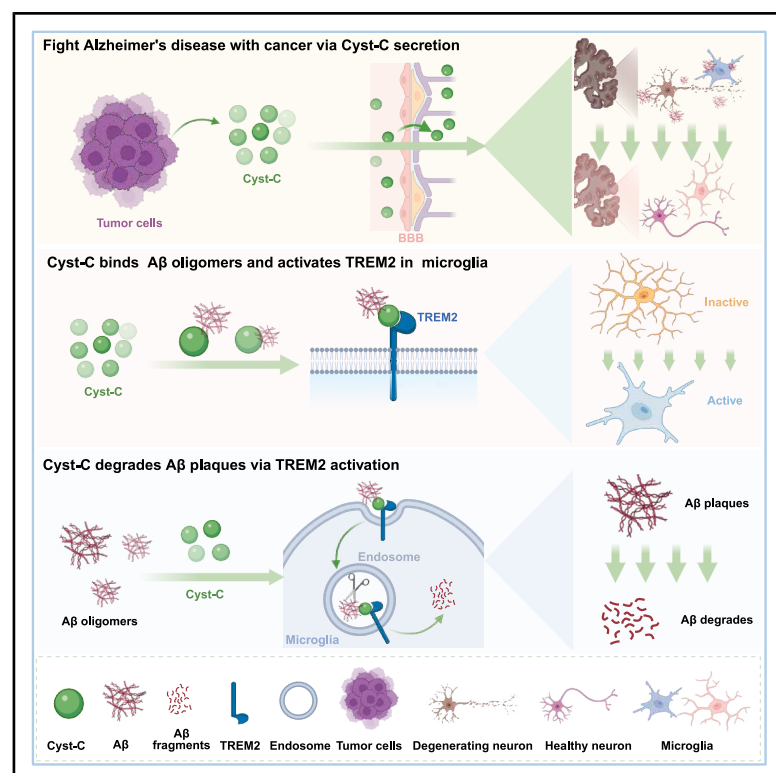


Peripheral cancer attenuates amyloid pathology in Alzheimer's disease via cystatin-c activation of TREM2

Graphical abstract



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In brief

Peripheral cancer inhibits amyloid pathology and rescues cognition of Alzheimer's disease through secretion of cystatin-c (Cyst-C), which binds amyloid oligomers and activates TREM2 in microglia and enables microglia to degrade pre-existing plaques.

Highlights

- Fight Alzheimer's disease with peripheral cancers via Cyst-C secretion
- Tumor-derived Cyst-C attenuates amyloid pathology of Alzheimer's disease
- Human Cyst-C binds amyloid oligomers and activates TREM2
- Tumor-derived Cyst-C degrades pre-existing amyloid plaques via TREM2

Article

Peripheral cancer attenuates amyloid pathology in Alzheimer's disease via cystatin-c activation of TREM2

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<https://doi.org/10.1016/j.cell.2025.12.020>

SUMMARY

Alzheimer's disease (AD) and cancer are among the most devastating diseases worldwide. Epidemiological data indicate that the incidence of AD significantly decreases in patients with a history of cancer. However, whether and how peripheral cancer may affect AD progression is yet to be studied. Here, we find that peripheral cancer inhibits amyloid pathology and rescues cognition via secretion of cystatin-c (Cyst-C), which binds amyloid oligomers and activates triggering receptor expressed on myeloid cells 2 (TREM2) in microglia, enabling microglia to degrade the pre-existing amyloid plaques in AD mice. These effects of Cyst-C are abolished by a cell-type-specific deletion (*Cx3cr1*^{TREM2^{-/-}}) or mutation of TREM2 (TREM2^{R47H}) or Cyst-C (Cyst-C^{L68Q}) in microglia. Together, these findings provide significant conceptual advances into cancer neuroscience and establish therapeutic avenues that are distinct from the present amyloid-lowering strategies, aiming at degrading the existing amyloid plaques for precision-targeted AD therapy.

INTRODUCTION

Alzheimer's disease (AD) and cancer are two common diseases in aging populations and are the leading causes of death worldwide.^{1–4} As a major neurodegenerative disorder, AD is characterized by age-related cognitive declines. β -Amyloid ($A\beta$), such as $A\beta_{1-42}$ deposits, is the main component of senile plaques and is commonly described as a pathological fingerprint of AD.^{5–8} Hence, various strategies developed for the treatment of AD have been directed at $A\beta_{1-42}$ peptide accumulation and deposition. Although some of these approaches have been shown to attenuate learning and memory declines in various mouse models,^{9–12} no disease-modifying therapies are currently available in clinics. Recently, some anti- $A\beta$ antibodies approved by the US Food and Drug Administration (FDA) have been shown to slow cognitive decline in mild AD patients, while their long-term clinical benefits and the potential risks remain under debate.^{13,14}

Cancer is also an age-related disease and shares many risk factors with AD, including smoking and several molecular hallmarks such as inappropriate activation and deregulation of the cell cycle.^{15–18} Epidemiological studies indicate that the inci-

dence of AD significantly decreases in patients with a history of cancer.^{19–23} However, deciphering the complex interplay between these two devastating diseases remains a conceptual and practical challenge; patients with one disease may not live to develop the other, and a diagnosis of one disease may limit the likelihood of a diagnosis of the other. Hence, whether, and if so how, peripheral cancer can affect the pathological progression of AD are yet to be studied.

Here, we report a discovery that peripheral cancer attenuates amyloid pathology in preclinical cancer-bearing mouse models of AD. We show that cystatin-C (Cyst-C) secreted from peripheral tumor cells effectively reduces amyloid plaque burden and rescues cognition in mouse models of AD. Human Cyst-C, which acts as a ligand of triggering receptor expressed on myeloid cells 2 (TREM2), directly binds $A\beta_{1-42}$ oligomers and activates TREM2 and hence catabolizes $A\beta_{1-42}$ aggregates in microglia. These effects of Cyst-C are completely abolished by either a cell-type-specific deletion (*Cx3cr1*^{TREM2^{-/-}}) or a disease mutation (TREM2^{R47H}) of TREM2 or Cyst-C (Cyst-C^{L68Q}). Together, this study demonstrates that peripheral cancer attenuates amyloid pathology and promotes cognition of AD via Cyst-C secretion and TREM2 activation.

RESULTS

Peripheral cancer inhibits amyloid pathology

To determine the causal role of peripheral cancer in the pathological progression of AD, we generated allograft mouse models, including LLC (Lewis lung carcinoma cells) lung cancer, RM1 (RM-1 mouse prostate carcinoma cells) prostate cancer, and MC38 (MC-38 mouse colon adenocarcinoma cells) colon cancer-bearing preclinical AD mouse models (Figure S1A), via intravenous injection (tail vein) of LLC, RM1, or MC38 cells (2.5×10^5 cells/0.1 mL) into 5×FAD mice at 3 months of age²⁴ and rTg4510 mice at 5 months of age, in which the mutant Tau^{P301L} was expressed²⁵ (Figures S2A–S2D). 30 days after the injection, the number and size of tumors in the peripheral tissues and Aβ peptide accumulation and plaque burden in the brain of each mouse were quantified. We found no significant difference in either the size or the number of tumors in the peripheral tissues among these models (Figures S1B–S1D), while all these types of tumors inhibited amyloid accumulation and aggregation on the basis of the measurements of soluble versus insoluble Aβ_{1–42} (Figure 1A), Aβ_{1–40} peptides (Figure 1B), Aβ_{1–16}-labeled plaques (Figures 1C, 1D, and S3A–S3D), and thioflavin-S-labeled pathological amyloid aggregates (Figures 1C, 1E, and S3A–S3D). Although amyloid inhibition was observed in the 5×FAD mice, peripheral cancer did not affect tau protein misfolding in the rTg4510 mice (Figures S2E–S2H), showing that peripheral cancer selectively inhibits amyloid pathology in AD mouse models.

Peripheral cancer inhibits amyloid pathology via CSPs

To determine whether the physical burden of peripheral tumors underlies amyloid inhibition, we next applied cancer cell secretory proteins (CSPs) released from each of these three types of cancer cells to 5×FAD mice at 3 months of age once per day (5 mg protein/100 μL per injection) for 30 consecutive days. All these applications failed to generate peripheral tumors in the 5×FAD mice (Figures S4A and S4B), whereas each of these applications robustly reduced amyloid plaque burden, similar to the effects produced by the injection of LLC, RM1, or MC38 cell lines (Figures 2A–2C, S4C, and S4D).

We then tested these mice in a Morris water maze, with four trials per day. In the spatial training tests, no significant differences in path length, latency, or time spent floating were observed among the groups (Figure 2D). These results are consistent with previous reports that 5×FAD mice at 4 months of age have normal hippocampus-dependent and hippocampus-independent learning.^{26,27} In the hidden platform test, when probe trials were performed the day after the training sessions, the 5×FAD mice that were administered CSPs spent a much higher amount of time in the quadrant that harbored the platform than did the controls (Figure 2E). CSPs from all these cancer cell lines did not affect the performance of the mice in the open field test (Figure S4E) or the elevated plus maze (Figure S4F). Notably, protective effects were observed even when CSPs were applied to 5×FAD mice at 4 months of age, and behaviors and amyloid pathology were examined at 5 months of age (Figures 2F, 2G, and S5A–S5C).

In the novel arm Y-maze test,²⁸ CSPs normalized the spatial working memory of 5×FAD mice without affecting mobility

(numbers of novel arm visits), as shown by a selective increase in the time spent in a novel arm (Figures 2H and 2I). Moreover, similar protection, such as a reduction in amyloid plaques (Figures S5D–S5F), were observed in amyloid precursor protein (APP)/presenilin 1 (PS1) mice at 8 months of age. APP/PS1 mice constitute another well-known preclinical model for studies of amyloid pathology in AD.²⁹ In this study, APP/PS1 mice were injected with CSPs at 6 months of age once per day for 60 consecutive days. Together, these findings indicate that CSPs released from multiple cancer cell types, but not the physical burden of peripheral tumors, inhibit amyloid pathology and rescue cognition in preclinical mouse models of AD.

Profiling amyloid inhibitors from CSPs

We then hypothesized that multiple types of cancer cells may release the same CSPs to inhibit amyloid pathology in AD mice. To directly test this hypothesis, we first profiled the transcriptomes of the LLC, RM1, and MC38 cell lines, as well as the tumor tissues from cancer-bearing 5×FAD mice, via RNA sequencing (RNA-seq). We identified over 1,500 candidate genes that exhibited a shared expression pattern among these different cancer types (Table S1). In parallel, CSPs in cancer cell culture media were examined via proteomic analysis. We found that 94 proteins were commonly present in all these cancer cell lines (Table S1), 33 of which were included in the list of candidate genes identified by RNA-seq profiling (Figures 3A and 3B). Among them, candidate proteins were then filtered for being amyloid pathological regulators. Four proteins, namely, calyculin-1 (CLS1),³⁰ carboxypeptidase-E (CPE),³¹ cystatin-c (Cyst-C),³² and gelsolin (GSN),³³ were identified as potential amyloid inhibitors (Figure 3B).

We then used an unbiased enzyme-linked immunosorbent assay (ELISA) to examine the blood plasma levels of these four proteins in LLC, RM1, and MC38 cancer-bearing 5×FAD mice and human patients with multiple cancer types, including non-small cell lung cancer, prostate cancer, colon cancer, breast cancer, bladder cancer, and gallbladder cancer. Notably, the levels of all four proteins were robustly elevated in all these cancer-bearing 5×FAD mice and human patients (Figures 3C–3F). We also analyzed apolipoprotein E (APOE), which is known as a genetic risk factor for early- and late-onset AD and exacerbates amyloid pathology through several mechanisms, including plaque aggregation and clearance^{34,35} in both the plasma and the CSF (cerebrospinal fluid), while there were no significant differences between 5×FAD mice with or without peripheral tumors (Figures 3H and 3I). These data are consistent with the earlier reports that the levels of APOE do not significantly differ between cognitively normal individuals and AD patients.^{36,37}

Peripheral cancer inhibits amyloid pathology via Cyst-C secretion

To determine which of these four proteins inhibits amyloid pathology in mouse models of AD, we established a CRISPR-Cas9 knockout strategy³⁸ to knock out the *CLS1*, *CPE*, *Cst3*, or *GSN* genes in LLC cancer cells (Figures S6A–S6D). To test the potential effects of gene deletion on tumor growth, a mutant LLC cell line with a deletion of *CLS1*, *CPE*, *Cst3*, or *GSN* was

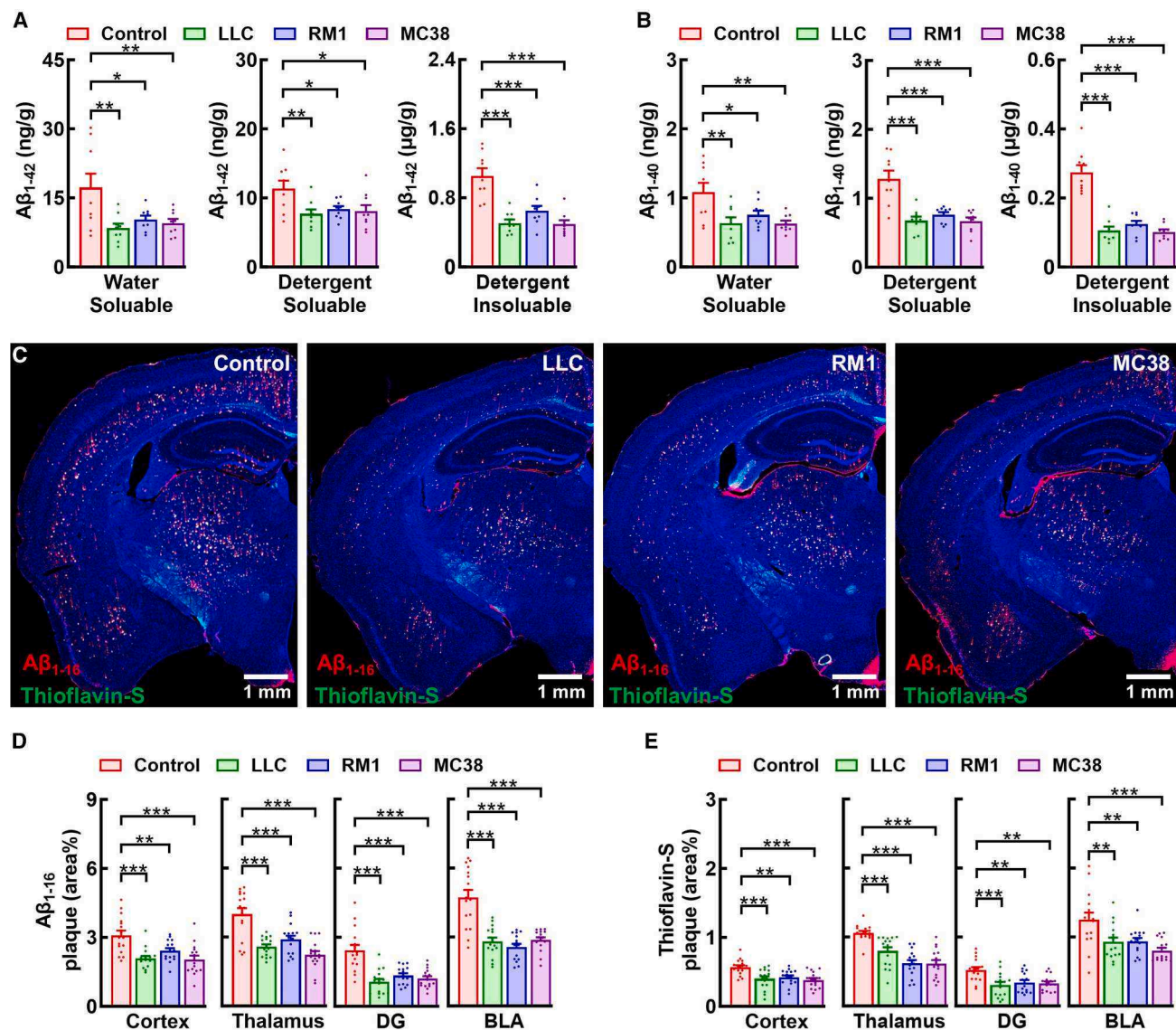


Figure 1. Peripheral cancer attenuates amyloid pathology

(A and B) Soluble and insoluble $A\beta_{1-42}$ (A) and $A\beta_{1-40}$ (B) in the brains of LLC, RM1, and MC38 cancer-bearing 5 $\times$ FAD mice. $n = 9$ mice per group.

(C–E) Representative images (C) and plots showing the areas of anti- $A\beta_{1-16}$ (red)-labeled (D) and thioflavin-S (green)-labeled (E) amyloid plaques in the cortex, thalamus, dentate gyrus (DG), and basal lateral amygdala (BLA) of LLC, RM1, and MC38 cancer-bearing 5 $\times$ FAD mice. $n = 16$ mice per group.

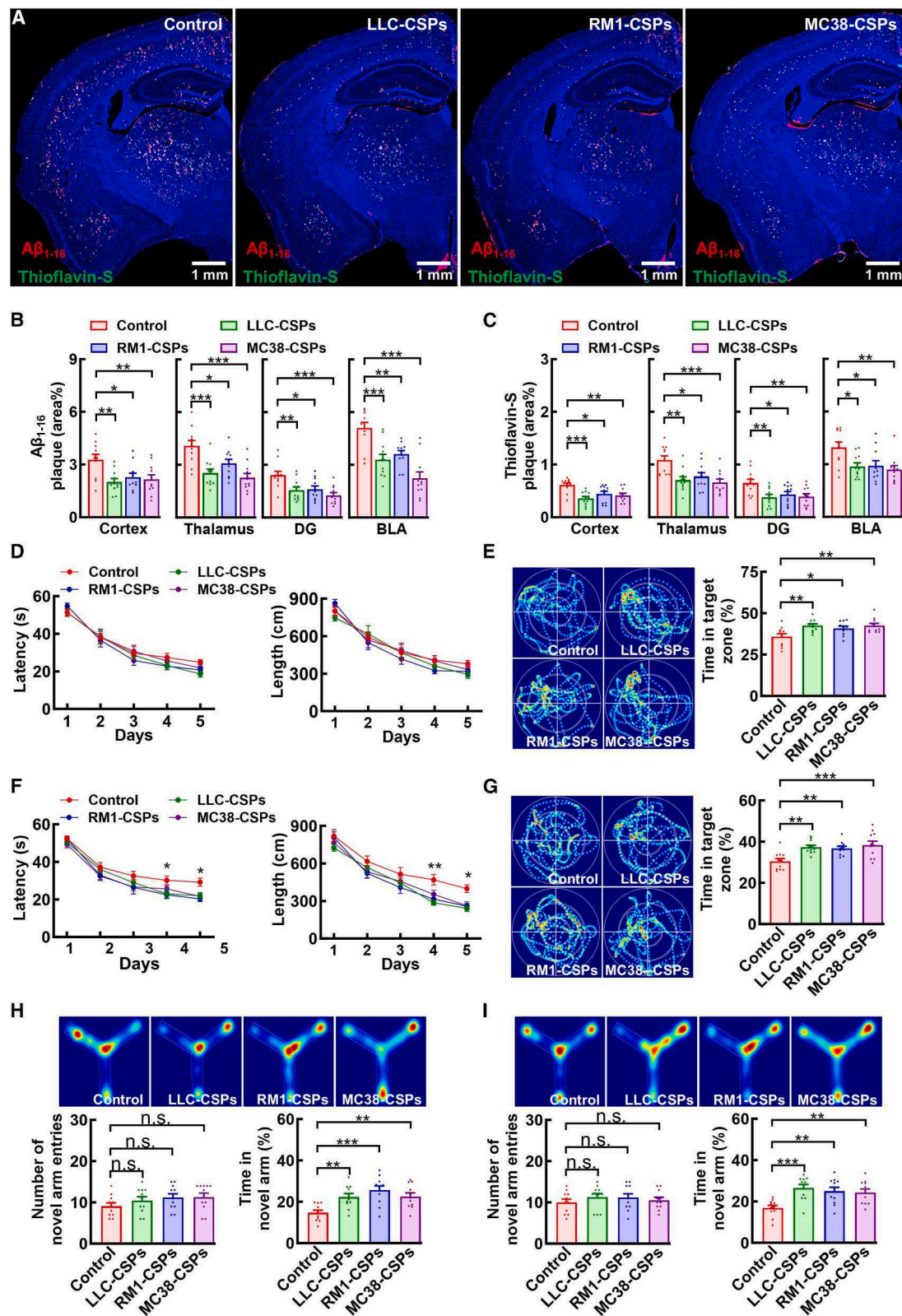
Data are represented as mean $\pm$ SEM. * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$ by one-way ANOVA with Bonferroni's test (A, B, D, and E).

See also Figures S1–S3.

injected into 5 $\times$ FAD mice at 3 months of age. 30 days after the injection, tumor size was measured. Our data revealed that deletion of any of these four genes did not affect the tumor growth (Figures S6E and S6F). CSPs were then prepared from each of these mutant cell lines and injected via the tail vein once per day (5 mg protein/100 μ L per day) for 30 consecutive days into 5 $\times$ FAD mice. All these injections did not generate tumors, while a deletion of the *Cst3* gene, which encodes Cyst-C, but not any of the other three genes, completely eliminated tumor-derived Cyst-C expression in the brain (Figure S6G) and significantly attenuated amyloid plaque deposition in the brain of 5 $\times$ FAD

mice at either 4 months (Figures 4A–4D and 4F) or 5 months of age (Figures 4E, 4G, S6H, and S6I). We also performed the open field tests and observed that Cyst-C deletion did not alter locomotor activity, as total distance traveled remained unchanged across groups (Figure S6J), supporting the specific effects of tumor-derived Cyst-C on cognition.

Cyst-C is one of the cysteine proteinase inhibitors, which include Cyst-A, Cyst-B, Cyst-C, Cyst-D, and Cyst-F.³⁹ Among these proteins, Cyst-B and Cyst-F are also related to amyloid fibril aggregation.^{40,41} We then generated stable mutant LLC cell lines with a deletion of *Cst6*, which encodes Cyst-B, or



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Cst7, which encodes Cyst-F. CSPs from these mutant cancer cell lines were then purified and applied to 5×FAD mice. None of these deletions altered amyloid plaque burden in AD-model mice (Figures S6K and S6L).

We then determined the essential roles of Cyst-C secreted from cancer cells in amyloid inhibition by engineering *Cst3*-deficient LLC cancer cells (LLC^{*Cst3*−}) expressing the His-tagged human *Cst3* gene (LLC^{*Cst3*−h*Cst3*+}). CSPs from LLC^{*Cst3*−h*Cst3*+} cultures were then prepared and injected into 5×FAD mice at 4 months of age once per day for 30 consecutive days (Figure 5A). This injection robustly increased the expression levels of human Cyst-C (Figure 5B), but not endogenous Cyst-C (Figure 5C), in the CSF of 5×FAD mice. Of note, we found that human Cyst-C, as labeled by an anti-His antibody, was incorporated into and colocalized with the existing amyloid plaques in the brains of 5×FAD mice (Figures 5D–5F). The specificity of anti-His antibody to His-tagged human Cyst-C was validated by the absence of anti-His signaling in the brain of 5×FAD mice without His-tagged human Cyst-C (Figure 5D). We then assessed whether the colocalization of human Cyst-C with amyloid plaques affects the plaque burden. In this study, a mutant Cyst-C with a Leu-68 → Gln substitution (Cyst-C^{L68Q}), which was found to be present in patients with hereditary cerebral amyloidosis,^{42,43} was used as a control. We found that human Cyst-C, but not a mutant Cyst-C^{L68Q}, robustly reduced amyloid plaque burden (Figure 5G) and promoted cognition in 5×FAD mice (Figures 5H and 5I), indicating that human Cyst-C counteracts the effects of *Cst3* deletion in LLC cancer cells. Notably, a significant reduction of amyloid plaque burden by human Cyst-C, but not by Cyst-C^{L68Q}, was observed in 5×FAD mice at 5 months of age, showing that Cyst-C secreted from cancer cells is essential for degradation of the pre-existing amyloid plaques.

Tumor-derived Cyst-C penetrates the BBB for entry into the brain

Subsequently, we determined the route and the amount of Cyst-C secreted from peripheral cancer cells on amyloid inhibition. Previous reports indicate that the blood-brain barrier (BBB) was dysfunctional in the preclinical mouse models, including 5×FAD and APP/PS1 mice,^{44,45} as well as human patients at their early stage.^{46,47} We then hypothesized that tumor-derived Cyst-C can penetrate across this impaired BBB and reach therapeutically relevant levels in the brain. To test this hypothesis, we produced high-sensitivity isotope-labeled ¹²⁵I-Cyst-C and quantitatively measured the brain vascular permeability of 5×FAD mice (Figures S7A–S7G). In this study, 10-kDa ¹²⁵I-dextran and

67-kDa ¹²⁵I-albumin were used as controls. Our data revealed that 67-kDa ¹²⁵I-albumin, as a negative control, was unable to penetrate the BBB in 5×FAD mice at 4 months of age, with a permeability of 1.17 ± 0.19 only (mean $\pm$ SEM, $n = 5$ mice per group; Figure S7F). In contrast, both 10-kDa ¹²⁵I-dextran, as a positive control, and 13-kDa ¹²⁵I-Cyst-C displayed a marked degree of penetrance across the BBB in 5×FAD mice at 4 months of age, with vascular permeabilities of 23.57 ± 1.04 for ¹²⁵I-dextran and 20.16 ± 1.39 for ¹²⁵I-Cyst-C (mean $\pm$ SEM, $n = 5$ mice per group; Figure S7F). Together with the data in Figures 5A–5C showing that human Cyst-C, but not endogenous Cyst-C expression levels, was robustly elevated in the brain after the injections of CSPs from LLC^{*Cst3*−h*Cst3*+} cell cultures, we concluded that Cyst-C secreted from peripheral tumor cells readily penetrates the BBB and efficiently reaches the therapeutically relevant levels in the brain of 5×FAD mice.

Cyst-C is also enriched in cortical neurons and microglia.⁴⁸ We therefore next investigated the inhibitory effects of CSPs through neuronal Cyst-C. We generated a mutant strain of mice via selective deletion of the *Cst3* gene in cortical neurons (n*Cst3*^{−/−} mice) or microglia/macrophages (m*Cst3*^{−/−} mice) (Figure S7H). Crossing these mutant mice with 5×FAD mice resulted in the complete deletion of Cyst-C in cortical neurons or microglia/macrophages, while this deletion had no effect on tumor-derived Cyst-C expression levels (Figures S7H–S7J) and amyloid inhibition (Figures S7K–S7N).

In addition to microglia, peripheral immune cells may also react to proteins secreted from peripheral tumor cells in 5×FAD mice. We then hypothesized that these peripheral immune cell reactions may play a role in amyloid inhibition. To test these possibilities, we first measured peripheral immune cell subpopulations using flow cytometry in 5×FAD mice at 5 months of age after the injection of CSPs from *Cst3*-deficient LLC cancer cell cultures expressing His-tagged human Cyst-C (once per day for 30 consecutive days). This injection did not alter either Ly6C⁺ monocytes or CD45⁺ T cells, including CD4⁺ and CD8⁺ cells (Figures S8A–S8C). We then applied a low dose of X-ray whole-body irradiation (IR) with head shielding in 5×FAD mice. This irradiation reliably depleted ~80% of CD45⁺ T cells, including CD3⁺CD4⁺ and CD3⁺CD8⁺ T cells, as well as CD11b⁺ Ly6C⁺ monocytes (Figures S8D–S8F). Of note, peripheral immune cell depletion produced no effects on either human Cyst-C expression levels (Figure S8G), peripheral tumor growth (Figure S8H), or amyloid inhibition in the brain of LLC^{*Cst3*+} and LLC^{*Cst3*−} cancer-bearing 5×FAD mice (Figures S8I and S8J). These data demonstrate that Cyst-C secretion from peripheral

Figure 2. Peripheral cancer inhibits amyloid pathology via CSPs

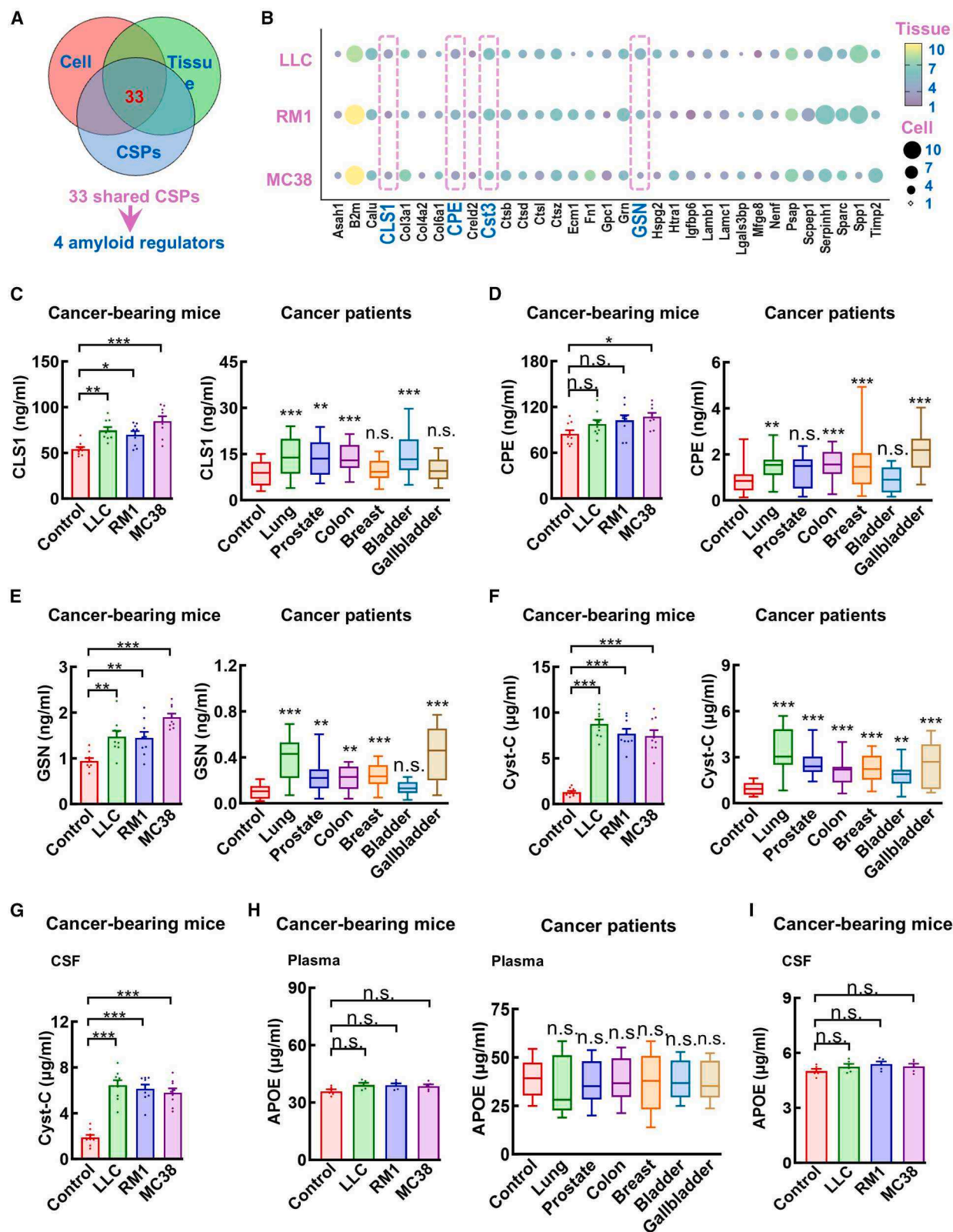
(A–C) Representative images (A) and plots showing Aβ_{1–16}-labeled (B) and thioflavin-S-labeled (C) amyloid plaques in the brains of 5×FAD mice after injection (tail vein) of CSPs from LLC, RM1, and MC38 culture media. $n = 11$ mice per group.

(D–G) The latency and length of the swimming path to reach the hidden platform during the training sessions (D and F), and the percentage of time spent searching for a hidden platform in the target quadrant (quadrant 4) during the probe trials (E and G) in the Morris water maze of 5×FAD mice at 4 months (D and E) or 5 months (F and G) of age. $n = 11$ mice per group.

(H and I) Heatmaps and plots showing the number and time of visits to the novel arm in the Y-maze of 5×FAD mice at 4 months (H) or 5 months (I) of age. $n = 11$ mice per group.

Data are represented as mean $\pm$ SEM. n.s. (no significant difference), * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$ by one-way ANOVA with Bonferroni's test (B, C, E, and G–I) or two-way ANOVA with Bonferroni's test (D and F).

See also Figures S4 and S5.



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cancer cells, but not immune cell reactions, inhibits amyloid pathology in AD mice.

Human Cyst-C inhibits amyloid pathology

Next, we investigated whether the application of human Cyst-C has therapeutic effects against amyloid pathology in preclinical mouse models of AD. Human Cyst-C was purified and injected (tail vein, 50 μ g/100 μ L) into 5 $\times$ FAD mice at 4 months of age once per day for 30 consecutive days (Figure 6A). A Cyst-C^{L68Q} mutant and a vehicle solution were used as controls. Immediately after the last injections, the level of human Cyst-C in the CSF was robustly elevated to 6.25 ± 0.29 μ g/mL (mean $\pm$ SEM, $n = 9$ mice per group; Figure 6A), which was comparable to that seen in cancer-bearing AD mice. Strikingly, human Cyst-C, as labeled with anti-His antibody, was largely colocalized with microglia-associated amyloid aggregates in the brain, including the cortex, thalamus, dentate gyrus, and basal lateral amygdala (Figure S9A). Significantly, we found that treatment with human Cyst-C caused activation of plaque-associated microglia; an increase of plaque-associated CD68⁺ microglia (activated) was closely associated with a decrease of TMEM119⁺ (transmembrane protein 119) microglia (inactivated) in the brain of 5 $\times$ FAD mice treated with human Cyst-C (Figure 6B). Further, the treatment with human Cyst-C enlarged plaque-associated microglial soma and reduced their branching complexity (Figure S9B), while cerebral amyloid angiopathy (CAA) pathology did not differ between groups treated with tumor-derived or recombinant Cyst-C and their respective controls (Figure S9C).

We then assessed the plaque burden by labeling with anti-A β_{1-16} and thioflavin-S. 5 $\times$ FAD mice at 4 months of age were injected with human Cyst-C, Cyst-C^{L68Q}, or a vehicle control. We found that human Cyst-C, but not Cyst-C^{L68Q} or the vehicle control, effectively attenuated extracellular amyloid accumulation and plaque burden in the brains of the 5 $\times$ FAD mice at 5 months of age (Figure 6C). Together, these findings support the hypothesis that human Cyst-C promotes microglial phagocytosis and triggers the clearance of pre-existing amyloid plaques. We next analyzed the effects of human Cyst-C on disease progression in 5 $\times$ FAD mice. We first recorded LTP of synaptic transmission at the CA3 to CA1 Schaffer collateral pathway, which represents a cellular substrate of learning and memory.^{49,50} Consistent with the findings of amyloid inhibition, human Cyst-C completely reversed LTP deficits (Figure 6D) and rescued learning and memory in 5 $\times$ FAD mice at 5 months of age (Figures 6E and 6F).

To further test whether human Cyst-C can trigger amyloid plaque clearance, we applied human Cyst-C with tail-vein injections into 5 $\times$ FAD mice at 8 months of age and APP/PS1 mice at 6 months of age, respectively. Amyloid plaques in these mice (5 $\times$ FAD mice at 9 months of age and APP/PS1 mice at 8 months of age) were then examined immediately after the last injection. Human Cyst-C treatment significantly reduced the amyloid plaque burdens in these aged AD mice (Figures S9D–S9I), similar to that observed in these young AD mice (5 $\times$ FAD mice at 5 months of age). Significantly, we found that this treatment was achieved in a dose-dependent manner (Figures S9J and S9K). These findings indicate that recognition and clearance of amyloid plaques are important components of human Cyst-C efficacy and represent more importance than a mechanism involving the prevention of plaque deposition by recognition of soluble amyloid peptides.

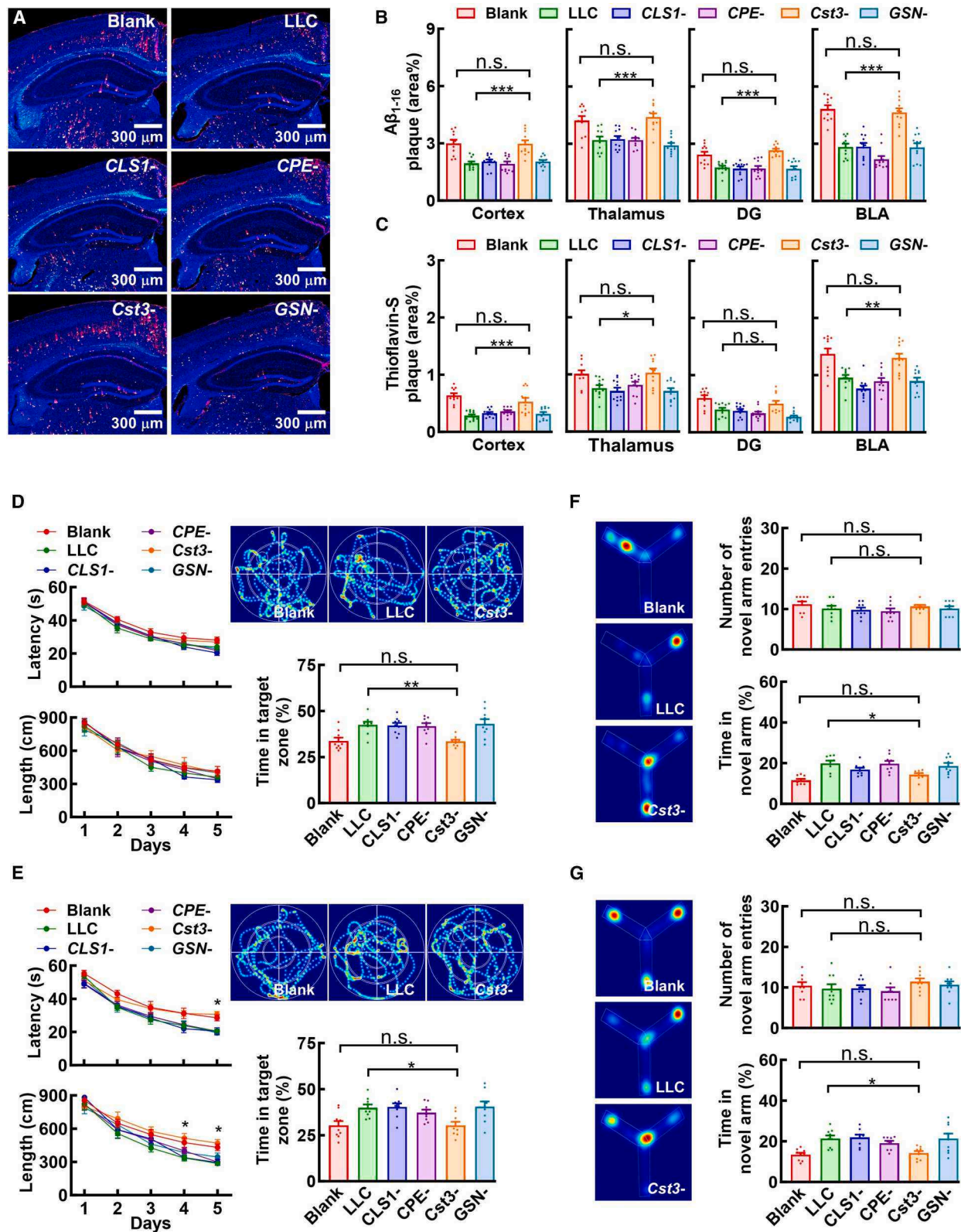
Immunoblotting of cortical homogenates revealed that human Cyst-C did not affect the levels of full-length APP, cleaved C-terminal fragments (APP-CTFs), or APP-processing/A β -degrading enzymes, including PS1,⁵¹ beta-site APP cleaving enzyme 1 (BACE1),⁵² ADAM17,⁵³ secreted APP alpha (sAPP α),⁵⁴ and insulin-degrading enzyme (IDE)⁵⁵ (Figures S10A and S10B), indicating that human Cyst-C is not involved in APP processing in AD-model mice. Of note, human and mouse Cyst-C share $\sim 70\%$ sequence identity. Mouse Cyst-C may not bind to human A β simply because of species differences. Furthermore, the effect of human Cyst-C and potential other effects of human Cyst-C in AD may be limited because human Cyst-C may not be able to bind and signal with mouse proteins. To exclude these possibilities, we applied recombinant mouse Cyst-C in AD mice and found that this application produced the protective effects on amyloid pathology, similar to that induced by human Cyst-C (Figures S10C–S10F).

Human Cyst-C binds A β_{1-42} oligomers and activates TREM2

To determine the mechanisms underlying how Cyst-C released from cancer cells is therapeutically effective against amyloid pathology, we searched for signaling targets of human Cyst-C with an unbiased proteomic screen of the Cyst-C protein complex in lysates from the hippocampus of 5 $\times$ FAD mice. A top hit from this screen was TREM2 (Table S1), as validated by western blots (Figure 7A). To determine whether the therapeutic effects of tumor-derived Cyst-C are mediated through TREM2, we performed single-cell RNA-seq in CD11b⁺-enriched microglia

Figure 3. An unbiased proteomic screen of amyloid inhibitors from CSPs

(A and B) Venn (A) and bubble (B) diagrams of 33 genes and proteins that are commonly expressed in cancer cells or culture media and tumor tissues of LLC, RM1, and MC38 cancer-bearing 5 $\times$ FAD mice.
(C–F) Bar graphs showing the levels of CLS1 (C), CPE (D), GSN (E), and Cyst-C (F) in the blood plasma of LLC, RM1, and MC38 cancer-bearing 5 $\times$ FAD mice and patients. $n = 9$ mice per group (left); $n = 38$ healthy controls, 35 non-small cell lung cancer patients, 21 prostate cancer patients, 33 colon cancer patients, 46 breast cancer patients, 33 bladder cancer patients, and 35 gall bladder cancer patients (right).
(G) A bar graph showing Cyst-C levels in the CSF of LLC, RM1, and MC38 cancer-bearing 5 $\times$ FAD mice. $n = 9$ mice per group.
(H) Bar graphs showing APOE levels in the plasma of LLC, RM1, and MC38 cancer-bearing 5 $\times$ FAD mice and cancer patients. $n = 5$ mice per group (left); $n = 38$ healthy controls, 35 non-small cell lung cancer patients, 21 prostate cancer patients, 33 colon cancer patients, 46 breast cancer patients, 33 bladder cancer patients, and 35 gall bladder cancer patients (right).
(I) A bar graph showing APOE levels in the CSF of LLC, RM1, and MC38 cancer-bearing 5 $\times$ FAD mice. $n = 5$ mice per group.
Data are represented as mean $\pm$ SEM. n.s., * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$ by one-way ANOVA with Bonferroni's test (C–I).
See also Table S1.



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isolated from 5×FAD mice treated with (human Cyst-C) or without (control) human Cyst-C. Uniform manifold approximation and projection (UMAP) visualization and neighborhood clustering revealed 7 distinct microglial subtypes, each defined by unique gene expression profiles and functional annotations (Figure S11A). Notably, treatment with human Cyst-C increased activated microglial subtypes such as microglia subtype-5 with expression of CD68, while this treatment decreased the proportion of TMEM119-positive microglia such as microglia subtype-1, demonstrating Cyst-C activates microglia in the brain of 5×FAD mice (Figures S11A and S11B). Transcriptomic analysis identified 91 differentially expressed genes (Table S1). Upregulated genes showed enrichment in *Trem2*, *CD68*, and *Tyrbp* genes, while downregulated genes were enriched in *Tmem119*, *Fcrls*, and *csf1r*. These findings suggest that Cyst-C activates microglia and induces the expression of anti-inflammatory factors in 5×FAD mice. Pathway enrichment further indicated activation of phagocytic and lysosomal pathways, supporting that the effects of human Cyst-C were achieved by TREM2-dependent reprogramming of microglia (Figures S11C and S11D). Together with our proteomic binding data and functional binding assays (Figures 3B and 7A–7C), it is plausible that tumor-derived Cyst-C exerts its therapeutic effects against amyloid pathology via TREM2-mediated modulation of microglial function.

Previous studies have indicated that TREM2 modulates microglial responses to amyloid plaque burden. While TREM2 activation has been reported to promote microglial phagocytosis and attenuate amyloid deposition,^{56,57} other studies have shown, however, that TREM2 deficiency primarily reduces microglial clustering around plaques without consistently affecting overall amyloid burden.^{58,59} We then examined whether TREM2 functions as a receptor for human Cyst-C. We employed the extracellular domain of human TREM2 (hTREM2, amino acids [aa] 19–174) fused at the C terminus to the Fc portion of human immunoglobulin G1 (IgG1) (TREM2-Fc) and investigated whether TREM2-Fc could directly bind to human Cyst-C. As expected, TREM2-Fc was physically associated with human Cyst-C in the presence of Aβ_{1–42} oligomers (Aβ_{1–42o}), and little binding was observed with TREM1-Fc or Fc controls (Figures 7B and 7C). The immobilized TREM2-Fc bound to human Cyst-C with an affinity comparable to that of previously described Aβ_{1–42o},⁵⁷ with TREM2-Fc exhibiting little binding with the human Cyst-C mutant Cyst-C^{L68Q} (Figures 7B and 7C). Similarly, human Cyst-C bound to TREM2-Fc with a comparable affinity to Aβ_{1–42o}, with few interactions detected in Aβ_{1–42} monomers (Aβ_{1–42m}) (Figure S11E). We also generated TREM2^{R47H} by replacing the TREM2 arginine res-

idue at position 47 with a histidine. TREM2^{R47H} is an hTREM2 mutation associated with late-onset AD.⁶⁰ We found that human Cyst-C was not bound with TREM2^{R47H} (Figure S11F). This finding is consistent with the previous studies that the TREM2^{R47H} mutation disrupts a direct binding between TREM2 and its ligand and impairs downstream responses of TREM2 activation in microglia, particularly in the context of AD.⁶¹

Next, we investigated whether an interaction between human Cyst-C and TREM2 functionally activates TREM2 in microglia. We crossed TREM2^{fllox} mice with *Cx3cr1-Cre^{ERT2}* knockin mice and 5×FAD mice, which enabled the inducible deletion of TREM2 in microglia of 5×FAD mice via tamoxifen (TAM) administration. We refer to these mice as *Cx3cr1^{TREM2–/–}* 5×FAD mice, whereas *Cx3cr1^{TREM2+/+}* 5×FAD mice served as controls (Figures S11G and S11H). We first investigated the downstream events of TREM2 activation by human Cyst-C. Using a fluorescence resonance energy transfer (FRET) assay, we detected a significant increase in the interaction between TREM2 and its obligate adapter DAP12 after the application of human Cyst-C (Figure 7D). In addition, we validated the FRET assay by including Aβ_{1–42m} and Aβ_{1–42o} as negative and positive controls, respectively. Our data confirmed the previous studies that Aβ_{1–42o}, but not Aβ_{1–42m}, can activate TREM2 in microglia (Figure S12A), while this activation was robustly enhanced by human Cyst-C (Figure 7D). Consistent with this finding, human Cyst-C in the presence of Aβ_{1–42o} effectively induced the phosphorylation of the spleen protein tyrosine kinase (SYK), a key component of the TREM2-DAP12 downstream signaling pathway,⁶² in microglia from TREM2^{+/+} 5×FAD mice but not in those from TREM2^{–/–} 5×FAD mice (Figures S12B and S12C). The effects of human Cyst-C were specific, as the application of Cyst-C^{L68Q}, an inactive human Cyst-C mutant that did not bind TREM2 (Figure 7C), produced no effects (Figures S12D and S12E). Taken together, these results indicate that human Cyst-C, as a ligand of TREM2, directly binds Aβ oligomers and activates TREM2 in microglia.

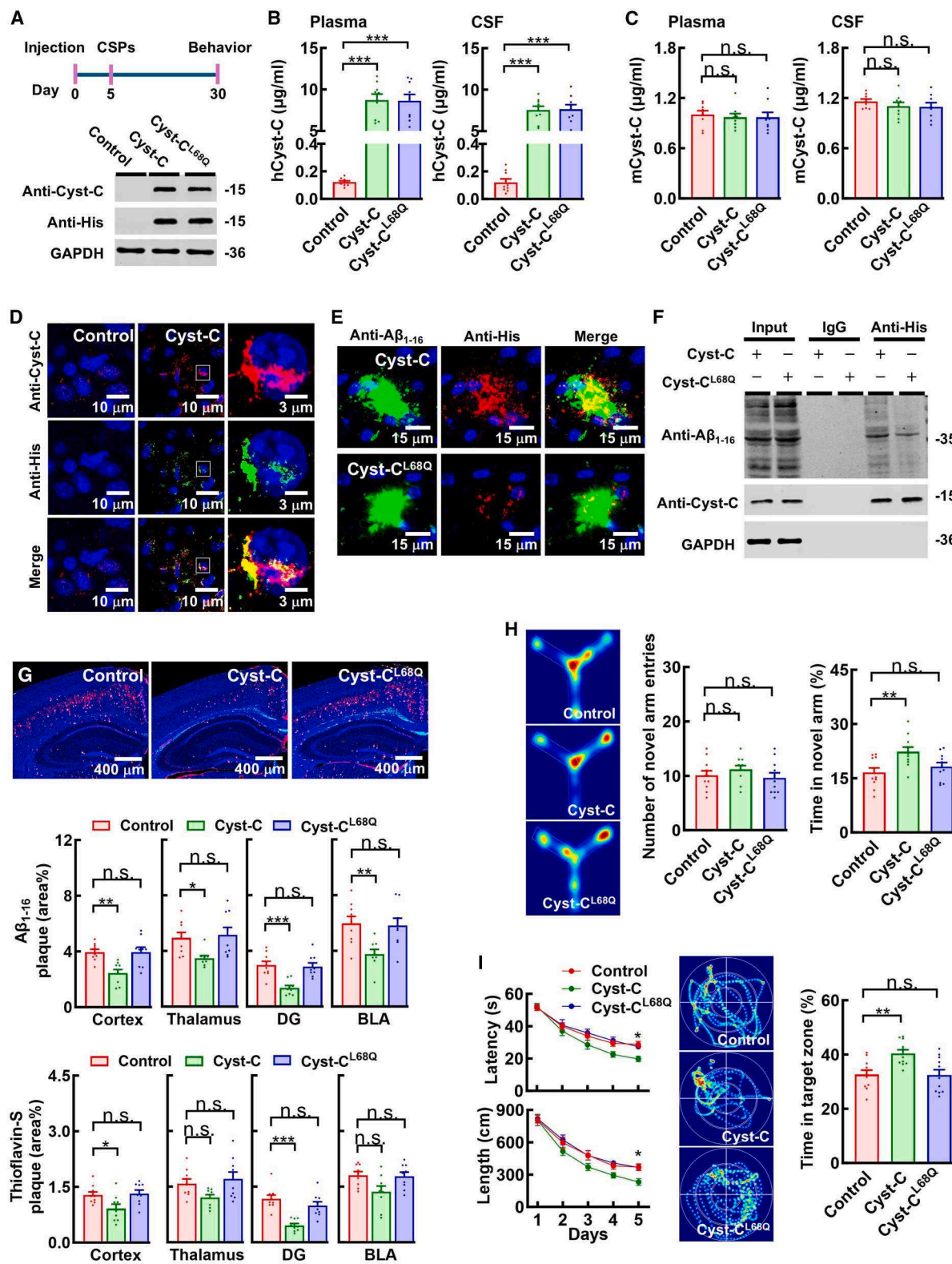
To explore whether other TREM2 ligands contribute to the effects of human Cyst-C, we analyzed high-density lipoprotein (HDL) and APOE in the CSF from 5×FAD mice injected with or without CSPs derived from LLC cultures and found no significant differences between groups (Figures S12F and S12G). Notably, a previous study using cultured endothelial cells *in vitro* suggested a role of Cyst-C in the α-secretase pathway.⁵⁴ In contrast, our findings using *in vivo* analysis indicate that Cyst-C activates TREM2 signaling rather than α-secretase cleavage. The discrepancy between the studies could be due to the differences of the experimental systems (cell types) used.

Figure 4. Peripheral cancer inhibits amyloid pathology via Cyst-C secretion

(A–C) Representative images (A) and plots showing Aβ_{1–16}-labeled (B) and thioflavin-S-labeled (C) amyloid plaques in the brains of 5×FAD mice at 4 months of age after intravenous injections (tail vein) of CSPs from LLC cancer cells without (blank) or with deletion of CLS1, CPE, Cyst-C, or GSN. *n* = 11 mice per group. (D and E) The latency and length of the swimming path to reach a hidden platform during the training sessions (left), and the percentage (right) of time spent searching for a hidden platform in the target quadrant (quadrant 4) during the probe trials in the Morris water maze of 5×FAD mice at 4 months (D) or 5 months (E) of age after the injections (tail vein) of CSPs from LLC cancer cells without (blank) or with deletion of CLS1, CPE, Cyst-C, or GSN. *n* = 9 mice per group. (F and G) Heatmaps and plots showing the number and time of visits to novel arms in the Y-maze of 5×FAD mice at 4 months (F) or 5 months (G) of age after the injections (tail vein) of CSPs from LLC cancer cells without (blank) or with deletion of CLS1, CPE, Cyst-C, or GSN. *n* = 9 mice per group.

Data are represented as mean ± SEM. n.s., **p* < 0.05, ***p* < 0.01, and ****p* < 0.001 by one-way ANOVA with Bonferroni's test (B, C, probe trials in D–F, and G) or two-way ANOVA with Bonferroni's test (training sessions in D and E).

See also Figure S6.



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Human Cyst-C degrades existing amyloid plaques via TREM2

Based on the data described above, we propose a working model for inhibition of amyloid pathology by Cyst-C activation of TREM2. In this model, human Cyst-C acts as a carrier of $A\beta_{1-42o}$ for targeted degradation of $A\beta$ plaques via activation of TREM2 in microglia. Indeed, we observed that Cyst-C was physically associated with $A\beta_{1-42o}$ (Figure 7E) and phagocytosed $A\beta_{1-42o}$ but not $A\beta_{1-42m}$ in microglia (Figure 7F). When incubated with pHrodo- $A\beta_{1-42o}$ or pHrodo- $A\beta_{1-42m}$ in the presence of human Cyst-C (15 $\mu\text{g/mL}$), microglia from TREM2^{+/+} (wild-type [WT]) mice showed substantially greater uptake of $A\beta_{1-42o}$ than $A\beta_{1-42m}$ (Figure 7F). In contrast, in the absence of Cyst-C, uptake of $A\beta_{1-42o}$ in microglia was undetectable. Notably, uptake of $A\beta_{1-42o}$ induced by Cyst-C was abolished in microglia from TREM2^{-/-} mice (the unconditional TREM2 knockout mice), indicating that Cyst-C induces phagocytosis of $A\beta_{1-42o}$ in microglia in a TREM2-dependent manner (Figure 7F). Notably, microglial uptake of $A\beta_{1-42o}$ occurred in a dose-dependent manner with human Cyst-C; $A\beta_{1-42o}$ in microglia from TREM2^{+/+} mice was stably detected in the presence of a relatively high level of human Cyst-C (15 $\mu\text{g/mL}$) and was occasionally observed in the presence of 7.5 $\mu\text{g/mL}$ human Cyst-C. When a relatively low level of human Cyst-C (1 $\mu\text{g/mL}$) was added, the uptake of $A\beta_{1-42o}$ in microglia from either TREM2^{+/+} or TREM2^{-/-} mice was not detectable (Figure 7G). This finding suggests that a minimal concentration of human Cyst-C is required to effectively activate TREM2-mediated phagocytosis in microglia, supporting the previous studies that at the basal condition TREM2 is in an inactive state.⁵⁷ Taken together, our findings indicate that human Cyst-C, as a carrier of $A\beta$ oligomers, binds $A\beta$ oligomers and activates TREM2 in microglia to phagocytose extracellular $A\beta$ aggregates.

We subsequently investigated whether human Cyst-C activation of TREM2 could indeed affect catabolism of $A\beta$ plaques by measuring the rate of degradation of $A\beta_{1-42o}$ following its uptake by microglia from TREM2^{+/+} mice compared with those from TREM2^{-/-} mice. After incubation with free carboxy fluorescein (FAM)-labeled $A\beta_{1-42o}$, there was no difference in the time course

of the degradation of internalized $A\beta_{1-42o}$ between these two genotypes (Figures S12H and S12J). After internalization of $A\beta_{1-42o}$ in the presence of human Cyst-C, however, $A\beta_{1-42o}$ degradation was faster in microglia from TREM2^{+/+} mice than in those from TREM2^{-/-} mice (Figures S12I and S12J). Moreover, the rate of $A\beta_{1-42o}$ degradation in microglia from TREM2^{+/-} heterozygous mice was intermediate between that in microglia from TREM2^{+/+} and TREM2^{-/-} mice (Figure S12J), indicating that the degradation and/or clearance of $A\beta_{1-42o}$ by microglia not only requires TREM2 but also depends on the gene dosage.

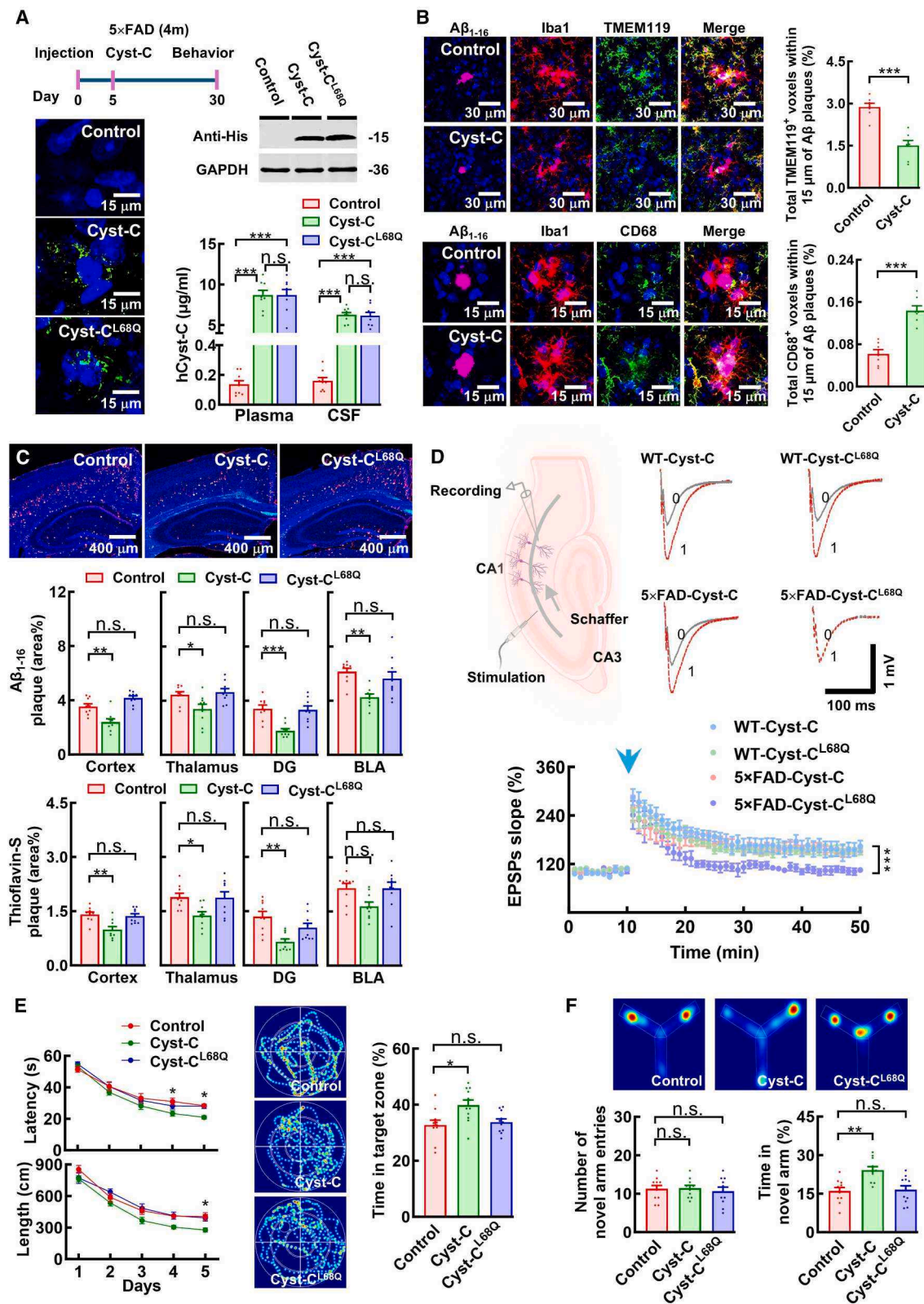
Next, we investigated whether human Cyst-C triggers the amyloid plaque clearance *in vivo* via TREM2. We injected TREM2^{-/-} 5 $\times$ FAD and TREM2^{+/+} 5 $\times$ FAD mice at 4 months of age with human Cyst-C (once per day for 30 consecutive days). Immediately after the last injection, the mice were sacrificed, and the brains were prepared for immunohistochemistry and protein analysis. Very few amyloid plaques, as detected immunopositively by $A\beta_{1-16}$ antibody and thioflavin-S staining, were observed in the brains of the TREM2^{+/+} 5 $\times$ FAD mice (Figures 7H and 7I). In contrast, intense plaques were observed in both TREM2^{-/-} 5 $\times$ FAD mice and TREM2^{+/+} 5 $\times$ FAD mice injected with Cyst-C^{L68Q} (Figures 7H and 7I).

To further determine whether human Cyst-C promotes microglial engulfment of amyloid aggregates and whether this effect depends on TREM2 in microglia, we performed MeX04 phagocytosis assays in both TREM2^{-/-} 5 $\times$ FAD mice and TREM2^{+/+} 5 $\times$ FAD mice. In TREM2^{+/+} 5 $\times$ FAD mice, application of human Cyst-C significantly increased the MeX04 signal in Iba1⁺ microglia in the cortex, indicating enhanced microglial uptake of $A\beta$ aggregates. However, this increase was not observed in TREM2^{-/-} 5 $\times$ FAD mice, showing TREM2-dependent phagocytosis of $A\beta$ aggregates in AD mice *in vivo* (Figures S13A–S13C).

We also used TREM2^{R47H} 5 $\times$ FAD mice to investigate the effects of human Cyst-C on plaque aggregation and clearance in a second independent loss-of-function control model. Consistent with the findings in the TREM2^{-/-} 5 $\times$ FAD mice, quantitative image analysis (Figures 7H and 7I) demonstrated that the TREM2^{R47H} mutation completely blocked the ability of human

Figure 5. Cancer cell-secreted Cyst-C inhibits amyloid pathology

(A) Experimental schedule (top) and western blots (bottom) showing the expression of His-tagged human Cyst-C or Cyst-C^{L68Q} in Cst3-deficient LLC cells. (B and C) Bar graphs showing the expression levels of human Cyst-C (B) and mouse Cyst-C (mCyst-C) (C) in both the plasma and the CSF of 5 $\times$ FAD mice after the injections of CSPs from the Cst3-deficient LLC cultures without (control) or with expression of human Cyst-C or Cyst-C^{L68Q}. $n = 9$ mice per group. (D) Representative images of the brain sections from 5 $\times$ FAD mice after the injections of CSPs from the Cst3-deficient LLC cultures without (control) or with the expression of human Cyst-C. The cortical sections were stained with anti-His (green) and anti-Cyst-C (red) antibodies, as indicated. Selected areas (boxed) are shown with high magnification (right). The similar results were seen in each of the five experiments. (E and F) Representative images (E) and blots of anti-His or non-specific IgG (IgG) precipitates (F) showing the physical association of human Cyst-C with amyloid aggregates in the cortex of 5 $\times$ FAD mice at 4 months of age after the first five injections of CSPs from Cst3-deficient LLC culture media expressing human Cyst-C or Cyst-C^{L68Q}. (G) Representative images (top) and plots (bottom) showing $A\beta_{1-16}$ -labeled and thioflavin-S-labeled amyloid plaques in the brains of 5 $\times$ FAD mice at 5 months of age after 30 consecutive injections (tail vein) of CSPs from Cst3-deficient LLC cells expressing human Cyst-C, Cyst-C^{L68Q}, or an empty vector (control). $n = 9$ mice per group. (H) Heatmaps and plots showing the number and time of visits to novel arms in the Y-maze of 5 $\times$ FAD mice at 5 months of age after 30 consecutive injections of culture media from Cst3-deficient LLC cells expressing human Cyst-C or Cyst-C^{L68Q}. $n = 11$ mice per group. (I) The latency and length of the swimming path to reach the hidden platform during the training sessions and the percentage of time spent searching for a hidden platform in the target quadrant (quadrant 4) during the probe trials in the Morris water maze of 5 $\times$ FAD mice at 5 months of age after 30 consecutive injections (tail vein) of CSPs from Cst3-deficient LLC cells expressing human Cyst-C or Cyst-C^{L68Q}. $n = 11$ mice per group. Data are represented as mean $\pm$ SEM. n.s., $p < 0.05$, $^{**}p < 0.01$, and $^{***}p < 0.001$ by one-way ANOVA with Bonferroni's test (B, C, G, H, and probe trials in I) or two-way ANOVA with Bonferroni's test (training sessions in I). See also Figures S7 and S8.



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Cyst-C to inhibit amyloid pathology (Figures S13D and S13E). Specifically, we found that the effects of Cyst-C^{L68Q} on plaque burden in AD mice did not significantly differ from that produced by the TREM2^{R47H} mutation.

Finally, we injected human Cyst-C into TREM2^{+/+} WT and TREM2^{-/-} WT mice at 4 months of age. The behavioral tests were performed immediately after the last injection (5 months of age). We found that in the memory recall session without a submerged platform, the TREM2^{-/-} 5×FAD mice spent significantly less time in the target quadrant than did the TREM2^{+/+} 5×FAD mice, whereas no difference was found between the TREM2^{+/+} WT and TREM2^{-/-} WT groups (Figure S13F). Consistent with the observations in the Morris water maze test, the deletion of TREM2 in microglia completely abolished the therapeutic effects of human Cyst-C in the novel arm Y-maze test (Figure S13G).

DISCUSSION

Cancer neuroscience has focused on reciprocal interactions of the central and peripheral nervous systems with cancers, highlighting opportunities for cancer therapies.^{63–65} While much is known about how the nervous system regulates cancer growth,^{66–69} whether peripheral cancer affects the pathological progression of AD is yet to be examined. In this study, we have shown that peripheral cancer attenuates amyloid pathology and rescues cognition in AD mouse models via Cyst-C secretion. We have also demonstrated that Cyst-C binds amyloid aggregates and activates TREM2 in microglia, enabling microglia to phagocytose and degrade the pre-existing amyloid plaques. This study has provided significant conceptual advances into cancer neuroscience and established precision-targeted therapeutic strategies by removing the pre-existing amyloid plaques for AD therapies.

Consistent with the previous studies that vascular permeability in the brain increases in both the preclinical mouse models^{44,45} and human patients,^{46,47} Cyst-C secreted from peripheral cancer cells can readily penetrate the BBB and reach

the therapeutically relevant levels in the brain of 5×FAD mice. Our data also revealed that albumin after tail-vein injection did not increase in the brains of AD mice, suggesting that changes in the BBB in AD are likely quite focal and not widespread, as is seen in other neurological disorders such as brain tumors and infectious diseases. Of note, tumor-derived Cyst-C concentrations in the plasma vary across the different cancer-bearing mice, while the reduction of amyloid pathology following the injections of CSPs from these different tumor types does not differ, raising the possibility that the effect of CSPs may not be specific to tumor-derived Cyst-C. To exclude this possibility, we have analyzed tumor-derived Cyst-C levels in both the plasma and the CSF (Figures 3F and 3G) and demonstrated that although concentrations of Cyst-C secreted from cancer cells in the plasma vary among different types of peripheral tumors, Cyst-C released from each of these different tumor types in the plasma can reach the therapeutic levels in the brain that are required for amyloid inhibition. More importantly, even if a concentration of Cyst-C in the plasma further increases, the inhibitory effects on amyloid pathology do not intensify.

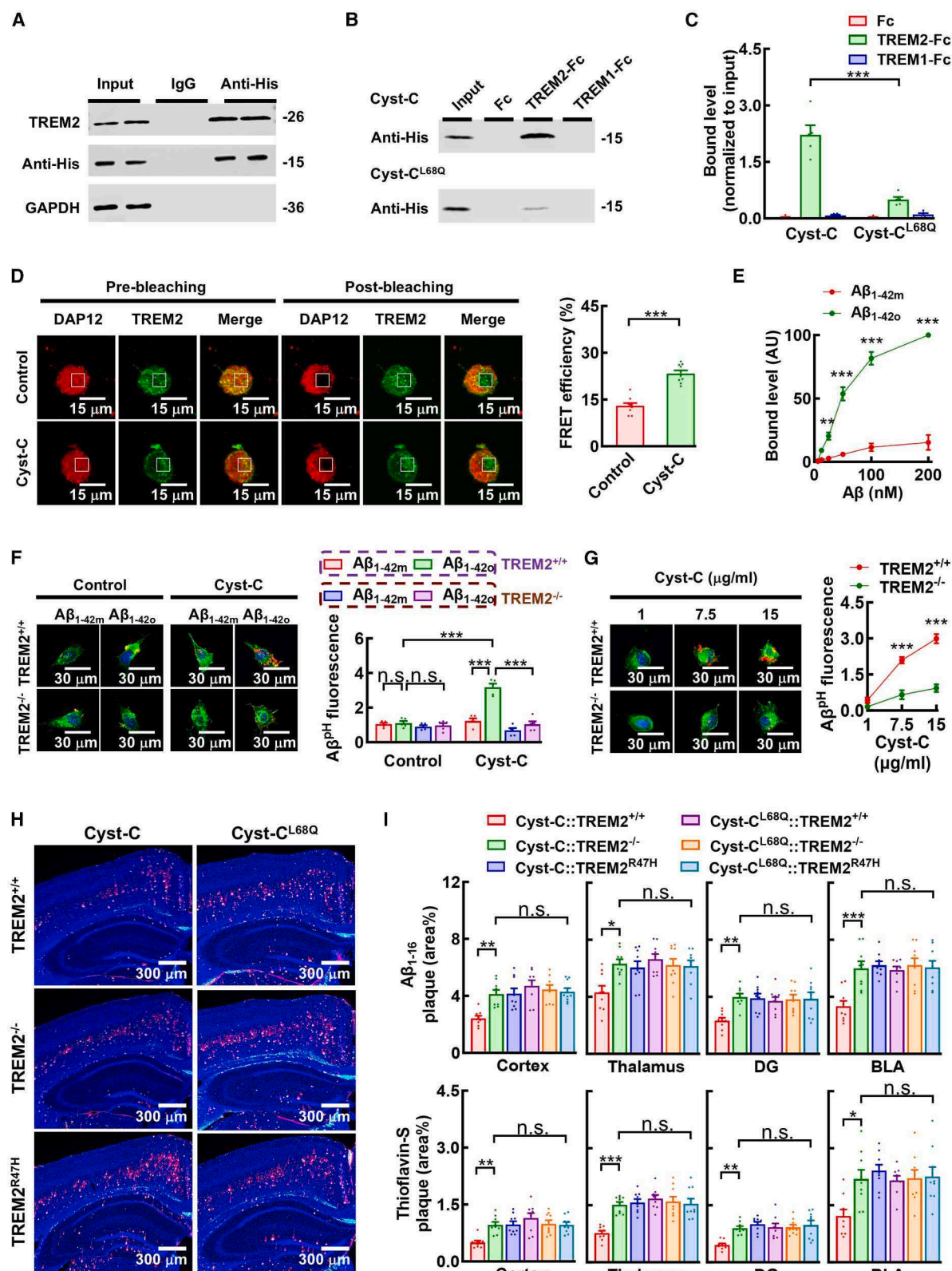
Amyloid aggregates are the main components of senile plaques in the brain and are commonly described as a constant neuropathological feature of early and late AD.^{5–8} The long-term search for AD therapies involving the inhibition of amyloid plaques has focused mainly on amyloid accumulation and plaque formation.^{70–73} A reduction of A β deposition can be caused by BACE1 deletion, indicating that pharmacological inhibition of BACE1 could be a promising strategy for slowing the development of AD-related amyloid pathology.⁷⁴ However, treatments by targeting BACE1 should be initiated before the formation of amyloid plaques.⁷⁵ The generation of A β _{1–42m} is, in and of itself, a physiologically relevant event, whereas its aggregation into oligomers and fibrils is pathogenic.⁷⁶ Thus, the strategy of removing the existing amyloid plaques has emerged as a valid disease-modifying therapy.⁷⁷ Our findings have demonstrated that Cyst-C binds to both A β fibrillary aggregates and TREM2 in microglia and that this binding activates TREM2 in microglia,

Figure 6. Human Cyst-C inhibits amyloid pathology

- (A) Experimental schedule, representative images, and western blots showing human Cyst-C or Cyst-C^{L68Q} in the cortex of 5×FAD mice at 4 months of age after the first five injections. A plot showing the level of human Cyst-C and Cyst-C^{L68Q} in the CSF of 5×FAD mice at 5 months of age after His-tagged human Cyst-C injection once per day for 30 consecutive days. The injections of Cyst-C^{L68Q} mutant and a vehicle solution were used as controls. *n* = 9 mice per group.
- (B) Representative images show that a decrease of plaque-associated TMEM119⁺ microglia was closely associated with an increase of plaque-associated CD68⁺ microglia in the cortex of 5×FAD mice after the injections of human Cyst-C. Bar graphs show the percent of TMEM119⁺ (top) and CD68⁺ (bottom) voxels within 15 μ m around A β _{1–16}⁺ plaques. *n* = 7 mice per group.
- (C) Representative images and plots showing A β _{1–16}-labeled and thioflavin-S-labeled amyloid plaques in the brains of 5×FAD mice at 5 months of age after 30 consecutive injections with human Cyst-C, Cyst-C^{L68Q}, or a vehicle control. *n* = 9 mice per group.
- (D) Illustration showing extracellular recordings of excitatory postsynaptic potentials (EPSPs) from the CA1 hippocampus with stimulation of Schaffer collateral fibers. Representative traces of EPSPs and a plot of the EPSP slope normalized with respect to a 10 min baseline (defined as 100) immediately preceding the tetanus (arrow) in slices from wild-type (WT) or 5×FAD male mice at 5 months of age after the injection of human Cyst-C or Cyst-C^{L68Q}. *n* = 12 recordings from 4 mice per group.
- (E) The latency and length of the swimming path to reach the hidden platform during the training sessions and the percentage of time spent searching for a hidden platform in the target quadrant (quadrant 4) during the probe trials in the Morris water maze of 5×FAD mice at 5 months of age after the injection of human Cyst-C or Cyst-C^{L68Q}. *n* = 11 mice per group.
- (F) Heatmaps and plots showing the number and time of visits to novel arms in the Y-maze of 5×FAD mice at 5 months of age after the injection of human Cyst-C or Cyst-C^{L68Q}. *n* = 11 mice per group.

Data are represented as mean $\pm$ SEM. n.s., **p* < 0.05, ***p* < 0.01, and ****p* < 0.001 by one-way ANOVA with Bonferroni's test (A, C, D, probe trials in E, and F), two-way ANOVA with Bonferroni's test (training sessions in E), or *t* test (B).

See also Figures S9 and S10.



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enabling microglia to phagocytose and degrade the pre-existing amyloid plaques.

Cyst-C is also expressed in neurons and microglia,⁷⁸ while deletion of Cyst-C in all these cell types does not alter amyloid plaque burden in AD mice, raising a question of how a tumor-derived Cyst-C can override the function of brain-derived endogenous Cyst-C. To address this question, we have further dissociated a cancer cell-secreted human Cyst-C from an endogenous mouse Cyst-C by injecting CSPs from LLC^{Cst3} cell cultures expressing His-tagged human Cyst-C into 5×FAD mice. This injection significantly increases the expression levels of human Cyst-C, but not endogenous mouse Cyst-C, in the brain, showing that tumor-derived Cyst-C inhibits amyloid pathology in 5×FAD mice. Significantly, tumor-derived Cyst-C can be readily incorporated into microglia-associated amyloid aggregates. Thus, Cyst-C released from cancer cells can be considered “a molecular glue” for targeted protein degradation of amyloid aggregates. Thus, degradation of pre-existing amyloid plaques by tumor-derived Cyst-C secretion and TREM2 activation may represent an alternative therapeutic modality that is distinct from present amyloid-lowering strategies for the treatment of AD. Our findings are consistent with the previous reports that Cyst-C plays a protective role in amyloid pathology of AD,⁷⁹ while a recent population-based case report indicates that an elevation of circulating Cyst-C correlates with increased dementia risk.⁸⁰ This recent report, however, lacks basic information about patients used for their assays, such as diagnostic criteria for dementia, sampling methods, and sample size.

Sequence variants in a gene encoding TREM2 are associated with an increased risk for late-onset AD.⁸¹ TREM2 is required for a wide variety of cellular functions, including chemotaxis,⁸² maintenance of energy metabolism,⁸³ and phagocytic clearance of apoptotic cell debris.⁸⁴ Despite recent identification of several lipids, APOE, and Aβ oligomers,⁵⁷ functional ligands (agonists) for the activation of TREM2 in microglia have yet to be identified. TREM2 is associated with tumor-derived Cyst-C, whereas a disease-related mutation in TREM2 (TREM2^{R47H}) or human Cyst-C (Cyst-C^{L68Q}) disrupts this association. These findings indicate that tumor-derived Cyst-C can be considered as an agonist of TREM2 in microglia for targeted inhibition of amyloid pathology in AD.

Limitations of the study

Epidemiological studies have generally agreed on a negative association between cancer and AD incidence,^{19–23} while an earlier report by Freedman et al.⁸⁵ indicated a lower incidence of AD among breast cancer patients compared with those with lung cancer. However, patients in this study neither had their blood protein (Cyst-C) levels tested nor received a pathological diagnosis. A correlation between human plasma Cyst-C levels and AD severity has remained undefined. Furthermore, in our present study, we have demonstrated that Cyst-C secreted from cancer cells inhibits amyloid pathology without affecting neurofibrillary tau tangles in AD mice. Thus, the different incidence of AD between breast cancer versus lung cancer survivors reported in an early study⁸⁵ could be due to the different neuropathological severities, such as neurofibrillary tau tangles and amyloid plaques in the cancer survivors.

Thus, one limitation of our study is that we have not found the effects of peripheral cancer and/or CSPs in tau protein misfolding, which is a well-known specific pathological biomarker in AD patients.^{86,87} The tau protein has numerous phosphorylation sites across its N-terminal and C-terminal regions, which are modulated by a balance of various kinases and phosphatases to maintain normal neuronal physiological functions.^{86,88,89} A loss of the balance between phosphatases and kinases may lead to the hyperphosphorylation of tau.^{86,88,89} This process results in the detachment of the tau protein from microtubules, followed by conformational changes and the misfolding and accumulation of tau oligomers. The lack of effects of peripheral cancer on tau pathology suggests that amyloid inhibitors released from peripheral cancer cells may not influence the activity of protein kinases and phosphatases that modify the tau phosphorylation state.

RESOURCE AVAILABILITY

Lead contact

Further information and requests for resources and reagents should be directed to and will be fulfilled by the lead contact, Youming Lu (lym@hust.edu.cn).

Materials availability

This paper did not generate new, unique reagents.

Figure 7. Human Cyst-C degrades existing amyloid plaques via TREM2

(A) Representative blots showing the physical association of human Cyst-C with TREM2. Similar results were observed in each of the three experiments. (B and C) Representative images (B) and a bar graph (C) showing direct binding of His-tagged human Cyst-C (human Cyst-C) but not its mutants human Cyst-C^{L68Q} and TREM2-Fc, nor Fc or TREM1-Fc. *n* = 5 independent experiments. (D) Representative images and a bar graph showing interactions between TREM2-GFP and DAP12-mCherry, as determined by FRET. The white rectangles indicate the regions before (prebleaching) and after (postbleaching) bleaching. In this study, cultured primary microglia expressing TREM2-GFP and DAP12-mCherry were treated with or without human Cyst-C for 30 min. *n* = 9 cells per group. (E) Solid-phase binding assay showing the levels of human Cyst-C bound to Aβ_{1–42o} or Aβ_{1–42m} with different concentrations. The values were normalized to the bound level of Aβ_{1–42o} at the concentration of 200 nM. *n* = 3 independent experiments. (F and G) Representative images and plots showing the uptake of pHrodo-Aβ_{1–42o} or Aβ_{1–42m} in cultured primary microglia from TREM2^{+/+} and TREM2^{−/−} mice induced by human Cyst-C or vehicle at a single dose of 15 μg/mL (F) or three different doses of 1, 7.5, or 15 μg/mL (G), as determined by fluorescence intensity of pHrodo in microglia. *n* = 5 independent experiments in (F), *n* = 3 independent experiments in (G). (H and I) Representative images showing Aβ_{1–16}-labeled and thioflavin-S-labeled amyloid plaques in the brains of TREM2^{+/+} 5×FAD, TREM2^{−/−} 5×FAD, and TREM2^{R47H} 5×FAD mice at 5 months of age. *n* = 9 mice per group.

Data are represented as mean ± SEM. n.s., **p* < 0.05, ***p* < 0.01, and ****p* < 0.001 by one-way ANOVA with Bonferroni's test (C, F, and I), two-way ANOVA with Bonferroni's test (E and G), or *t* test (D).

See also Figures S11–S13 and Table S1.

Data and code availability

- Single-cell RNA-seq data of microglia have been deposited at the China National Center for Bioinformation (CNCB) under accession number CRA033979. Original western blot images have been deposited at Mendeley Data: <https://doi.org/10.17632/rzypfghszv.1>.
- This paper did not report original code.
- Any additional information required to reanalyze the data reported in this paper is available from the [lead contact](#) upon request.

ACKNOWLEDGMENTS

This study is supported by the National Natural Science Foundation of China (grants 82430044 and 32421003 to Y.L. and 82271486 to X.L.); the Key Laboratory of Anesthesiology and Resuscitation, Ministry of Education, China; the Union Hospital, Tongji Medical College; and the Huazhong University of Science and Technology. We thank Drs. Cong Ma and Jianfeng Liu at the Center for Biological Cryo-EM, Huazhong University of Science and Technology, for technical support, suggestions, and comments on this study.

AUTHOR CONTRIBUTIONS

X.L. and Y.L. initiated, designed, and supervised the study; X.L., X.T., and J.Z. generated cancer-bearing mouse models of AD and analyzed amyloid pathology. L.D. analyzed the peripheral tumors in peripheral tissues. Z.H. and L.L. performed behavioral studies and immunohistochemistry studies. Y.G. performed electrophysiological studies. J.L. collected and analyzed serum samples from human patients. C.C., A.H., and Yue Wang purified human Cyst-C and performed western blot studies. J.L. and Ya Wang performed immunohistochemistry studies. X.L., T.Z., X.T., and J.Z. analyzed Cyst-C and TREM2 and TREM2-dependent activation of microglial phagocytosis and clearance of amyloid aggregates. All authors analyzed the data. X.L. and Y.L. wrote the manuscript.

DECLARATION OF INTERESTS

The authors declare no competing interests.

STAR★METHODS

Detailed methods are provided in the online version of this paper and include the following:

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- Novel arm Y-maze test
- Electrophysiology

● QUANTIFICATION AND STATISTICAL ANALYSIS

SUPPLEMENTAL INFORMATION

Supplemental information can be found online at <https://doi.org/10.1016/j.cell.2025.12.020>.

Received: December 4, 2024

Revised: September 5, 2025

Accepted: December 10, 2025

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STAR★METHODS

KEY RESOURCES TABLE

REAGENT or RESOURCE	SOURCE	IDENTIFIER
Antibodies		
mouse anti-A β ₁₋₁₆	Biolegend	Cat# 803003; RRID: AB_2564653
mouse anti-HT7	Invitrogen	Cat# MN1000; RRID: AB_223453
mouse anti-AT8	Invitrogen	Cat# MN1020; RRID: AB_223648
rabbit anti-Gelsolin	Proteintech	Cat# 11644-2-AP; RRID: AB_2295090
rabbit anti-Carboxypeptidase	Proteintech	Cat# 13710-1-AP; RRID: AB_2083913
rabbit anti-Calsyntenin-1	Proteintech	Cat# 12788-1-AP; RRID: AB_2229723
rabbit anti-Cyst-C	Proteintech	Cat# 12245-1-AP; RRID: AB_2088058
rabbit anti-His	Proteintech	Cat# 10001-0-AP; RRID: AB_11232228
rabbit anti-Insulin-degrading enzyme (IDE)	ABclonal	Cat# A11190; RRID: AB_2861515
rabbit anti-ADAM17	ABclonal	Cat# A0821; RRID: AB_2757412
rabbit anti-GAPDH	Proteintech	Cat# 10494-1-AP; RRID: AB_2263076
rabbit anti-beta actin	Proteintech	Cat# 20536-1-AP; RRID: AB_10700003
rabbit anti-TREM2	Cell Signaling Technology	Cat# 89956; RRID: AB_2687924
rabbit anti-SYK	Cell Signaling Technology	Cat# 13198; RRID: AB_2687924
rabbit anti-phospho-SYK	Thermo Fisher Scientific	Cat# MA5-14918; RRID: AB_10989513
rabbit anti-PS1	ABclonal	Cat# A2187; RRID: AB_2764205
rabbit anti-BACE1	ABclonal	Cat# A5266; RRID: AB_2766088
rabbit anti-Iba1	Wako	Cat# A5266; RRID: AB_839504
mouse anti-TMEM119	Cell Signaling Technology	Cat# 98778; RRID: AB_3676700
guinea pig anti-CD68	Synaptic Systems	Cat# 234308; RRID: AB_2924932
rabbit anti-CD31	Proteintech	Cat# 28083-1-AP; RRID: AB_2881055
mouse anti-CD16/32	BioLegend	Cat# 156603; RRID: AB_2783137
donkey anti-rabbit Alexa Fluor 488	Invitrogen	Cat# A32790; RRID: AB_2762833
donkey anti-mouse Alexa Fluor 555	Invitrogen	Cat# A31570; RRID: AB_2536180
goat anti- guinea pig Alexa Fluor 647	Invitrogen	Cat# A-21450; RRID: AB_2535867
donkey anti-rabbit Alexa Fluor 555	Invitrogen	Cat# A31572; RRID: AB_162543
donkey anti-mouse Alexa Fluor 647	Invitrogen	Cat# A32787; RRID: AB_2762830
Dylight 800, Goat Anti-Rabbit IgG	Abbkine	Cat# A23920
Dylight 800, Goat Anti-Mouse IgG	Abbkine	Cat# A23910
FITC anti-mouse CD45	BioLegend	Cat# 103108; RRID: AB_312973
APC anti-mouse CD3	BioLegend	Cat# 100235; RRID: AB_2561455
PerCP/Cyanine5.5 anti-mouse CD4	BioLegend	Cat# 100433; RRID: AB_893330
PerCP/Cyanine5.5 anti-mouse/human CD11b	BioLegend	Cat# 101227; RRID: AB_893233
PE anti-mouse Ly-6C	BioLegend	Cat# 128007; RRID: AB_1186133
PE anti-mouse CD8a	BioLegend	Cat# 100707; RRID: AB_312746
Bacterial and virus strains		
Lenti-CMV-hCst3-GFP virus	Shanghai Taitool Bioscience Co., Ltd.	N/A
Biological samples		
Human plasma	This paper	N/A
Chemicals, peptides, and recombinant proteins		
A β ₁₋₄₂ peptides	Anaspec	Cat# AS-20276
Biotin- A β ₁₋₄₂ peptides	Anaspec	Cat# AS-23523

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REAGENT or RESOURCE	SOURCE	IDENTIFIER
FAM- A β ₁₋₄₂ peptides	Anaspec	Cat# AS-23525
Recombinant human IgG1 Fc	R&D Systems	Cat# 110-HG
Recombinant human TREM2-Fc protein	R&D Systems	Cat# 1828-T2
Recombinant human TREM1-Fc protein	R&D Systems	Cat# 1278-TR
Recombinant human TREM2 ^{R47H} -Fc protein	Shanghai Taitool Bioscience	N/A
4'6'-diamidino-2-phenylindole (DAPI)	Sigma	Cat# D9542; CAS: 28718-90-3
Thioflavin S	MedChemExpress	Cat# HY-D0972; CAS: 1326-12-1
pHrodo™ Red	Invitrogen	Cat# P36600
heat-inactivated fetal bovine serum (HI-FBS)	Sigma	Cat# 12106C
bovine serum albumin (BSA)	Sigma	Cat# B2064-100G; RRID: 9048-46-8
protease inhibitor cocktail	Sigma	Cat# P8340
phosphatase inhibitor cocktails	Sigma	Cat# P2850
Phosphatase Inhibitor Cocktail 2	Sigma	Cat# P5726
PMSF	MedChemExpress	Cat# HY-B0496; CAS: 329-98-6
formic acid	aladdin	Cat# G648434; CAS: 2804039-78-7
EGTA	Sigma	Cat# E3889; CAS: 67-42-5
sarkosyl	Sigma	Cat# L5000; CAS: 97-78-9
LB medium	BIOFOUNT	Cat# HC1007
IPTG	MedChemExpress	Cat# HY-15921; CAS: 367-93-1
Ni-NTA Sepharose column	QIAGEN	Cat# 31014
Superdex-200 Increase 10/300 GL column	CYTIVA	Cat# 28990944
5 × SDS-PAGE loading buffer	affinibody	Cat# AIWB-0025
Protein G-Sepharose	Sigma	Cat# P3296
streptavidin-HRP	Beyotime Biotech	Cat# A0305
mouse serum albumin	Thermo Fisher Scientific	Cat# 23209
amine-functionalized dextran	Thermo Fisher Scientific	Cat# D1860
Radiolabeled sodium iodide ¹²⁵ I	Hubei JUSHENG Technology Co.	Cat# 24359-64-6
TMB solution	Thermo Fisher	Cat# N301

Critical commercial assays

human Cyst-C ELISA kit	Mlbio	Cat# ml027229
human calsyntenin-1 ELISA kit	Mlbio	Cat# ml851547
human gelsolin ELISA kit	Fine Test	Cat# EH0875
human carboxypeptidase-E ELISA kit	Mlbio	Cat# ml060744
human A β ₁₋₄₀ ELISA kit	Thermo Fisher	Cat# KHB3482
human A β ₁₋₄₂ ELISA kit	Thermo Fisher	Cat# KHB3442
human APOE ELISA kit	Elabscience	Cat# E-EL-H0470
mouse APOE ELISA kit	Elabscience	Cat# E-EL-M0135
mouse Cyst-C ELISA kit	Mlbio	Cat# ml063171
mouse calsyntenin-1 ELISA kit	Mlbio	Cat# ml844100
mouse gelsolin ELISA kit	Fine Test	Cat# EM1094
mouse carboxypeptidase-E ELISA kit	Mlbio	Cat# ml844101

Deposited data

RNA-seq of cancer cell and tumor tissue	This paper	Table S1
Proteomic analysis of cancer cell culture media	This paper	Table S1
Proteomic screen of Cyst-C protein complex	This paper	Table S1

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REAGENT or RESOURCE	SOURCE	IDENTIFIER
Single-cell RNA-seq of microglia	This paper	Table S1; CNCB: CRA033979; https://www.cncb.ac.cn/
Original images of Western blots	This paper	Mendeley Data: doi: 10.17632/rzypfghszv.1
Experimental models: Cell lines		
Luciferase-expressing lung cancer cells (LLC)	ORiCells Biotechnology (Shanghai) Co., Ltd	N/A
Luciferase-expressing prostate cancer cells (RM1)	ORiCells Biotechnology (Shanghai) Co., Ltd	N/A
Luciferase-expressing colon cancer cells (MC38)	ORiCells Biotechnology (Shanghai) Co., Ltd	N/A
mutant LLC cancer cells (<i>CLS1</i> -KO)	Shanghai Taitool Bioscience Co., Ltd.	N/A
mutant LLC cancer cells (<i>CPE</i> -KO)	Shanghai Taitool Bioscience Co., Ltd.	N/A
mutant LLC cancer cells (<i>GSN</i> -KO)	Shanghai Taitool Bioscience Co., Ltd.	N/A
mutant LLC cancer cells (<i>Cst3</i> -KO)	Shanghai Taitool Bioscience Co., Ltd.	N/A
mutant LLC cancer cells (<i>Cst6</i> -KO)	Shanghai Taitool Bioscience Co., Ltd.	N/A
mutant LLC cancer cells (<i>Cst7</i> -KO)	Shanghai Taitool Bioscience Co., Ltd.	N/A
BL21-DE3 <i>E. coli</i> cells	MERCK	CAS: 41106202
Experimental models: Organisms/strains		
Mouse: APP/PS1	Jackson Laboratory	RRID: IMSR_JAX: 034832
Mouse: 5×FAD	Jackson Laboratory	RRID: IMSR_JAX: 006554
Mouse: rTg4510	Jackson Laboratory	RRID: IMSR_JAX: 015815
Mouse: CaMK2α-Cre ^{ERT2}	Jackson Laboratory	RRID: IMSR_JAX: 012362
Mouse: Cx3cr1- Cre ^{ERT2}	Jackson Laboratory	RRID: IMSR_JAX: 020940
Mouse: TREM2 ^{flox}	Jackson Laboratory	RRID: IMSR_JAX: 029853
Mouse: TREM2 ^{R47H}	Jackson Laboratory	RRID: IMSR_JAX: 037497
Mouse: Ai9	Jackson Laboratory	RRID: IMSR_JAX: 007909
Mouse: Cst3 ^{flox}	Shanghai Model Organisms Center	Cat# NM-CKO-232632
Mouse: TREM2 ^{KO}	GemPharmatech	Cat# T003346
Software and algorithms		
GraphPad Prism v9.0.	GraphPad Software	https://www.graphpad.com
Image-Pro Plus software	Media Cybernetics	https://www.totalsmart.com.cn/cn/image-pro-plus
Synergy H1 microplate reader	BioTek	N/A
In Vivo FX PRO Imager	Bruker	N/A
Olympus FV3000	Olympus	N/A
Olympus SLIDEVIEW VS200	Olympus	N/A
Image J	National Inst. of Health	RRID:SCR_003070

EXPERIMENTAL MODEL AND STUDY PARTICIPANT DETAILS

Animals

Mice were bred and reared under specific pathogen-free (SPF) conditions. All experiments were approved by the Institutional Animal Care and Use Committee (IACUC) of Huazhong University of Science and Technology, Wuhan, China, and were performed in accordance with the institutional guidelines. Male mice were used to avoid the potential differences between sexes. Mice were housed in groups of three to five mice/cage under a 12-h light-dark cycle, with lights on at 8:00 am, at a consistent ambient temperature ($21 \pm 1^\circ\text{C}$) and humidity ($50 \pm 5\%$). All behavioral tests were conducted during the light phase of the cycle. APP/PS1 (Stock No: 034832), 5×FAD mice (Stock No: 006554), rTg4510 mice (Stock No: 015815), CaMK2α-Cre^{ERT2} mice (Stock No: 012362), Cx3cr1- Cre^{ERT2} mice (Stock No: 020940), TREM2^{flox} (two *loxP* sites flanking exon 2-3; Stock No: 029853), TREM2^{R47H} mice (Stock No: 037497), and Ai9 mice (Stock No: 007909) were purchased from the Jackson Laboratory.

Cst3^{fllox} mice (two *loxP* sites flanking exon 1-2) and *TREM2*^{KO} (knockout exon 2-3) mice were generated and provided by Shanghai Model Organisms Center and GemPharmatech, respectively. *Cst3*^{fllox} mice were crossed with *CaMK2α-Cre*^{ERT2} mice, and 5×FAD mice, to obtain *Cst3*^{-/-}5×FAD mice, in which the *Cst3* gene that encodes Cyst-C was deleted in the cortical neurons following tamoxifen administration. *TREM2*^{fllox} mice were crossed with *Cx3cr1-Cre*^{ERT2} mice, and 5×FAD mice, to obtain *TREM2*^{-/-}5×FAD mice, in which the *TREM2* was deleted in microglia following tamoxifen administration. Mice at 2 months of age received daily intraperitoneal injection of 100 mg/kg tamoxifen dissolved in corn oil for five consecutive days.

The transgenic mice were genotyped by PCR using genomic DNA isolated from the tail samples with the following primer sequences: APP/PS1 (5'-ATGGTAGAGTAAGCGAGAACACG-3', 5'-GGATCTCTGAGGGGTCCAGT-3'), 5×FAD (5'-ACCCCATGTCAGAGTTCCT-3', 5'-CGGGCCTCTTCGCTATTAC-3'), rTg4510 (Tau: 5'-TATTATGATGATTTTGGAGGCTGA-3', 5'-GGTAACCGGCCTCTTCATC-3'; *CaMK2α*: 5'-GACCTGGATGCTGACGAAGG-3', 5'-GCAGCTCTAATGCGCTGT-3'), *CaMK2α-Cre*^{ERT2} (5'-ATACCGGAGATCATGCAAGC-3', 5'-GGCCAGGCTGTTCTTCTTAG-3'), *Cx3cr1-Cre*^{ERT2} (5'-ACGCCAGACTAATGGTGAC-3', 5'-GTTAATGACCTGCAGCCAAG-3'), *Ai9* (5'-CTGTTCTGTACGGCATGG-3', 5'-GGCATTAAAGCAGCGTATCC-3'), *Cst3*^{fllox} mice (5'-ACCCAGCCTCATACCGTAGT-3', 5'-TTTCTCTGAAGGCCCTGTCC-3'); Wild-type: 282 bp; Mutant: 341 bp), *TREM2*^{fllox} mice (5'-CAAAGGAAGGTCCATTTTG-3', 5'-CCTGACCTATGGGCAGTAACA-3'); Wild-type: 196 bp; Mutant: 350 bp), *TREM2*^{KO} (5'-ACACGCAGCCTCTGGTTCTCT-3', 5'-GAGTGCAGGGAGCATAGCGTGT-3', Wild-type: 335 bp; 5'-GCTTGTAGCGTCGGGGATAC-3', 5'-AGGTGGTAGGCTAGAGGTGAC-3', Mutant: 410 bp) and *TREM2*^{R47H} (5'-ACCCTAGTCCTGACTGTTGCT-3', 5'-CCATCTGCTCAAGGAAGGTG-3', Wild-type: 225 bp; 5'-ACCCTAGTCCTGACTGTTGCT-3', 5'-AGGGAAGGAGGGGTGTGAAGA-3', Mutant: 360 bp).

Cell lines

Luciferase-expressing lung cancer (LLC), prostate cancer (RM1), and colon cancer (MC38) cells were purchased from ORiCells Biotechnology (Shanghai) Co., Ltd and verified with STR (Short Tandem Repeat) test. Cells were cultured in 5% CO₂ at 37 °C using Dulbecco's Modified Eagle Medium (DMEM) containing 10% heat-inactivated fetal bovine serum (HI-FBS; Sigma), 100 U/mL penicillin, and 100 μg/mL streptomycin.

Mutant cancer cell lines with deletion of targeting genes including *CLS1*, *CPE*, *GSN*, *Cst3*, *Cst6*, and *Cst7* were engineered by Shanghai Taitool Bioscience Co., Ltd. LLC cancer cells were transiently transfected with PX458-pSpCas9 (BB)-2A-GFP containing gRNA of *CLS1* (5'-CTGCTGGCGGGGCTGCTGTG-3'), *CPE* (5'-GCTGGCGCTGTGTGCCGCGC-3'), *Cst3* (5'-GACGGCCAGCAGGAACAGCA-3'), *GSN* (5'-ACAGTGCACAGCGCCAGG-3'), *Cst6* (5'-TCTGGCGTTCTCCGGTCTCTG-3'), or *Cst7* (5'-CCTAACTTCTGACACCCATG-3'). 24 h after transfection, GFP-positive cells were sorted (FacsAriaIII Cell Sorter, BD) for single-cell clonal selection. Genetic deletion cell lines were identified by DNA sequencing.

To express human *Cst3* (*hCst3*) gene in *Cst3*-deficient LLC cells, the high infectious virus particles (5.6 × 10⁸ genomic particles/mL) lentivirus Lenti-CMV-*hCst3*-GFP virus (Shanghai Taitool Bioscience Co., Ltd.) was applied (2 μL/well) to the cultured cancer cell lines. 48 h after incubation, cancer cell secretory proteins in the culture media were prepared and stored at 4 °C.

Human subjects

Blood plasma samples from cancer patients and health donors was obtained from Union Hospital, affiliated with Tongji Medical college, Huazhong University of Science and Technology. This study was approved by the Institutional Review Board of Huazhong University of Science and Technology (Approval No: 2024-S189) and performed in accordance with the principle of the Helsinki Declaration II. Written informed consent was obtained from all participants.

This study cohort included 38 healthy controls and 203 cancer patients. The patients were stratified by cancer type into the following cohorts: non-small cell lung cancer (n=35), prostate cancer (n=21), colon cancer (n=33), breast cancer (n=46), bladder cancer (n=33), and gallbladder cancer (n=35). Each group included at least 20 samples.

METHOD DETAILS

Cancer-bearing mouse models

LLC, RM1 and MC38 cancer cells were harvested and passed through a 40-μm cell strainer, washed three times in PBS, re-suspended in PBS, and inoculated (tail vein, 2.5 × 10⁵ cells in 100 μL media per injection per day for two consecutive injections) into 5×FAD mice at 3 months old of age or the rTg4510 mice at 5 months old of age. 0, 7, 14, 21, and 28 days after the last injection, in vivo imaging was performed with a Bruker In Vivo FX PRO Imager to examine the tumor growth. At day 30, mice were sacrificed, the tumors, brains, and blood were collected, and the size and number of tumors in the peripheral tissues were calculated.

Screen cancer cell secretory proteins

LLC, RM1 and MC38 cancer cell lines were cultured in a culture dish with a diameter of 10 cm. When the cell density reached 80% area, the cultures were washed three times with serum-free DMEM culture media and cultured in 10 mL serum-free DMEM media. After 24 h, the cultures were harvested and centrifuged for 10 minutes (1,500 g, 4 °C). The supernatants were then centrifuged for 10 minutes (12,000 g, 4 °C). The final supernatants were collected and subjected to proteomic analyses by PTM Biolabs. Data-independent Acquisition (DIA) was processed using Spectronaut (version 18) software. The false discovery rate (FDR) of protein, peptide, and the propensity score matching (PSM) were adjusted to < 1%.

To prepare CSPs, cancer cell culture media were concentrated from 10 to 1 (UFC9003; Millipore), and CSPs in the supernatants were quantified (50 mg proteins/mL supernatants) and injected (tail vein, 100 μ L supernatants per injection per day) into 5 $\times$ FAD mice at 3 or 4 months old of age once per day for 30 consecutive days, or APP/PS1 mice at 6 months old of age once per day for 60 consecutive days.

Immunofluorescence

Mice were anesthetized by intraperitoneal injection with tribromoethanol and transcardially perfused with chilled phosphate-buffered saline (PBS) followed by 4% paraformaldehyde (PFA). Brains were removed quickly after death, fixed in 4% PFA overnight at 4 $^{\circ}$ C, and transferred to 30% sucrose solution for at least 48 h. Serial coronal sections (30 μ m) were sliced using a cryostat (Thermo Fisher Scientific CryoStar NX50). Sections for immunofluorescence were stored at 4 $^{\circ}$ C in PBS until staining. Sections were washed three times with PBS containing 0.1% Triton X-100, blocked in PBS with 5% bovine serum albumin (BSA) at room temperature for 1 h, and incubated for 36–48 h at 4 $^{\circ}$ C in primary antibody containing PBS with 3% BSA. The primary antibodies used for immunofluorescence were mouse anti-A β _{1–16} (1:300, Bio-legend, 803003), mouse anti-HT7 (1:500, Invitrogen, MN1000), and mouse anti-AT8 (1:500, Invitrogen, MN1020), rabbit anti-Iba1 (1:300, Wako, A5266), mouse anti-TMEM119 (1:300, Cell Signaling Technology, 98778), guinea pig anti-CD68 (1:500, Synaptic Systems, 234308), and rabbit anti-CD31 (1:500, proteintech, 28083-1-AP). Afterward, sections were washed and reacted with conjugate-adsorbed Alexa Fluor secondary antibodies (1:300, Invitrogen) against the appropriate species diluted in PBS with 3% BSA at room temperature for 2 h, washed and counterstained with DAPI (1:1,000, Sigma, D9542). For Thioflavin S staining, sections were washed with PBS and stained in 500 μ M thioflavin S solution (MedChemExpress, HY-D0972) in 50% ethanol for 8 min at room temperature. Fluorescence images were captured using a confocal laser-scanning microscope (Olympus FV3000) and a slide scanner (Olympus SLIDEVIEW VS200). The average plaque size and A β fractional area were generated and normalized, with an automated thresholding based on entropy of the histogram. The number of A β deposits was measured for each slice using six slices per mouse. At least 3 independent replicates were analyzed per group. A β plaque size, which is the total area stained for A β counted in a defined region relative to the total area of that region, was calculated by Image J (version 1.8.0).

To validate gene knockout, the cancer cells cultured in the confocal dishes were fixed in 4% PFA for 30 minutes at 4 $^{\circ}$ C, blocked in PBS with 5% bovine serum albumin (BSA) at room temperature for 1 h, and incubated for 24 h at 4 $^{\circ}$ C in primary antibody containing PBS with 3% BSA. The primary antibodies used for immunofluorescence were rabbit anti-Gelsolin (11644-2-AP, Proteintech, 1:500), rabbit anti-Carboxypeptidase (13710-1-AP, Protein tech, 1:500), rabbit anti-Calsyntenin-1 (12788-1-AP, Protein tech, 1:200), and rabbit anti-Cyst-C (12245-1-AP, Protein tech, 1:500). Afterward, cells were washed and reacted with conjugate-adsorbed Alexa Fluor secondary antibodies (1:300, Invitrogen) against the appropriate species diluted in PBS with 3% BSA at room temperature for 2 h, washed and counterstained with DAPI (1:1,000, Sigma, D9542). Fluorescence images were captured using a confocal laser-scanning microscope (Olympus FV3000).

RNA-sequencing analysis

All the samples (cancer cells and cancer tissues) were subjected to RNA-seq by CapitalBio Technology. The raw gene counts were processed with the DESeq2 package (version 1.42.1) in R (version 4.3.2) to analyze differentially expressed genes, a p-adjust value cutoff of 0.05 and fold-change cutoff of 2 were used to judge the statistical significance of gene expression differences. Heatmap and volcano plot were performed in R (version 4.3.2) using the pheatmap package (version 1.0.12) and ggplot2 package (version 3.5.1).

Protein extraction

To extract water-soluble, detergent-soluble, and insoluble fractions of the brain, a three-step protocol was used as described before.⁹⁰ The brains of 5 $\times$ FAD mice were weighed, transferred to 4 volumes of ice-cold buffer A (25 mM Tris-HCl, pH 7.4; 140 mM NaCl; 3 mM KCl; 0.1 mM phenylmethylsulfonyl fluoride; 0.2 mM 1,10-phenanthroline monohydrate; protease inhibitor cocktail (P8340, Sigma-Aldrich, St. Louis, MO); and phosphatase inhibitor cocktails (P2850 and P5726, Sigma-Aldrich)) and homogenized. The homogenate was centrifuged for 90 min (16,100 g; 4 $^{\circ}$ C); the supernatant was harvested as the water-soluble fraction. The pellets were transferred to 4 volumes of ice-cold buffer B (25 mM Tris-HCl, pH 7.4; 140 mM NaCl; 3 mM KCl; 1% (v/v) Triton-X-100; 0.1 mM phenylmethylsulfonyl fluoride; 0.2 mM 1,10-phenanthroline monohydrate; protease inhibitor cocktail (P8340, Sigma-Aldrich); and phosphatase inhibitor cocktails (P2850 and P5726, Sigma-Aldrich)) and homogenized. The homogenate was centrifuged for 90 min (16,100 g; 4 $^{\circ}$ C); the supernatant was harvested as the detergent-soluble fraction. The pellets were transferred to 40 μ L of 70% formic acid and homogenized by repeatedly pipetting and vigorously shaking at room temperature for 30 min. The acidic pH of the homogenate was neutralized using 800 μ L of 1 M Tris-base solution (no pH adjustment, pH $\sim$ 10.6) and centrifuged for 90 min (16,100 g; 4 $^{\circ}$ C). The supernatant was harvested as the insoluble fraction.

The brains of rTg4510 mice were weighed, transferred to 10 volumes of ice-cold extraction buffer (10 mM Tris HCl, PH 7.5; 0.8 M NaCl, 10% (w/v) sucrose; 1 mM EGTA, 2% (w/v) sarkosyl (Sigma, 97-78-9); and protease inhibitor cocktails (P8340, Sigma-Aldrich, St. Louis, MO)) and homogenized. The homogenate with an additional 5 volumes of extraction buffer was incubated at 37 $^{\circ}$ C for 30 min statically and subsequently centrifuged for 10 min (20,000 g, 25 $^{\circ}$ C). The supernatants were collected and centrifuged for 20 min (100,000g; 25 $^{\circ}$ C). The resulting supernatants were soluble fractions and the precipitates were insoluble fractions.

Cortex of Cst3^{-/-}5 $\times$ FAD (5 $\times$ FAD::CaMK2 α -Cre^{ERT2}::Cst3^{fllox/fllox}::Ai9), Cst3^{+/+}5 $\times$ FAD (5 $\times$ FAD::CaMK2 α -Cre^{ERT2}::Ai9), TREM2^{-/-}5 $\times$ FAD (5 $\times$ FAD::Cx3cr1-Cre^{ERT2}::TREM2^{fllox/fllox}::Ai9), and TREM2^{+/+}5 $\times$ FAD (5 $\times$ FAD::Cx3cr1-Cre^{ERT2}::Ai9) mice with

tamoxifen treatment were prepared and digested in buffer containing 10 mM Tris-Cl (pH 7.6), 50 mM NaF, 1 mM Na₃VO₄, 1 mM edetic acid, 1 mM benzamidine, 1 mM PMSF, 1 mg/10 mL papain, and a mixture of aprotinin, leupeptin, and pepstatin A (10 µg/mL each) for 30 min. Suspended tdTomato-expressing cortical neurons or microglia were automatically isolated using an FACS Aria III Cell Sorter (BD), homogenized, and diluted with a buffer containing 200 mM Tris-Cl (pH 7.6), 8% SDS, and 40% glycerol.

Measurements of ¹²⁵I-Cyst-C penetrate the blood-brain barrier and entry to the brain

Human Cyst-C was synthesized and purified, as described below. 67-kDa mouse serum albumin (CAS#: 23209) and 10-kDa amine-functionalized dextran (CAS#: D1860) were purchased from Thermo Fisher Scientific. Radiolabeled sodium iodide ¹²⁵I (CAS#: 24359-64-6) was purchased from Hubei JUSHENG Technology Co. Briefly, sodium hydroxide ¹²⁵I was diluted in phosphate-buffered saline (pH 7.3) and oxidized for 5 minutes with intermittent agitation and then transferred to a tube containing human Cyst-C, mouse albumin or amine-functionalized dextran solution and incubated for 5 minutes with constant agitation. ¹²⁵I-Cyst-C, ¹²⁵I-dextran and ¹²⁵I-albumin were then purified using NAPTM-5 20 ST columns (GE17-0853-01, Sigma-Aldrich) pre equilibrated in phosphate-buffered saline (pH 7.3). The purified proteins were assessed by size-exclusion HPLC. Radioactivity was measured in the brain and blood using a Wizard 2480 automatic gamma counter (PerkinElmer Instruments Inc) 3 or 12 h after the intravenous injections (tail vein) of ¹²⁵I-Cyst-C, ¹²⁵I-dextran or ¹²⁵I-albumin. To visualize the spatial distribution of ¹²⁵I-Cyst-C, ¹²⁵I-dextran and ¹²⁵I-albumin in the brain, Mice were anesthetized by intraperitoneal injection with tribromoethanol and perfused with chilled phosphate-buffered saline (PBS) followed by 4% paraformaldehyde (PFA). Sagittal cryosections (20 µm) were sectioned and placed in an X-ray cassette along with standards of known ¹²⁵I-radioactivity and exposed to GE storage phosphor screens (GE28-9564-74, MERCK). The radioactive samples were exposed for 6 days and were scanned in a Cyclone Plus Imager system (Perkin – Elmer). Digital images were converted to a false color scale with ImageJ and normalized to the standards. To measure the concentrations of ¹²⁵I-Cyst-C, ¹²⁵I-dextran and ¹²⁵I-albumin, we precipitated these proteins from the plasma and the brain lysates using antibodies against human Cyst-C, dextran and albumin, respectively. The radioactivity (cpm) in the precipitates was then calculated using a γ-counter (WIZARD² 2480, PerkinElmer Instruments Inc).

Flow cytometry

Immunophenotyping was performed using a FACS CALIBUR flow cytometer (BD Biosciences). For surface marker staining, cells were incubated with specific antibodies against CD45 (0.5 µL/10⁶ cells, BioLegend, 103108), CD3 (0.5 µL/10⁶ cells, BioLegend, 100235), CD4 (0.5 µL/10⁶ cells, BioLegend, 100433), CD8 (0.5 µL/10⁶ cells, BioLegend, 100707), CD11b (0.5 µL/10⁶ cells, BioLegend, 101227), and Ly6C⁺ (0.5 µL/10⁶ cells, BioLegend, 128007) for 30 min at 4 °C. To ensure data accuracy, each sample included an unstained control and a fluorescence-matched isotype control (BD Biosciences). Data were acquired on the FACS Calibur cytometer using CellQuest software (BD Biosciences), collecting 50,000 events per sample. Analysis was performed with FlowJo 10.0.6 (Tree-Star, USA), applying gating strategies based on forward scatter (FSC), side scatter (SSC).

Whole-body irradiation

We placed 5×FAD mice at 3 months of age into an irradiation chamber of an RS2000 Supper X-ray irradiator (JUNSENG, Shanghai, China), ensuring whole-body uniform exposure to irradiator with lead shielding over the head. X-ray irradiator was calibrated to 160 kVp and a low-dose of X-ray whole-body irradiation was applied for 3.5 minutes (dose rate = 0.86 Gy/min). After irradiation, mice were returned to their home cages under strict aseptic conditions. 24 h post-irradiation, blood samples were collected from tail vein and peripheral immune cells were analyzed by flow cytometry. Data confirmed the depletion of over 80% of immune cells, including CD11b⁺Ly6C⁺ monocytes and CD45⁺ T cells. Subsequently, mice received injections of LLC cells (2.5 × 10⁵ cells in 100 µL media per injection per day for two consecutive injections) via the tail vein. 10 days after the injections, a second round of irradiation was administered to sustain immune cell depletion during tumor growth. The mice were sacrificed 20 days later, the blood samples, brain and tumor tissues were collected. Tumor size and number in the peripheral tissues, amyloid plaque burden and Cyst-C expression levels were analyzed.

Microglia isolation from adult mouse brain

Following transcardial perfusion with ice-cold PBS, brains were rapidly dissected and mechanically minced in Dulbecco's PBS (dPBS). Tissue dissociation was conducted using the Adult Brain Dissociation Kit (Miltenyi Biotec, 130-107-677) on a gentleMACSTM Dissociator (Miltenyi Biotec, 10A0-093-235). The homogenate was filtered through a 70µm MACS SmartStrainer and centrifuged for 10 min (300g, 4°C). Cellular debris was removed by density gradient centrifugation with Debris Removal Solution (Miltenyi Biotec) for 10 min (3000g, 4°C). Erythrocyte contamination was eliminated by incubation with 1×Red Blood Cell Removal Solution for 10 min at 4°C, neutralized with PBS with 0.5% BSA. Following centrifugation, the cell pellet was resuspended in PBS with 5% BSA. For microglia enrichment, single-cell suspensions were incubated with CD11b MicroBeads (Miltenyi Biotec, 130-093-634) for 15 min at 4°C. Labeled cells were isolated on LS columns mounted in a QuadroMACSTM separator (Miltenyi Biotec). The purified CD11b⁺ microglia were washed, resuspended in appropriate assay buffers, and used for subsequent applications.

Single-cell RNA sequencing analysis

The freshly prepared single-cell suspension was adjusted to an optimal concentration of 700–1,200 cells/ μ L. Library preparation and sample loading were performed according to the manufacturer's protocol using the 10x Genomics Chromium Next GEM Single Cell 3' Reagent Kits v3.1 (cat. no.1000268). The resulting libraries were subsequently sequenced on an Illumina NovaSeq 6000 platform with paired-end 150bp (PE150) chemistry to achieve appropriate sequencing depth and coverage.

ELISA assays

The human plasma, the fractions of the brain, and cell culture media were obtained as described above. Mouse blood was centrifuged in the anticoagulant tube for 10 min (1,000 g; 4°C), and the supernatant was harvested as mouse plasma. Assays using the ELISA kits for human Cyst-C (mI027229, Mlbio), human calyntenin-1 (mI851547, Mlbio), human gelsolin (EH0875, Fine Test), human carboxypeptidase-E (mI060744, Mlbio), human A β _{1–40} (KHB3482, Thermo Fisher), human A β _{1–42} (KHB3442, Thermo Fisher), human APOE (Elabscience, E-EL-H0470), mouse APOE (Elabscience, E-EL-M0135), mouse Cyst-C (mI063171, Mlbio), calyntenin-1 (mI844100, Mlbio), gelsolin (EM1094, Fine Test), and carboxypeptidase-E (mI844101, Mlbio) were performed according to the manufacturer instructions. At least 3 independent replicates were analyzed per group.

Cyst-C expression and purification

Human or mouse Cyst-C (wild-type and L68Q mutant) was expressed and purified as previously described,⁹¹ with minor modifications. Constructs encoding human Cystatin C and the L68Q variant were obtained from BGI Genomics Co. Ltd (Shenzhen, China) and cloned into the pCold-TF2.0 plasmid (Takara) under the CSPA promoter. Proteins were expressed in *E. coli* BL21(DE3) cells (CAS No: 41106202, MERCK). Cultures were initially grown in 50 mL of LB medium (HC1007, BIOFOUNT) supplemented with ampicillin (50 mg/L) and then scaled up to 1 L. Cells were incubated at 37 °C until OD₆₀₀ reached ~0.6, followed by induction with 1 mM IPTG (CAS No: 367-93-1, MCE). Expression continued at 16 °C for 18 h. Cells were harvested by centrifugation at 6,000 $\times$ g for 15 min, resuspended in lysis buffer (20 mM HEPES, pH 7.5, 300 mM NaCl, 10 mM imidazole, 5% glycerol), and lysed by sonication. The lysate was clarified by centrifugation at 15,000 $\times$ g for 40 min, and the supernatant containing soluble protein was applied to a Ni-NTA agarose column (Vazyme, HP202-01) for affinity purification. The column was washed with five column volumes of binding buffer (20 mM HEPES, pH 7.5, 300 mM NaCl, 10 mM imidazole), followed by an additional wash containing 100 mM imidazole. The bound protein was eluted with buffer containing 20 mM HEPES, pH 7.5, 300 mM NaCl, and 500 mM imidazole. Eluted fractions were concentrated using Amicon Ultra-0.5 centrifugal filters (3 kDa MWCO, Millipore). The His-TF tag was removed by overnight digestion at 4 °C with HRV 3C protease (1:100, w/w). The digest was further purified by size-exclusion chromatography on a Superdex 75 Increase 10/300 GL column (GE Healthcare) equilibrated in 20 mM HEPES, pH 7.5, 150 mM NaCl.

Homogeneous fractions, as confirmed by SDS-PAGE, were pooled and concentrated. Protein concentrations were determined using the BCA assay. All purification steps were performed using endotoxin-free ultrapure reagents and water. The final preparations (both human and mouse Cyst-C) were highly pure and free of detectable endotoxin (<0.01 EU/ μ g, based on absorbance at 405 nm), ensuring suitability for downstream cellular and structural analyses.

A β uptake and degradation assay

A β _{1–42} monomers (A β _{1–42m}) and A β _{1–42} oligomers (A β _{1–42o}) were prepared as described before. Unlabeled, FAM-labeled, and biotin-labeled synthetic human A β _{1–42} peptides (Anaspec) were diluted in 1 $\times$ PBS as A β _{1–42m}. A β _{1–42m} were then oligomerized by incubation at 22°C for 48 h, centrifuged for 10 minutes at 16,000g at 25°C, and the supernatant was harvested as A β _{1–42o}. pHrodo-A β _{1–42m} was obtained by labeled A β _{1–42m} with pHrodo™ Red (Invitrogen) according to the manufacturer instructions and oligomerized as pHrodo-A β _{1–42o}.

For primary microglial cell culture, brains were removed from TREM2^{+/+} and TREM2^{-/-} mice at postnatal day 2–3 and then dissociated by enzymatic digestion using a Neural Tissue Dissociation Kit P (Miltenyi Biotec) according to the manufacturer instructions. Microglia were labeled with magnetical CD11b MicroBeads (Miltenyi Biotec), loaded onto a MACS column (Miltenyi Biotec), and subjected to magnetic separation. Isolated microglia were cultured in DMEM/F12 medium supplemented with 10% heat-inactivated FBS and 1% penicillin/streptomycin and maintained in a humidified 5% CO₂ incubator at 37°C. After 24 h, cultured medium was replaced with fresh medium for 3 days until use for uptake and degradation assays.

For A β uptake assay, 5 $\times$ 10⁴ cultured primary microglia were seeded overnight into a 12-well plate before adding with hCyst-C (1, 7.5, or 15 μ g/mL) and pHrodo-A β _{1–42m} (200 nM) or pHrodo-A β _{1–42o} (200 nM). After 2 h of treatment, cells were fixed with 4% paraformaldehyde (PFA) and A β uptake was determined by quantifying pHrodo fluorescence, which colocalized with the anti-Iba1 by immunofluorescence. For A β degradation assay, primary microglia were incubated with FAM-A β _{1–42o} (200 nM) for 0.5, 1, or 2 hours in the presence or the absence of human Cyst-C (15 μ g/mL). After the removal of FAM-A β _{1–42o}, cells were fixed with 4% PFA and the uptake and degradation of A β was determined by quantifying FAM fluorescence. Images in at least three randomized fields per treatment were taken by confocal microscopy, and Image-Pro Plus software was used for data analysis.

Microglial phagocytosis of A β in AD mice

Quantitative in vivo assessment of A β phagocytic capacity was performed as previous report with minor modification.⁹² TREM2^{-/-} $\times$ FAD mice and TREM2^{+/+} $\times$ FAD mice (4 months old) were injected vehicle, His-tagged hCyst-C or His-tagged

Cyst-C^{L68Q} once per day for 30 consecutive days. The mice were intraperitoneally injected with Methoxy-X04 (10 mg/kg). 3 h later, mice were euthanized, perfused with ice-cold PBS, and the hippocampus and the prefrontal cortex were dissected. Tissues were enzymatically dissociated using a papain-based solution at 37°C for 40 minutes with gentle trituration. After centrifugation, myelin debris was removed via a 30% Percoll gradient. The resulting cell pellet was resuspended in DMEM/F12 with 10% FBS. A portion of the cell suspension was stained with anti-CD11b-APC antibody for 45 minutes at 4°C with rotation. After washing, cells were analyzed by flow cytometry. Microglia were identified as CD11b⁺ populations, and MeX04 fluorescence was used to quantify the uptake of A β aggregates. Unstained controls were used to establish gating. The percentage of MeX04⁺ microglia represented A β -phagocytic microglia, while MeX04 fluorescence intensity reflected phagocytic capacity. The confocal imaging was employed to visualize the intracellular localization of MeX04 in A β phagocytic microglia.

Co-IP and Western blots

Cerebral cortex from cancer-bearing 5 $\times$ FAD mice treated with human Cyst-C was homogenized in ice-cold lysis buffer containing 50 mM Tris-HCl (pH 7.4), 150 mM NaCl, 1% NP-40, 2 mM EDTA, 1 mM Na-orthovanadate and proteinase inhibitor mixture (Sigma, 5 μ L/100 mg tissue). After clearing debris by centrifuging at 14,000 *g* at 4°C, protein concentration in the extracts was determined by Bradford assay (Bio-Rad, Hercules, CA). The extracts (~500 μ g protein) were incubated with nonspecific polyclonal rabbit anti-His (2 μ g; 10001-0-AP, Protein tech) overnight at 4°C, followed by the addition of 40 μ L of Protein G-Sepharose (Sigma) for 3 h at 4°C. The precipitates were washed four times with lysis buffer and subjected to proteomic analyses (PTM Biolabs) or denatured with SDS sample buffer and separated by 12% SDS-PAGE.

For cell-free binding assay, 0.5 μ g His-tagged hCyst-C or hCyst-C^{L68Q} was incubated with 0.5 μ g A β _{1-42m} or A β _{1-42o} and nonspecific polyclonal rabbit anti-His (2 μ g; 10001-0-AP, Protein tech) in TBST buffer overnight at 4°C, followed by the addition of 40 μ L of Protein G-Sepharose (Sigma) for 3 h at 4°C. The precipitates were washed four times with lysis buffer and denatured with SDS sample buffer and separated by 8% or 15% SDS-PAGE respectively for A β _{1-42m} or A β _{1-42o} blots. 0.5 μ g human IgG1 Fc, TREM2-Fc, TREM1-Fc or TREM2^{R47H}-Fc was incubated with 0.5 μ g His-tagged hCyst-C or hCyst-C^{L68Q} in TBST buffer overnight at 4°C, followed by the addition of 40 μ L of Protein G-Sepharose (Sigma) for 3 h at 4°C. The precipitates were washed four times with lysis buffer and denatured with SDS sample buffer and separated by 12% SDS-PAGE. Human IgG1 Fc, TREM2-Fc and TREM1-Fc were obtained from R&D Systems and TREM2^{R47H}-Fc was purified by Shanghai Taitool Bioscience.

Proteins were transferred onto nitrocellulose membranes using a Bio-Rad mini-protein-III wet transfer unit overnight at 4°C. Transfer membranes were then incubated with blocking solution (5% no-fat milk in TBST) for 1 h at room temperature, washed three times, and incubated with rabbit anti-Cyst-C (12245-1-AP, Protein tech, 1:500), rabbit anti-His (10001-0-AP, Protein tech, 1:1000), rabbit anti-TREM2 (89956, Cell Signaling Technology, 1:1000) and mouse anti-A β ₁₋₁₆ (803003, Bio-legend, 1:500) for 1 h at room temperature. Membranes were washed three times with TBST buffer and incubated with the secondary antibody at room temperature for 1 h (Dylight 800, Goat Anti-Rabbit IgG, A23920, Abbkine, 1:10000; Dylight 800, Goat Anti-Mouse IgG, A23910, Abbkine, 1:10000). After incubation with secondary antibody, the membrane was washed in TBST as after incubation with primary antibody.

In Western blots with protein extracted from brain tissues or cells, 5 $\times$ SDS-PAGE loading buffer (AIWB-0025, affinity body) was added to each protein sample (1:4, v/v, buffer: sample), and the samples were heated at 95°C for 5 min. The denatured sample was loaded onto a 8–15% SDS-polyacrylamide Tris-Tricine gel and electrophoresis separation was performed at a constant current (20 mA) at room temperature. The separated proteins were then transferred to nitrocellulose membranes (10600002, Cytiva) under low temperature conditions (transfer performed at 4°C, 275mA constant current, 1 h). Membranes are incubated in 5% BSA blocking buffer for 1–2 h to block non-specific binding sites (5% (w/v) bovine serum albumin (BSA) (B2064-100G, Sigma-Aldrich)). Primary antibodies were then added directly to the universal antibody diluent as follows: mouse anti-HT7 (MN1000, Invitrogen, 1:500), mouse anti-AT8 (MN1020, Invitrogen, 1:500), rabbit anti- β -actin (20536-1-AP, Protein tech, 1:10000), rabbit anti-Insulin-degrading enzyme (IDE) (A11190, Abclonal, 1:500), rabbit anti-ADAM17(A0821, Abclonal, 1:500), rabbit anti-Cyst-C (12245-1-AP, Protein tech, 1:500), rabbit anti-His (10001-0-AP, Protein tech, 1:1000), mouse anti-A β ₁₋₁₆ (803003, Bio-legend, 1:500), rabbit anti-PS1 (A2187, Abclonal, 1:500), rabbit anti-BACE1 (A5266, AB clonal, 1:300), rabbit anti-TREM2 (89956, Cell Signaling Technology, 1:1000), rabbit anti-SYK (13198, Cell Signaling Technology, 1:1000), rabbit anti-phospho-SYK (MA5-14918, Thermo Fisher Scientific, 1:1000) and rabbit anti-GAPDH (10494-1-AP, Protein tech, 1:10000). Membranes were incubated overnight at 4°C on an orbital shaker. After incubation with primary antibody, the membrane was washed three times with TBST washing buffer (10 mM Tris-HCl, pH 7.4; 200 mM NaCl; 0.1 % (v/v) Tween-20) at room temperature for 10 min each time. The membranes were then incubated with the secondary antibody at room temperature for 1 h (Dylight 800, Goat Anti-Rabbit IgG, A23920, Abbkine, 1:10000; Dylight 800, Goat Anti-Mouse IgG, A23910, Abbkine, 1:10000). After incubation with secondary antibody, the membrane was washed in TBST as after incubation with primary antibody. We used the Odyssey® Imager-Image Studio Ver 2.0 for visualization and the ImageJ software Ver. 2.3.0 for quantitative analysis of protein bands. The original blots in this study were deposited at Mendeley Data: doi: [10.17632/rzypfghszv.1](https://doi.org/10.17632/rzypfghszv.1).

Solid phase binding assay

Nunc MaxiSorp 96-well plate was coated with 0.2 mg His-tagged hCyst-C per well, followed with blocking in 5% no-fat milk in TBS for 2 h at room temperature. Biotin-labeled A β _{1-42m} or A β _{1-42o} were added with the concentration of 6.25, 12.5, 25, 50, 100, or 200 nM

overnight at 4°C. After washing with TBST, streptavidin-HRP (Beyotime Biotech) was added for 0.5 h at room temperature. The plate was washed with TBST for three times, developed in TMB solution (Thermo Fisher Scientific), and absorbance at 450 nm was measured with a Synergy H1 microplate reader (Bio-Tek).

FRET assay

24 h after the transfection of TREM2-GFP and DAP12-mCherry, BV2 cells were incubated with or without hCyst-C at the concentration of 15 µg/mL for 1 h. The fluorescence intensity of the donor before and after bleaching was quantified, and each group contains 9 cells from three independent experiments. FRET efficiency was calculated by $E_{\text{fret}} = 1 - (I_a/I_b)$, where I_a and I_b represents the steady-state donor fluorescence with or without the acceptor, respectively.

Morris water maze

We filled a 1.5 m-diameter swimming pool with white and non-toxic ink water. Pool temperature was maintained at 25 °C. We placed a mouse to the behavior room where it was housed for 1-2 days before training session, as described before. The training session lasted for 6 days. In the first day of training, a mouse was allowed resting on the platform for 30 s and to have 60 s for finding the hidden platform. In case that a mouse did not find the platform within 60 s, we guided this mouse to find and stay the platform for 30 s. Throughout the period of training session, the animal was required for perform a total of 4 trials, in which a mouse was released at four different randomized release points of the pool. Immediately, after the training session, this mouse was required to perform probe trials at day 2 after the training session. In both training and probe trials, the behavioral tests were performed by an experimenter who was unaware of the genotypes and treatments.

Novel arm Y-maze test

Novel arm Y-maze test was adapted from previous studies.²⁸ The maze consisted of three arms (35 × 35 × 35 cm) with 120-degree angles between arms. Each of the arms was cleaned with 70% ethanol solution between trials. We randomly arranged three arms: start arm, in which the mouse started to explore (always open), novel arm, which was blocked at the first trial but opened at the second trial, and the other arm (always open). The start arm and the other arm were designed randomly to avoid the spatial memory error. We placed visual cues on the walls of the maze to discriminate different arms. We performed two trials separated by an inter-trial interval of 60 min in the test. In the first trial, the mouse was placed in the start arm and explored the maze for 8 min with the novel arm closed. In the second trial, we placed the mouse back in the maze in the same starting arm, with free access to all three arms for 5 min. We recorded the number of entries and the time spent in each arm by using a ceiling-mounted camera and used the amount of time in the novel arm relative to the total time during the second trial as an index of spatial work memory. The total number of arm visits was considered as an index of locomotor activity.

Electrophysiology

Hippocampal slices (350 µm) were cut from the mice and were placed in a holding chamber for at least 1 h. A single slice was then transferred to the recording chamber and submerged and superfused with artificial CSF (ACSF, 2 mL/min) that had been saturated with 95% O₂–5% CO₂. The composition of the ACSF was (in mM): 124 NaCl, 3 KCl, 1.25 NaH₂PO₄, 2 MgCl₂, 2 CaCl₂, 26 NaHCO₃, 10 dextrose. Field EPSPs were recorded with micropipettes at 30 ± 2°C filled with ACSF and evoked by stimulation of the Schaffer-collateral fibers at a frequency of 0.1 Hz. LTP was induced by three trains of 100 Hz stimulation lasting 500 msec, at an intertrain interval of 10 sec.

QUANTIFICATION AND STATISTICAL ANALYSIS

All values in the text and figures are represented as the mean ± SEM, where the n value represents the number of independent biological replicates or animals. Unpaired two-tailed Student's t tests and Bonferroni's post hoc test following the one-way or two-way analyses of variance (BF ANOVA) were used when assumptions of normality and equal variance (F test) were met. Significance was accepted for $p < 0.05$. Statistical significance in figures and supplemental figures is indicated as follows: * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$. The exact sample numbers (n) and statistical analysis are indicated in each figure legend. Power calculations were performed using GraphPad Prism v9.0. Group sizes were estimated based on our previous studies.^{93–96}

Supplemental figures

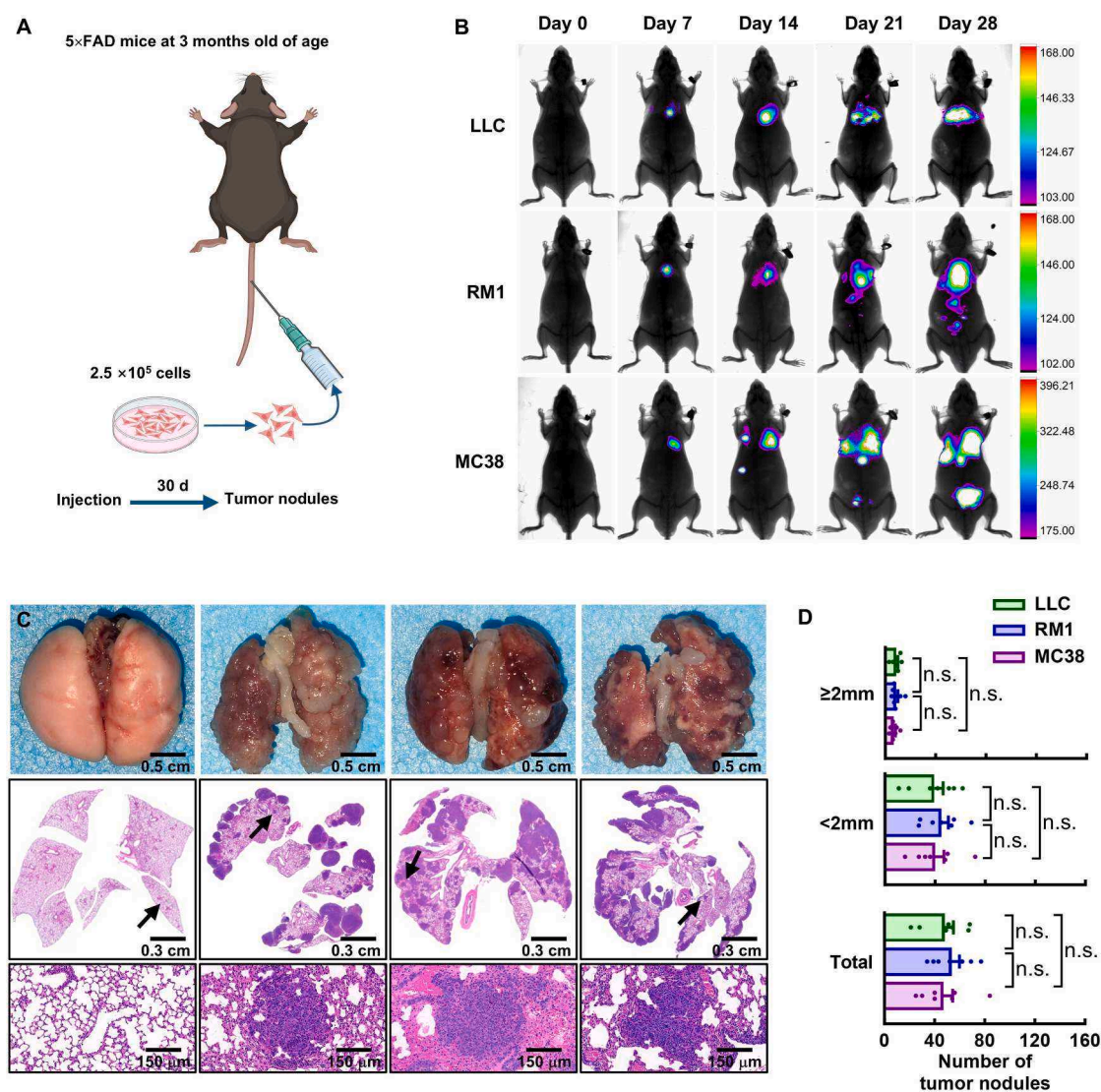


Figure S1. Preclinical cancer-bearing AD mouse models, related to Figure 1

(A) Illustration showing the generation of cancer-bearing AD mouse models by injection (tail vein) of LLC, RM1, and MC38 cancer cell lines (2.5×10^5 cells/0.1 mL) into 5x FAD male mice at 3 months of age or rTg4510 male mice at 5 months of age.

(B–D) Representative *in vivo* images (B), tumor tissues, HE staining of tumor tissue sections (C), and a bar graph (D) showing the number and the size of tumor nodules. $n = 7$ mice per group.

Data are represented as mean ± SEM. n.s. by one-way ANOVA with Bonferroni's test (D).

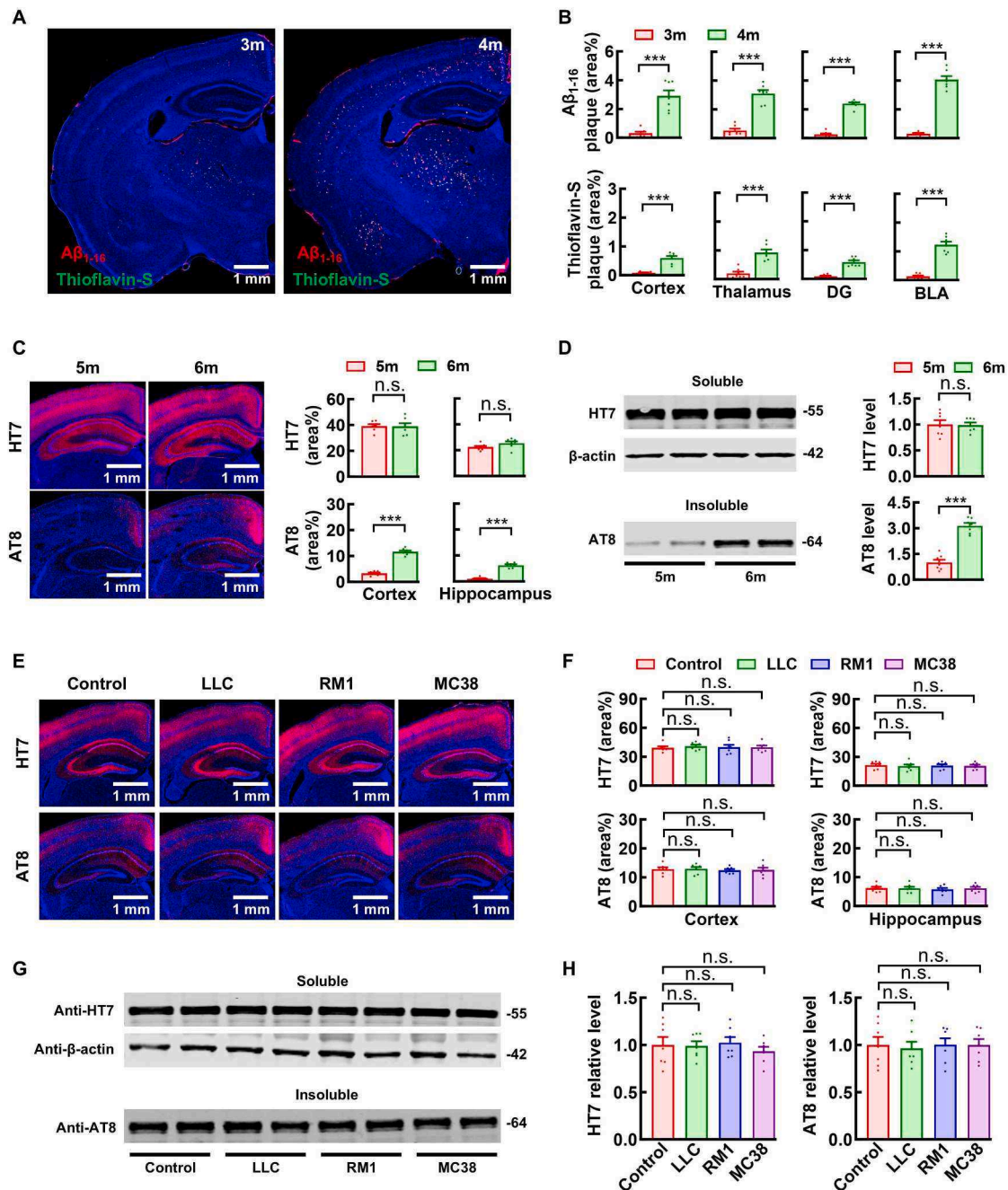


Figure S2. Peripheral cancer attenuates amyloid plaque burden but not tau tangle aggregation, related to Figure 1

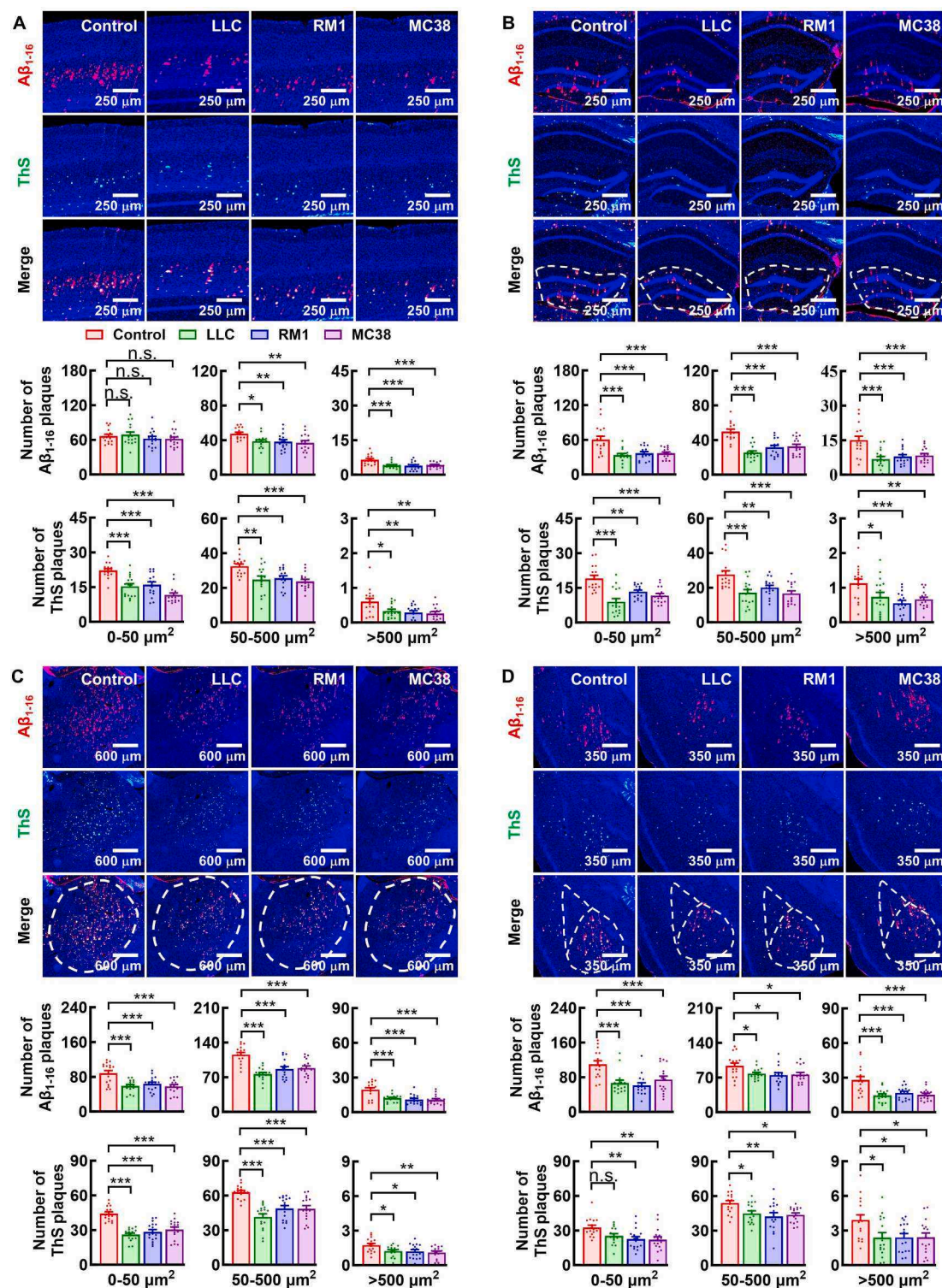
(A and B) Representative images (A) and bar graphs (B) showing anti- $A\beta_{1-16}$ -labeled (red) and thioflavin-S-labeled (green) plaques in the cortex, the thalamus, the DG, and the BLA of 5x FAD mice at 3 or 4 months of age. $n = 7$ mice per group.

(C and D) Phosphorylated tau (AT8) is detectable in rTg4510 mice at 6 months of age. Representative images (C) and western blots (D) and bar graphs showing anti-HT7 that labels total tau proteins and AT8 that labels phosphorylated tau in the cortex and the hippocampus of rTg4510 mice at 5 or 6 months of age. $n = 7$ mice per group.

(E and F) Peripheral tumor does not affect tau aggregation. Representative images (E) and plots (F) showing brain sections stained with HT7 for human tau protein and AT8 for tau phosphorylated at 202/205 in the cortex and hippocampus of LLC, RM1, and MC38 cancer rTg4510 mice. $n = 7$ mice per group.

(G and H) Western blots (G) and plots (H) showing anti-HT7 and anti-AT8 antibodies in the cortex and hippocampus of LLC, RM1, and MC38 cancer rTg4510 mice. $n = 7$ mice per group.

Data are represented as mean $\pm$ SEM. n.s. and *** $p < 0.001$ by one-way ANOVA with Bonferroni's test (F and H) or t test (B–D).



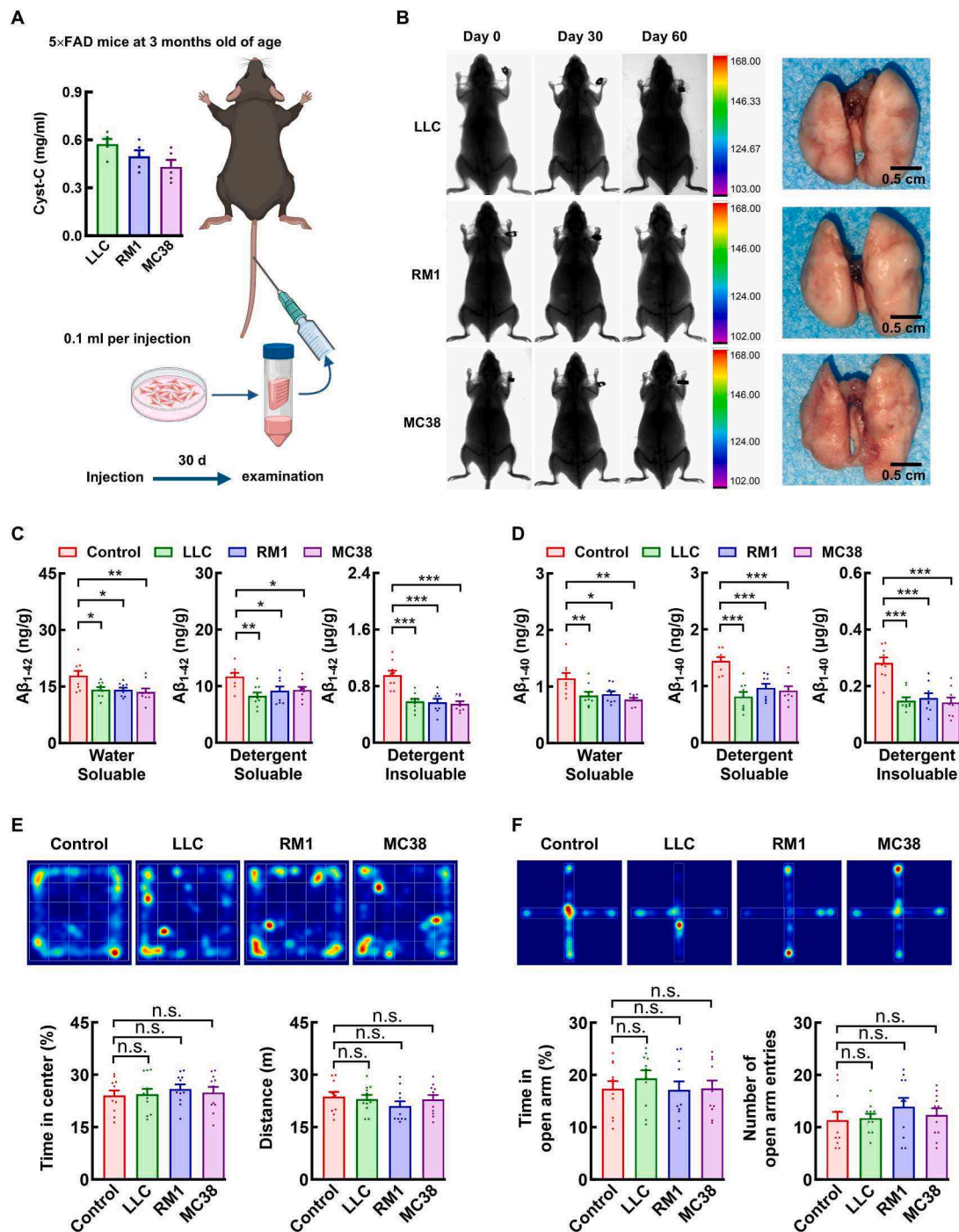


Figure S4. Peripheral cancer inhibits amyloid pathology via cancer cell-secreted proteins, related to Figure 2

(A) Illustration showing the experiments for injection (tail vein) of cancer cell secretory proteins (CSPs) into 5×FAD mice at 3 months of age and the concentration of Cyst-C protein in the CSPs used for injection.

(B) Representative images showing that injections of CSPs do not generate tumor nodules.

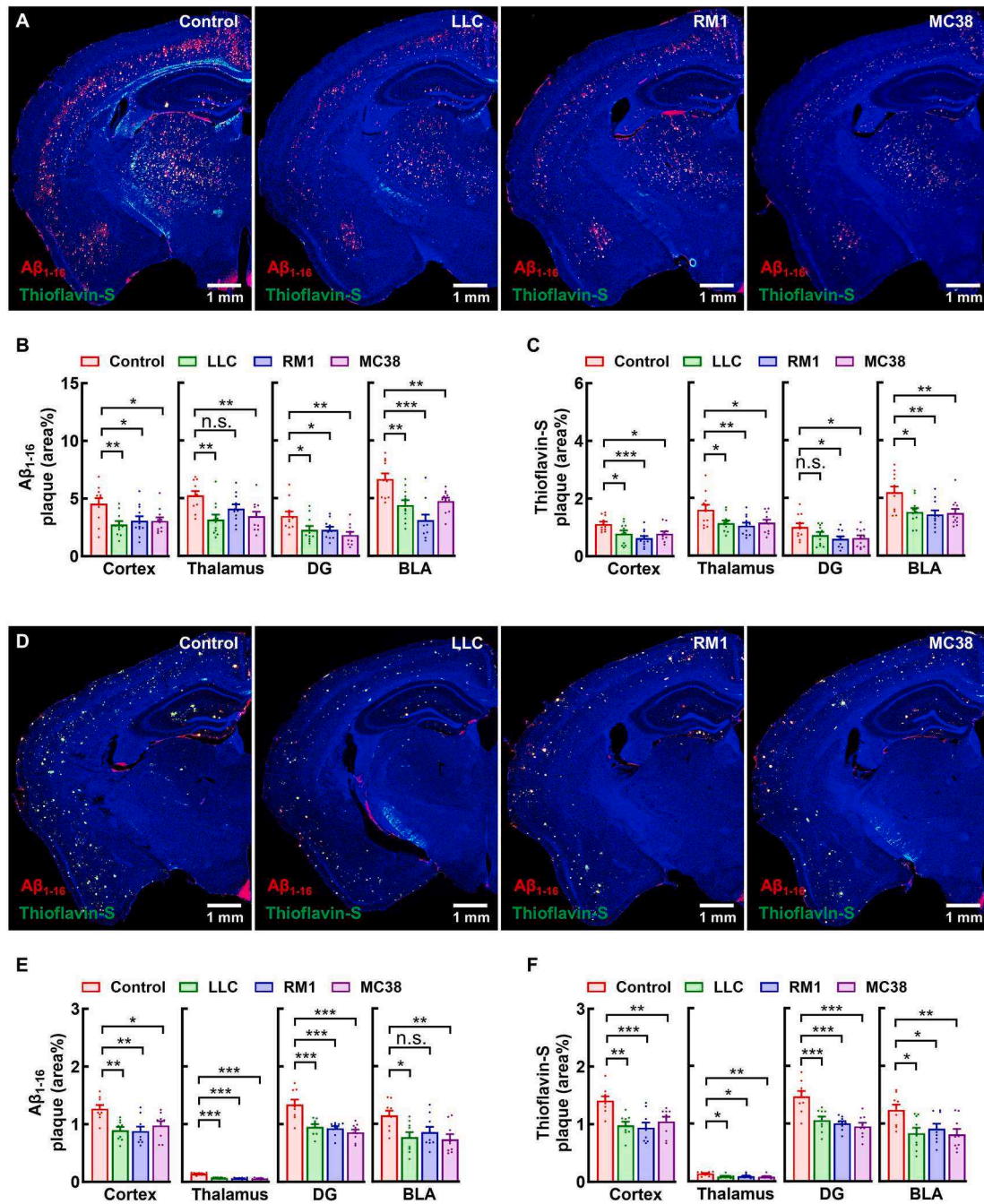
(C and D) Injection of CSPs inhibits amyloid accumulation and plaque deposition. Soluble and insoluble $A\beta_{1-42}$ (C) and $A\beta_{1-40}$ peptides (D) in the brains of LLC, RM1, and MC38 cancer AD mice. $n = 9$ mice per group.

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(E) Heatmaps and bar graphs showing the time spent in the center and the travel distance of 5×FAD mice after the injection of control, CSPs from LLC, RM1, or MC38 cell cultures in the open field. $n = 11$ mice per group.

(F) Heatmaps and bar graphs showing the time spent in the open arm and the number of open arm entries of 5×FAD mice after the injection of control, CSPs from LLC, RM1, or MC38 cell cultures in the elevated plus maze. $n = 11$ mice per group.

Data are represented as mean $\pm$ SEM. n.s., * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$ by one-way ANOVA with Bonferroni's test (C–F).



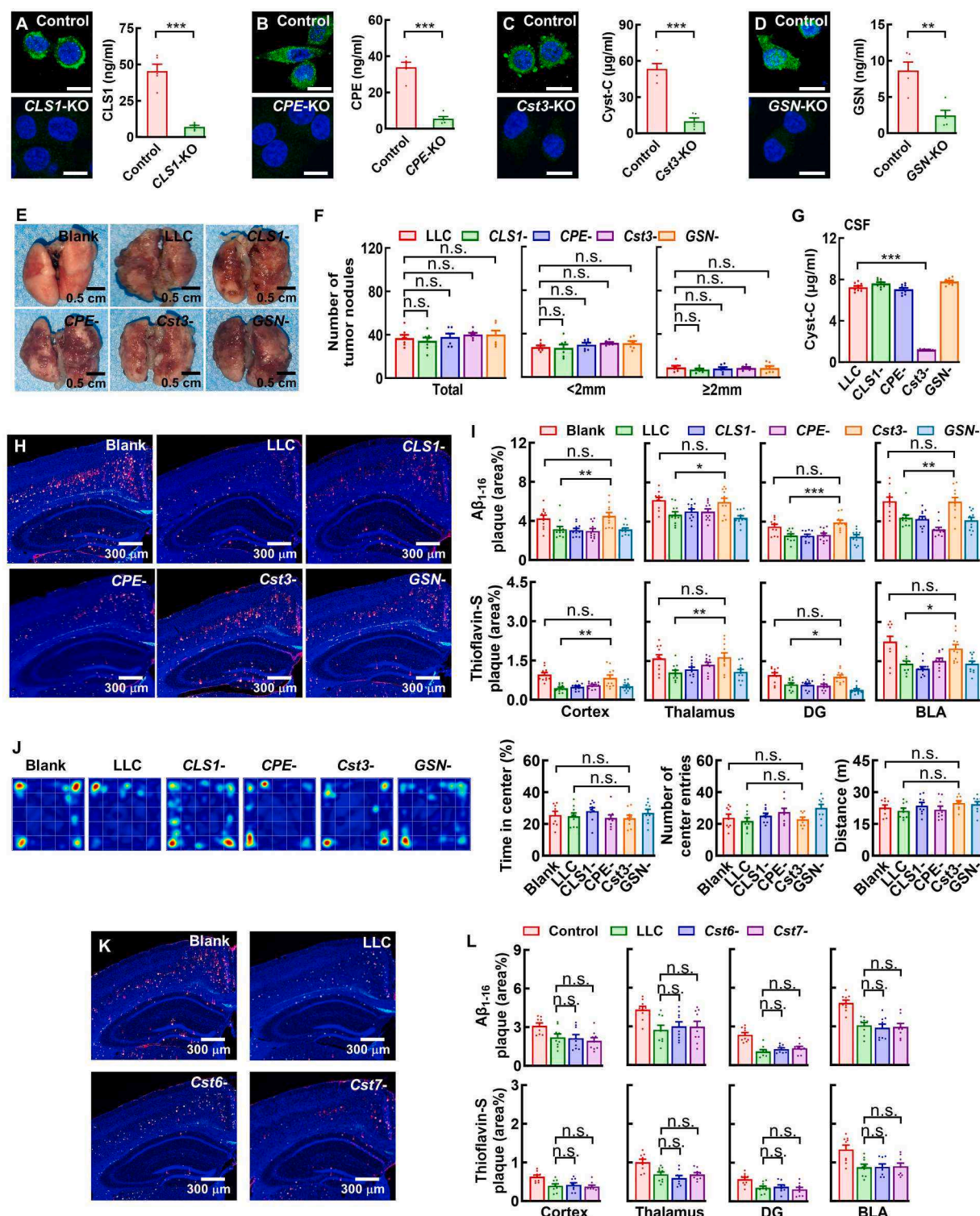


Figure S6. Tumor-derived Cyst-C attenuates plaque burden without affecting general motor activity, related to Figure 4

(A–D) Representative images (left) showing proteins of CLS1 (A), CPE (B), Cyst-C (C), and GSN (D) in the mutant LLC cancer cells. Plots (right) showing protein levels of CLS1, CPE, Cyst-C, and GSN in the mutant LLC cancer cell culture media by ELISA. $n = 5$ assays. Scale bar, 15 μ m.

(E and F) The number and the size of tumor nodules measurements for LLC cancer cells with CRISPR-Cas9-mediated knockout of *CLS1*, *CPE*, *Cst3*, or *GSN*. $n = 7$ mice per group.

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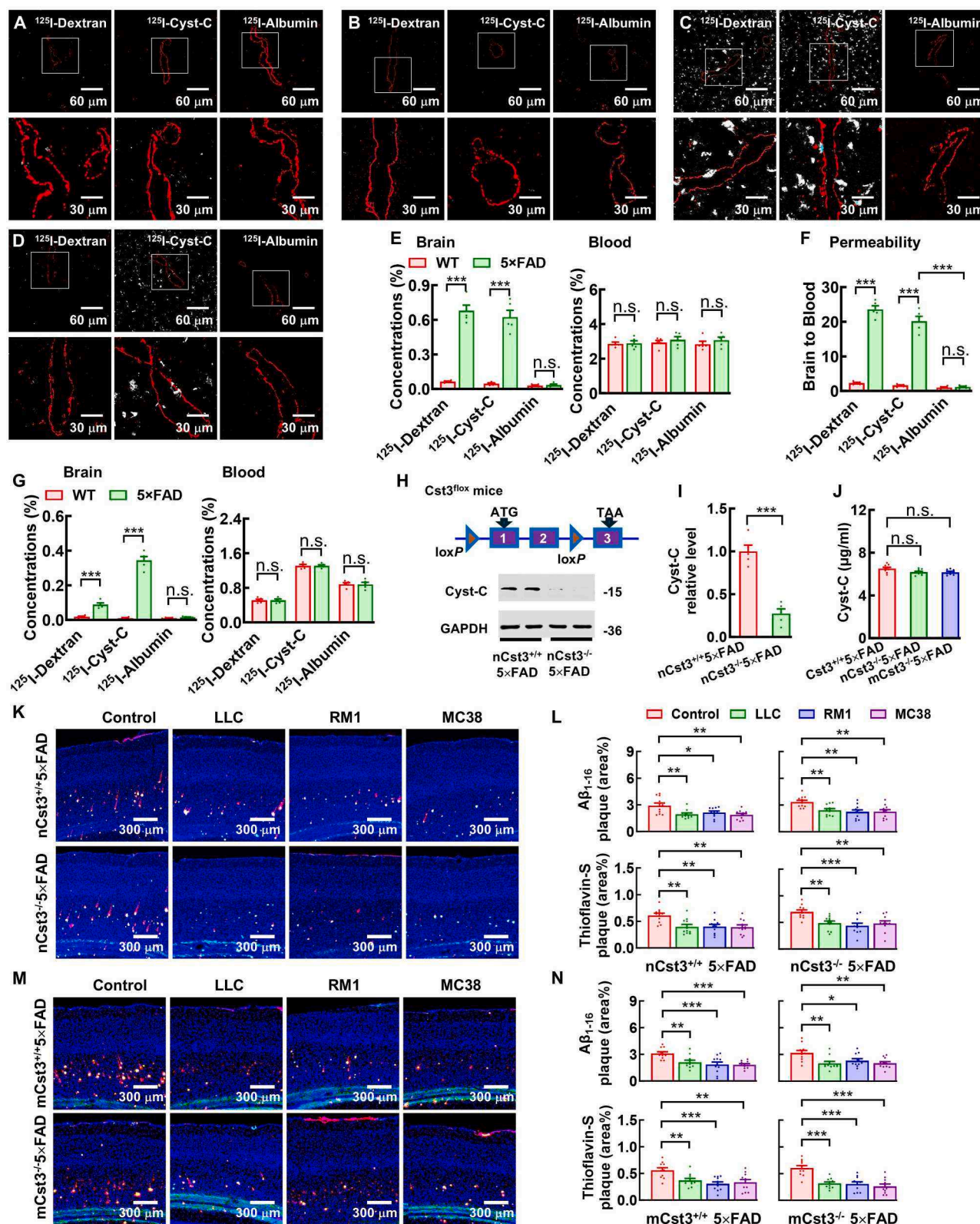
(G) A plot showing the levels of Cyst-C in the CSF of 5×FAD mice after tail vein injections of CSPs from the cultures of a mutant LLC cell line with deletion of *CLS1*, *CPE*, *Cst3*, or *GSN* genes. *n* = 9 mice per group.

(H and I) Representative images (H) and plots (I) showing that A β_{1-16} - and ThS-labeled amyloid plaques in the cortex, the thalamus, the DG, and the BLA of 5×FAD mice. In this study, the mice at 4 months of age were injected (tail vein) with CSPs from LLC cancer cells without (blank) or with deletion of *CLS1*, *CPE*, *Cst3*, or *GSN* once per day for 30 consecutive days. *n* = 11 mice per group.

(J) Open field test showing no significant differences in total distance traveled among 5×FAD mice injected with CSPs from LLC cells with or without deletion of *Cst3*. *n* = 9 mice per group.

(K and L) Representative images (K) and plots (L) showing that A β_{1-16} - and ThS-labeled amyloid plaques in the brain of 5×FAD mice at 4 months of age after injection (tail vein) of CSPs from LLC cancer cells without (blank) or with deletion of *Cst6* or *Cst7*. *n* = 9 mice per group.

Data are represented as mean $\pm$ SEM. n.s., **p* < 0.05, ***p* < 0.01, and ****p* < 0.001 by one-way ANOVA with Bonferroni's test (F, G, I, J, and L) or *t* test (A–D).



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Figure S7. Deletion of endogenous Cyst-C in microglia does not affect amyloid pathology, related to Figure 5

(A–D) Representative nuclear track emulsion autoradiographic images from low (top) to high (bottom) magnifications show the radioactivity (white) in the sagittal brain sections from non-AD control (A and B) and 5×FAD mice (C and D) at 3 h (A and C) or 12 h (B and D) after intravenously (tail vein) administering a single dose (50 µg protein/100 µL) of ¹²⁵I-dextran, ¹²⁵I-Cyst-C, or ¹²⁵I-albumin. The sections were stained with an antibody against vascular marker CD31 (red).

(E–G) Bar graphs show the percentages of ¹²⁵I-dextran, ¹²⁵I-Cyst-C, or ¹²⁵I-albumin concentrations (E and G) and the brain-to-blood ratios (F) from non-AD control (WT) and 5×FAD mice at 3 h (E and F) or 12 h (G) after intravenously injecting a single dose of ¹²⁵I-dextran, ¹²⁵I-Cyst-C, or ¹²⁵I-albumin. In this study, the concentrations are defined as ¹²⁵I-cpm per gram brain tissue or per mL blood divided by a single injection dose (¹²⁵I-cpm). The permeability is calculated as the percentage of the blood-to-brain ratios 3 h after a single-dose injection in (F). Of note, ¹²⁵I-dextran was undetectable 12 h after a single-dose injection in (G), while ¹²⁵I-Cyst-C remained in the brain. The different detectable times of these two molecules in the brain could be primarily due to their distinct clearance and metabolic mechanisms. Cyst-C can be incorporated into the existing amyloid plaques and hence has a longer clearance time and slower metabolic process. *n* = 5 mice per group.

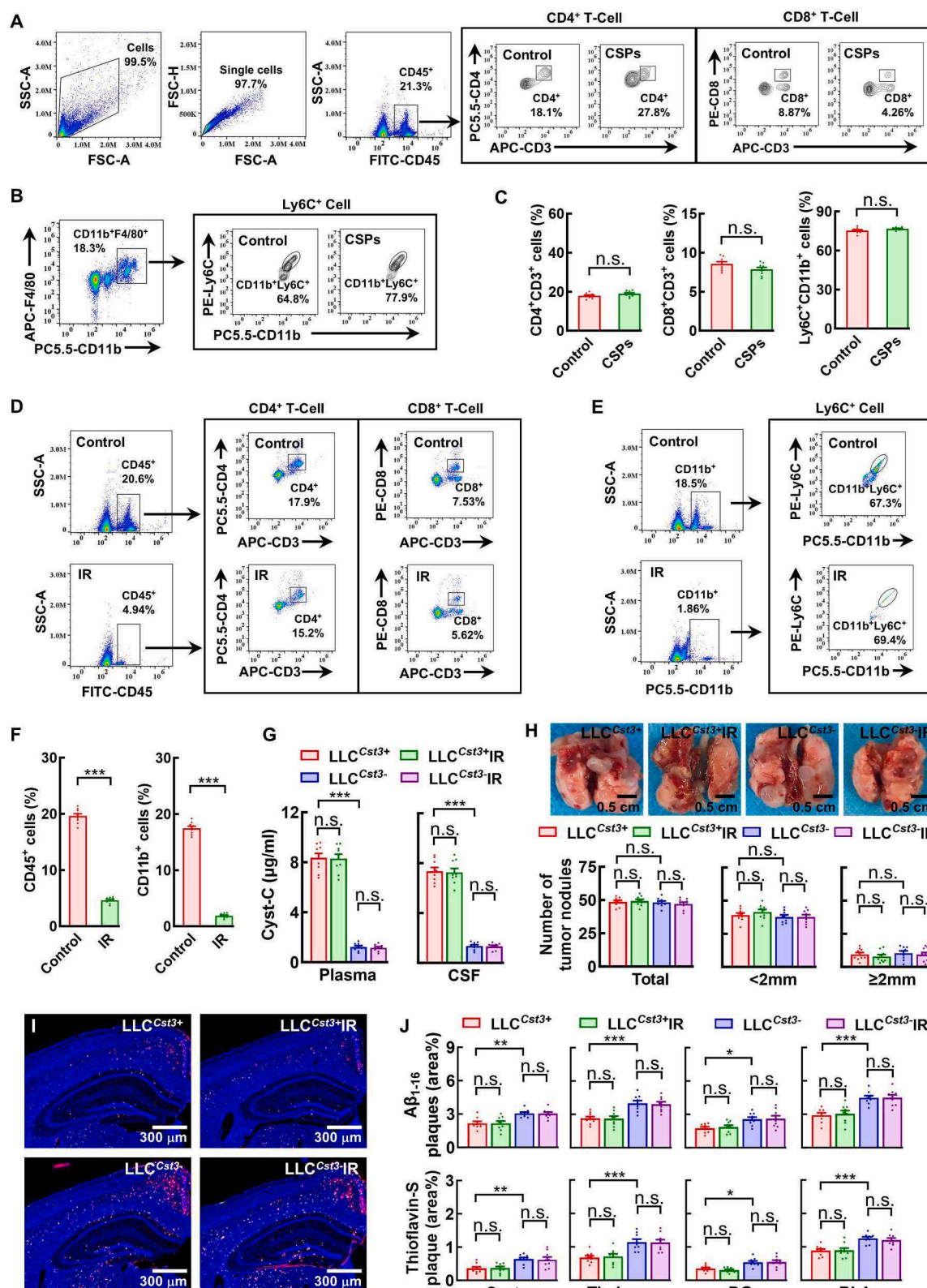
(H and I) A vector design (H) and representative western blots (I) showing genetic deletion of neuronal Cyst-C in 5×FAD mice. In this study, Cst3^{lox} mice were generated and crossed with CaMK2α-Cre^{ERT2} mice, 5×FAD mice, and Ai9 mice, resulting in the production of nCst3^{−/−} 5×FAD mice (5×FAD::CaMK2α-Cre^{ERT2}::Cst3^{lox/lox}::Ai9), in which Cst3 was selectively deleted in tdTomato-expressing cortical neurons after treatment with TAM. tdTomato-expressing cortical neurons were then isolated from the cortex of the mice and purified for western blots. The nCst3^{+/+} 5×FAD (5×FAD::CaMK2α-Cre^{ERT2}::Ai9) mice were used as the control. A bar graph (I) showing the relative protein levels. *n* = 5 mice per group.

(J) A plot showing the levels of Cyst-C in the CSF in neuronal (nCst3^{−/−} 5×FAD mice) and microglial (mCst3^{−/−} 5×FAD mice) Cst3 knockout 5×FAD mice after the injections of CSPs from LLC cell cultures. *n* = 9 mice per group.

(K and L) Representative images (K) and bar graphs (L) showing anti-Aβ_{1–16}- and ThS-labeled plaques in the cortex of nCst3^{−/−} 5×FAD (5×FAD::CaMK2α-Cre^{ERT2}::Cst3^{lox/lox}) and nCst3^{+/+} 5×FAD (5×FAD::CaMK2α-Cre^{ERT2}) mice after TAM and injections of CSPs from LLC, RM1, or MC38 cell cultures. *n* = 11 mice per group.

(M and N) Representative images (M) and bar graphs (N) showing anti-Aβ_{1–16}- and ThS-labeled plaques in the cortex of mCst3^{−/−} 5×FAD (5×FAD::Cx3Cr1-Cre^{ERT2}::Cst3^{lox/lox}) and mCst3^{+/+} 5×FAD (5×FAD::Cx3Cr1-Cre^{ERT2}) mice after TAM and injections of CSPs from LLC, RM1, or MC38 cell cultures. In this study, mCst3^{−/−} 5×FAD mice were generated and crossed with Cx3Cr1-Cre^{ERT2} mice and 5×FAD mice, resulting in the production of mCst3^{−/−} 5×FAD mice, in which Cst3 was selectively deleted in Cx3Cr1-expressing microglia and macrophages after treatment with TAM. *n* = 11 mice per group.

Data are represented as mean ± SEM. n.s., **p* < 0.05, ***p* < 0.01, and ****p* < 0.001 by one-way ANOVA with Bonferroni's test (E–G, J, L, and N), or *t* test (I).



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Figure S8. A low dose of X-ray irradiation depletes peripheral immune cells, related to Figure 5

(A and B) Flow cytometry of peripheral immune cell subpopulations in 5×FAD mice at 5 months of age after the injections (once per day for 30 consecutive days) of CSPs from *Cst3*-deficient LLC cancer cell cultures expressing His-tagged human Cyst-C. Representative images show the populations of CD3⁺CD4⁺ T cells and CD3⁺CD8⁺ T cells of CD45⁺ cells (A) and CD11b⁺Ly6C⁺ monocytes of CD11b⁺F4/80⁺ cells (B).

(C) Bar graphs show the ratio of CD3⁺CD4⁺ T cells, CD3⁺CD8⁺ T cells, and CD11b⁺Ly6C⁺ monocytes in 5×FAD mice at 5 months of age after the injections (once per day for 30 consecutive days) of CSPs from *Cst3*-deficient LLC cancer cell cultures expressing His-tagged human Cyst-C. *n* = 9 mice per group.

(D and E) Flow cytometry of peripheral immune cell subpopulations in 5×FAD mice at 3 months of age 24 h after treatment with (IR) or without (control) a low dose of X-ray whole-body irradiation with head shielding. Representative images showing the populations of CD3⁺CD4⁺ T cells and CD3⁺CD8⁺ T cells of CD45⁺ cells (D) and CD11b⁺Ly6C⁺ monocytes of CD11b⁺ cells (E).

(F) Bar graphs show the ratio of CD45⁺ cells and CD11b⁺ peripheral immune cells in 5×FAD mice 24 h after a low dose of X-ray whole-body irradiation with head shielding. *n* = 9 mice per group.

(G) Bar graphs show the Cyst-C expression levels in blood and CSF of peripheral immune cell-depleted 5×FAD mice 30 days after the injections of LLC^{Cst3+} or LLC^{Cst3−} cells. In this study, LLC^{Cst3+} or LLC^{Cst3−} cells were intravenously injected (tail vein) into 5×FAD mice at 3 months of age 24 h after the treatment with (IR) or without a low dose of X-ray whole-body irradiation with head shielding. *n* = 9 mice per group.

(H) Representative peripheral tumors (top) and bar graphs (bottom) show the numbers of tumor nodules in T cell-depleted 5×FAD mice 30 days after the injections of LLC^{Cst3+} or LLC^{Cst3−} cells. In this study, LLC^{Cst3+} or LLC^{Cst3−} cells were intravenously injected (tail vein) into 5×FAD mice at 3 months of age 24 h after the treatment with (IR) or without a low dose of X-ray whole-body irradiation with head shielding. The numbers of tumor nodules were analyzed 30 days after LLC cell injections. *n* = 9 mice per group.

(I and J) Representative images (I) and bar graphs (J) show Aβ_{1–16}-labeled and ThS-labeled amyloid plaques in the brains of 5×FAD mice at 4 months of age after intravenous injections (tail vein) of LLC^{Cst3+} or LLC^{Cst3−} cancer cells. In this study, LLC^{Cst3+} or LLC^{Cst3−} cells were intravenously injected (tail vein) into 5×FAD mice at 3 months of age 24 h after the treatment with (IR) or without a low dose of X-ray whole-body irradiation with head shielding. *n* = 9 mice per group.

Data are represented as mean ± SEM. n.s., **p* < 0.05, ***p* < 0.01, and ****p* < 0.001 by one-way ANOVA with Bonferroni's test (G, H, and J), or *t* test (C and F).

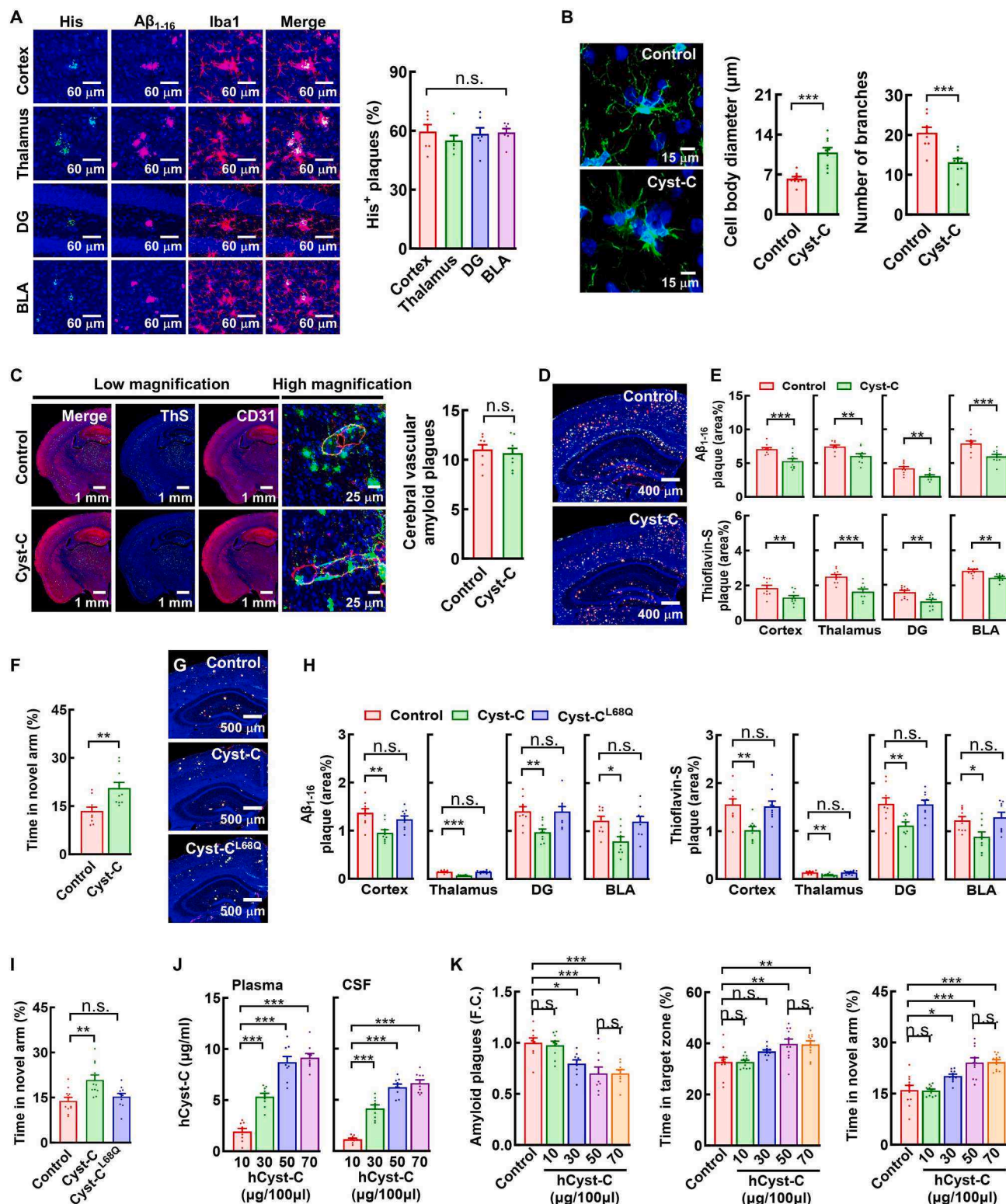


Figure S9. Human Cyst-C treatment triggers the pre-existing plaque clearance, related to Figure 6

(A) Representative images and a bar graph show colocalization of His-tagged Cyst-C with plaque ($A\beta_{1-16}$)-associated microglia ($Iba1^+$) in the cortex, the thalamus, the DG, and the BLA of 5x FAD mice. In this study, brain sections from 5x FAD mice at 4 months of age after peripheral injection of His-tagged Cyst-C or vehicle

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(control) were prepared and stained with A β_{1-16} and Iba1, as indicated. A bar graph shows the percentage of His-associated plaques in the cortex, the thalamus, the DG, and the BLA from the mice injected with control (red) or His-tagged Cyst-C. $n = 7$ mice per group.

(B) Representative images and bar graphs show microglial cell body diameters and the number of branches in these cells in the cortex of 5 $\times$ FAD mice at 5 months of age after the injection of human Cyst-C or control vehicle, showing that application of Cyst-C increases soma size and reduces process complexity of microglia in AD mice. $n = 9$ cells per group from 3 mice.

(C) Application of Cyst-C produces no effects on cerebral amyloid angiopathy (CAA). Representative images with low and high magnifications and a bar graph show the cerebral vascular amyloid plaques in 5 $\times$ FAD mice at 5 months of age after the injection of human Cyst-C or vehicle control. In this study, brain sections from the mice were prepared and stained with ThS and anti-CD31. $n = 9$ mice per group.

(D and E) Representative images (D) and plots (E) showing A β_{1-16} - and ThS-labeled amyloid plaques in the cortex, the thalamus, the DG, and the BLA of 5 $\times$ FAD mice after the 30 consecutive injections (tail vein once per day) of vehicle control or human Cyst-C. $n = 10$ mice per group.

(F) A plot shows the time of visit to the novel arm in the Y maze of 5 $\times$ FAD mice at 9 months of age after the injection of vehicle control, human Cyst-C. $n = 10$ mice per group.

(G and H) Representative images (G) and plots (H) showing A β_{1-16} - and ThS-labeled amyloid plaques in the cortex, the thalamus, the DG, and the BLA of APP/PS1 mice after the 60 consecutive injections (tail vein once per day) of vehicle control, human Cyst-C, or hCyst-C^{L68Q}. $n = 9$ mice per group.

(I) A plot shows the time of visit to the novel arm in the Y maze of APP/PS1 mice at 8 months of age after the injection of vehicle control, human Cyst-C, or Cyst-C^{L68Q}. $n = 11$ mice per group.

(J and K) Dose-dependent inhibition of amyloid pathology by human Cyst-C in AD mice. Bar graphs show the levels (J) of His-tagged human Cyst-C (Cyst-C) in both the plasma and the CSF of 5 $\times$ FAD mice at 5 months of age after the injections (tail vein) of His-tagged human Cyst-C at the doses of 10, 30, 50, or 70 μ g/100 μ L or vehicle control (once per injection for 30 consecutive days). $n = 9$ mice per group. The percentage of amyloid plaques labeled by ThS (K) in the cortex of 5 $\times$ FAD mice at 5 months of age after the injections (tail vein). In this study, the plaques in the cortex of the mice after injection of vehicle control were defined as 100%. The behaviors performed were examined immediately after the last injection. Plots showing the time in the target zone in the Morris water maze tests, as well as the time in the novel arm in the Y maze tests (K). $n = 9$ mice per group in amyloid analysis, $n = 11$ mice per group in behavioral test.

Data are represented as mean $\pm$ SEM. n.s., * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$ by t test (B–E) or one-way ANOVA with Bonferroni's test (A and H–K).

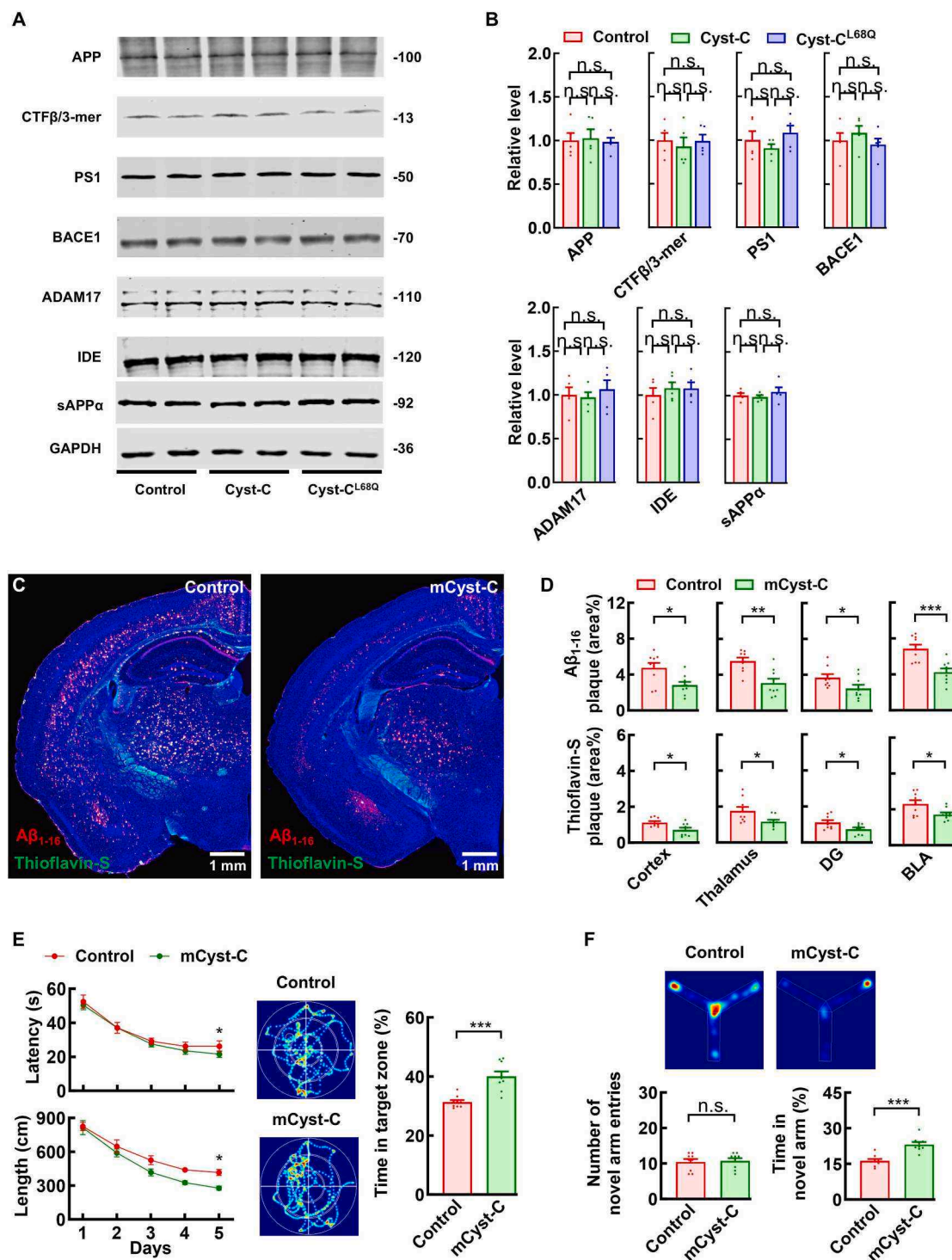


Figure S10. mCyst-C treatment inhibits amyloid pathology and rescues cognition in AD mice, related to Figure 6

(A and B) Western blots (A) and bar graphs (B) showing the expression level of APP, APP-CTFs, PS1, BACE1, ADAM17, sAPP α , and IDE in the brain of 5 $\times$ FAD mice at 5 months of age after 30 consecutive injections (tail vein once per day) of vehicle control, human Cyst-C, or Cyst-C^{L68Q}. $n = 5$ mice per group.

(C and D) Representative images (C) and plots (D) showing A β_{1-16} -labeled (red) and ThS-labeled (green) plaques in the cortex, the thalamus, the DG, and the BLA of 5 $\times$ FAD mice at 5 months of age after the injections of mCyst-C or vehicle control (once per day for 30 consecutive injections). $n = 9$ mice per group.

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(E) Representative heatmaps and graphs show the latency and path length to reach the hidden platform during the training sessions (left) and the percentage of time spent in the target quadrant during probe trials (right) in the Morris water maze tests of 5×FAD mice immediately after the last injection of vehicle control or mCyst-C. $n = 9$ mice per group.

(F) Representative heatmaps and graphs show the number and time of visits to novel arms in Y-maze tests of 5×FAD mice immediately after the last injection of vehicle control or mCyst-C. $n = 9$ mice per group.

Data are represented as mean $\pm$ SEM. n.s., * $p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$ by one-way ANOVA with Bonferroni's test (B), two-way ANOVA with Bonferroni's test (training sessions in E), or t test (D, probe trials in E and F).

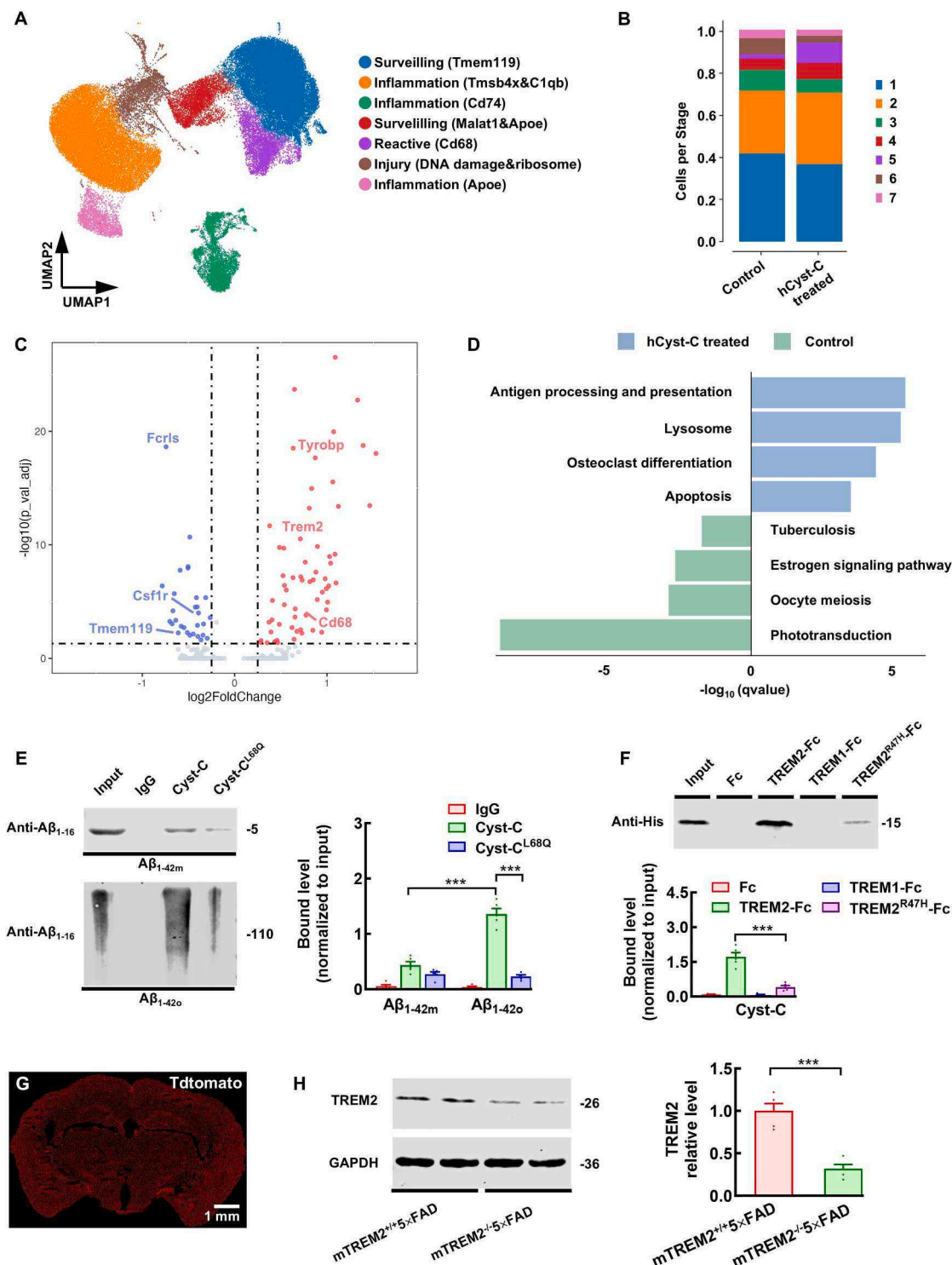


Figure S11. Proteomic and transcriptomic identification of Cyst-C activation of TREM2 in microglia, related to Figure 7

(A) UMAP representation of all cells from scRNA-seq, colored by annotated cell type. Data are presented after stringent quality control and comprehensive batch correction.

(B) Bar plot shows the relative abundance of 7 distinct cell types in 5x FAD mice treated with (hCyst-C) or without (control) human Cyst-C, expressed as a percentage of total cells.

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(C) Volcano plot show that application of human Cyst-C upregulates some key TREM2-related genes, including *Trem2*, *Tyrobp*, and *CD68*, in 5×FAD mice at 4 months of age.

(D) Gene ontology enrichment analysis shows that application of human Cyst-C activates TREM2 signaling, apoptosis, and lysosomal pathways in microglia.

(E) Representative blots and a bar graph show the physical association of human Cyst-C, but not Cyst-C^{L68Q}, with Aβ_{1–42o}, but not Aβ_{1–42m}. In this study, His-tagged human Cyst-C (Cyst-C) or its mutant Cyst-C^{L68Q} were incubated with Aβ_{1–42m} (top) or Aβ_{1–42o} (bottom) and precipitated with anti-His or non-specific IgG (IgG) and blotted with anti-Aβ_{1–16}, as indicated. *n* = 5 independent experiments.

(F) Representative blots and a bar graph show a direct binding of His-tagged human Cyst-C (anti-His) with TREM2-Fc, but not with TREM2^{R47H}. *n* = 5 independent experiments.

(G and H) A representative image (G) and western blots (H) show genetic deletion of TREM2 in microglia of 5×FAD mice. In this study, TREM2^{fllox} mice were generated and crossed with Cx3cr1-Cre^{ERT2} mice, 5×FAD mice, and Ai9 mice, resulting in the production of mTREM2^{–/–} 5×FAD mice (5×FAD::Cx3cr1-Cre^{ERT2}::TREM2^{fllox/fllox}::Ai9), in which TREM2 was selectively deleted in tdTomato-expressing microglia after treatment with TAM. tdTomato-expressing microglia were then isolated from the cortex of the mice and purified for western blots. mTREM2^{+/+} 5×FAD (5×FAD::Cx3cr1-Cre^{ERT2}::TREM2^{fllox/fllox}::Ai9) mice, in which vehicle control, but not TAM, was applied and was used as the control. *n* = 5 mice per group.

Data are represented as mean ± SEM. ****p* < 0.001 by one-way ANOVA with Bonferroni's test (E and F) or *t* test (H).

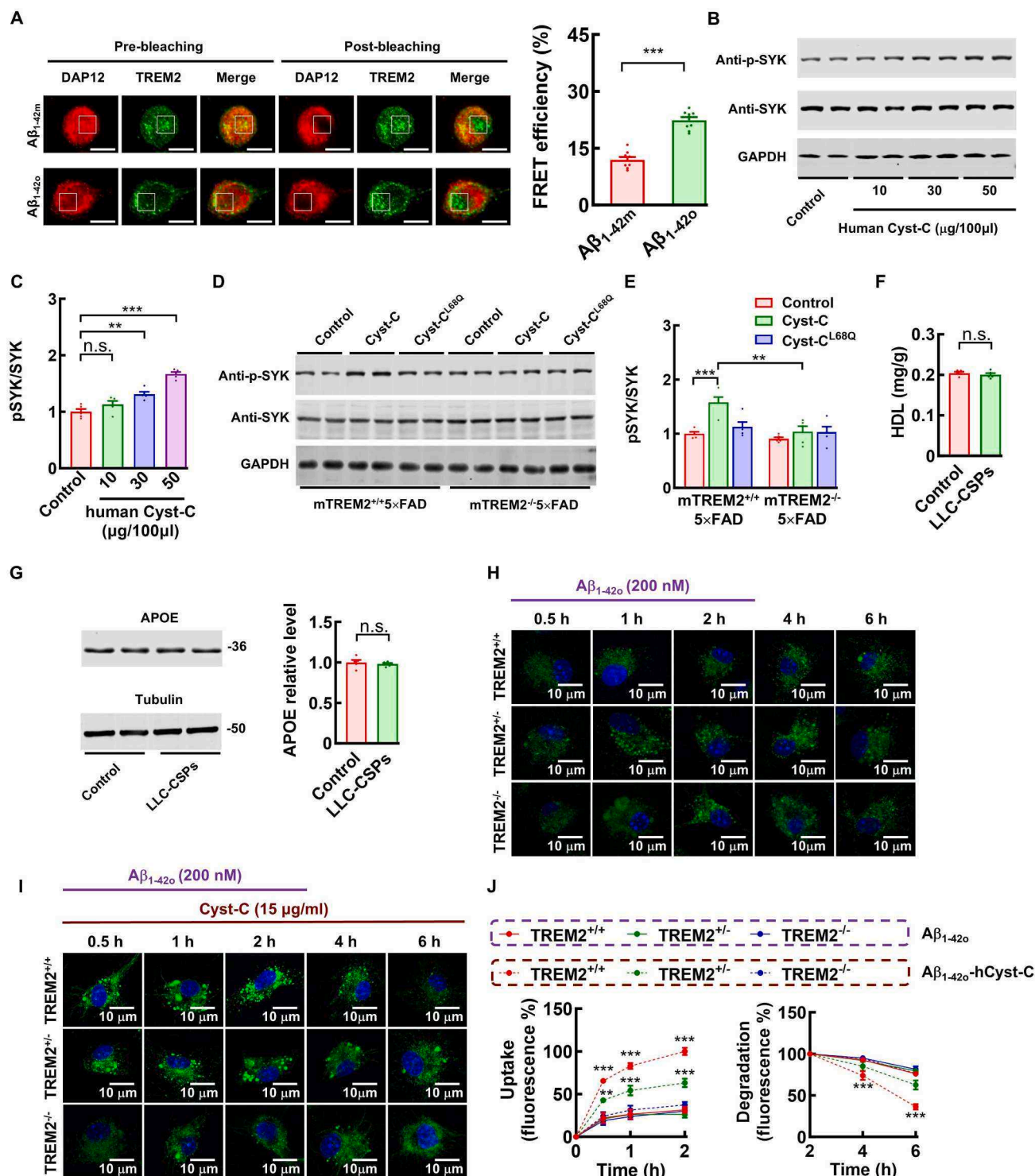


Figure S12. Microglia phagocytosis and clearance of $A\beta_{1-42o}$ by Cyst-C activation of TREM2, related to Figure 7

(A) Representative images and a bar graph show that oligomeric ($A\beta_{1-42o}$), but not monomeric ($A\beta_{1-42m}$) forms of $A\beta_{1-42}$ enhanced TREM2-DAP12 interaction based on the FRET assay. $n = 9$ assays. Scale bar, 10 μm .
(B and C) Representative blots (B) and a bar graph (C) showing the levels of tyrosine-phosphorylated (Y525/526, anti-pSYK) and total SYK (anti-SYK) in cultured primary microglia were treated without (control) or with Cyst-C at different concentrations as indicated. $n = 5$ independent experiments.

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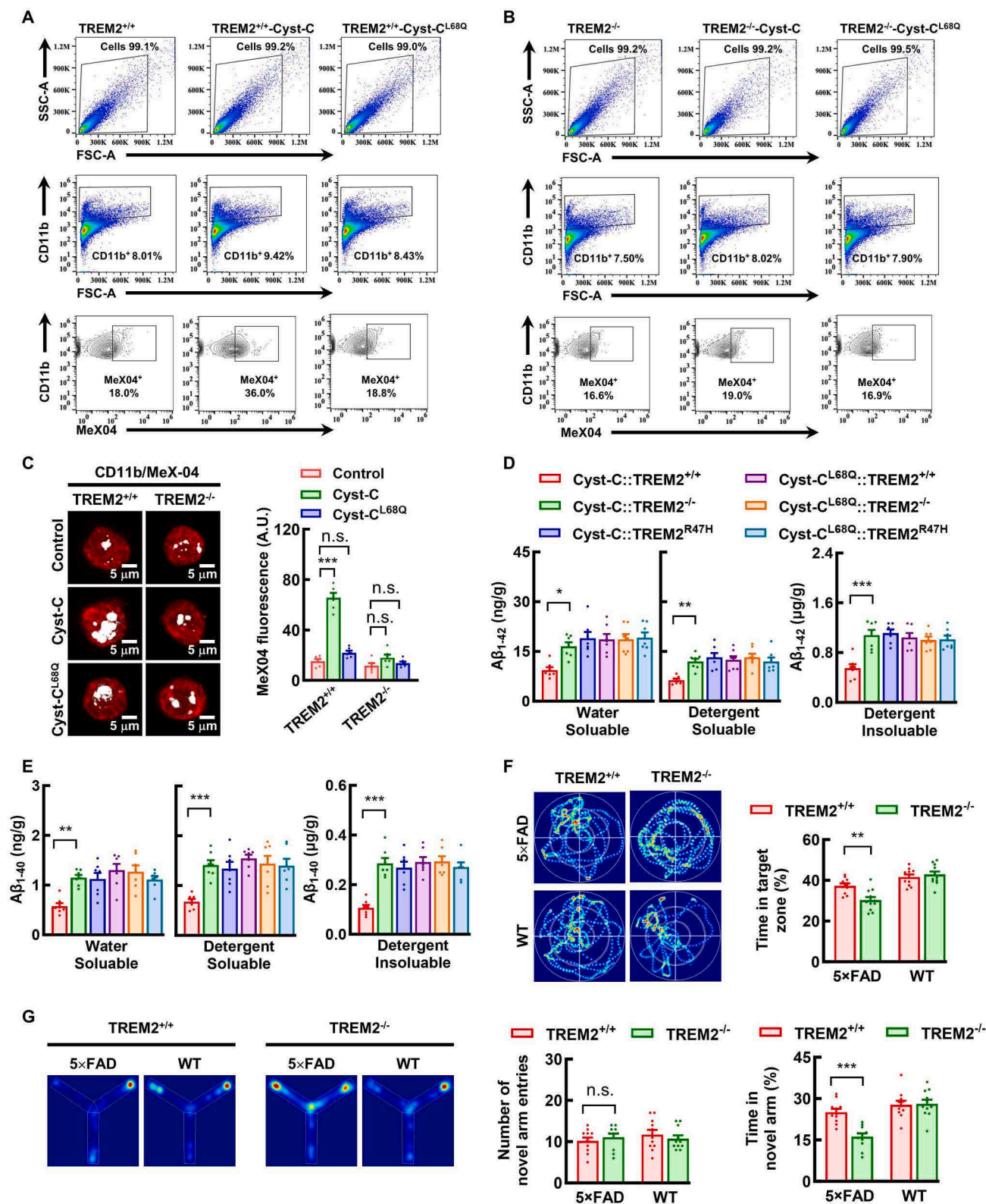
(D and E) TREM2-dependent activation of SYK by human Cyst-C. Representative blots (D) and a bar graph (E) show activation of SYK by human Cyst-C, but not hCyst-C^{L68Q}, in microglia in a TREM2-dependent manner. In this study, the levels of tyrosine-phosphorylated (Y525/526, anti-p-SYK) and total SYK (anti-SYK) were examined in microglia from the cortex of TREM2^{+/+} 5×FAD and TREM2^{-/-} 5×FAD mice. Cultured primary microglia were treated without (control) or with Cyst-C or Cyst-C^{L68Q}. *n* = 5 mice per group.

(F and G) Bar graphs show the levels of HDL (F) and APOE (G) in cortical lysates from 5×FAD mice at 4 months of age after the injection of CSPs from LLC cell cultures (LLC-CSPs) or vehicle control. ELISA was used to measure the levels of HDL, whereas immunoblot was used to detect the levels of APOE. *n* = 5 mice per group.

(H and I) Representative images showing FAM-Aβ_{1-42o} phagocytosis and clearance in cultured primary microglia. In this study, microglia were isolated from TREM2^{+/+}, TREM2^{+/-}, and TREM2^{-/-} mice, cultured, and incubated with FAM-Aβ_{1-42o} (200 μM) for 2 h in the absence (H) or the presence (I) of human Cyst-C (15 μg/mL). Fluorescence images were taken 0, 0.5, 1, 2, 4, and 6 h after 2-h incubation with FAM-Aβ_{1-42o}.

(J) Plots showing the rate of FAM-Aβ_{1-42o} uptake and degradation in cultured microglia from TREM2^{+/+}, TREM2^{+/-}, and TREM2^{-/-} mice in the absence or the presence of 15 μg/mL human Cyst-C. In the uptake plot (from 0 to 2 h), the fluorescence intensities of FAM-Aβ_{1-42o} are normalized to that in microglia from TREM2^{+/+} mice in the presence of human Cyst-C immediately after 2-h incubation with FAM-Aβ_{1-42o} (defined as 100%). In the degradation plot (from 2 to 6 h), the fluorescence intensities of FAM-Aβ_{1-42o} are normalized to those in microglia immediately after 2-h incubation of FAM-Aβ_{1-42o} (defined as 100%). *n* = 3 independent experiments.

Data are represented as mean ± SEM. n.s., ***p* < 0.01, and ****p* < 0.001 by one-way ANOVA with Bonferroni's test (C and E), two-way ANOVA with Bonferroni's test (J), or *t* test (A, F, and G).



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Figure S13. Cyst-C activation of TREM2 inhibits amyloid pathology and rescues cognition, related to Figure 7

(A and B) Gating strategy to identify the CD11b⁺ microglia (upper and middle) and contour plots (lower) showing the proportion of A β phagocytic microglia from TREM2^{+/+} and TREM2^{-/-} mice treated with vehicle, human Cyst-C, or Cyst-C^{L68Q}.

(C) Representative confocal images (left) and quantification (right) for the intracellular MeX04 (white color) in fluorescence-activated cell sorting (FACS)-isolated MeX04⁺ microglia from TREM2^{+/+} and TREM2^{-/-} mice treated with vehicle, human Cyst-C, or Cyst-C^{L68Q}. *n* = 6 mice per group.

(D and E) Soluble and insoluble A β ₁₋₄₂ (D) and A β ₁₋₄₀ peptides (E) in the brains of TREM2^{+/+} 5 $\times$ FAD mice, TREM2^{-/-} 5 $\times$ FAD, and TREM2^{R47H} 5 $\times$ FAD treated with human Cyst-C or hCyst-C^{L68Q}. *n* = 7 mice per group.

(F and G) The percentage of time spent searching for a hidden platform in the target quadrant (quadrant 4) during the probe trials in the Morris water maze (F), and the heatmaps and plots showing the number and time of visits to the novel arm in the Y-maze test (G) of TREM2^{+/+} 5 $\times$ FAD, TREM2^{-/-} 5 $\times$ FAD, TREM2^{+/+} WT, and TREM2^{-/-} WT mice. In the behavior tests (F and G), TREM2^{+/+} 5 $\times$ FAD, TREM2^{-/-} 5 $\times$ FAD, TREM2^{+/+} WT, and TREM2^{-/-} WT mice at 4 months of age were injected (tail vein) with human Cyst-C once per day for 30 consecutive days. *n* = 11 mice per group.

Data are represented as mean $\pm$ SEM. n.s., **p* < 0.05, ***p* < 0.01, and ****p* < 0.001 by one-way ANOVA with Bonferroni's test (C–G).

Table S1. RNA-seq and proteomic data, related to Figure 3 and Figure 7.

RNA-seq analysis of cancer cell and tumor tissue, related to Figure 3.

symbol	Cancer cell RNA-seq (FPKM)				Cancer tissue RNA-seq (FPKM)			
	LLC-1	LLC-2	MC38-1	MC38-2	RM1-1	RM1-2	LLC-1	LLC-2
Aamp	63.29424	67.3083	52.99285	35.226	55.42907	53.85885	47.08374	73.10932
Cyc1	89.8591	89.54327	198.20163	146.04278	143.61478	129.87316	45.65705	48.43717
Srrm2	45.71983	46.2136	45.31844	62.73189	23.41641	24.70736	61.75106	53.5886
Tpm3	91.04296	92.25034	76.12051	82.26067	91.66835	90.38818	148.04142	92.45145
Snrpd1	26.57959	29.44097	21.75841	15.47156	25.64677	26.30039	25.04704	20.7899
Bin1	72.00539	73.80649	43.30401	31.19764	31.00413	30.35043	61.87426	56.05685
Pink1	21.98975	22.40907	9.19366	9.35835	30.0853	29.35892	23.69889	58.13228
Nob1	29.1567	28.74447	33.49638	24.2462	30.16696	30.01584	23.24968	21.15006
Sh3pxd2b	31.90767	32.17746	32.17855	36.61252	33.44111	33.88673	51.40483	52.56872
Rabac1	74.33438	78.46316	70.1138	40.77278	113.30384	111.33723	67.05132	98.2519
Dcakd	16.91781	17.42547	50.31923	47.83944	36.23058	37.4263	19.58088	22.69543
Myl6	88.05708	88.20192	86.36211	45.74539	86.98336	83.62036	61.16675	95.8547
Rhog	27.12376	24.97819	32.24398	22.90458	49.41519	47.99178	51.25479	49.44011
Pold2	156.84056	163.04003	147.70438	105.60257	136.76385	126.3817	61.37185	59.18599
Sh3bgrl3	146.36387	138.20543	87.15107	65.79489	106.66683	100.74204	296.32146	306.51982
Rps3a1	1816.9357	1862.3217	921.08263	1072.5479	1818.595	1964.5984	1540.8089	2055.9651
Chd3	23.10524	23.44755	29.54773	24.75128	58.02373	55.73901	23.89227	40.406
Atxn7l3	22.14617	22.85137	35.17703	25.41145	27.32212	27.29093	25.72866	29.87472
Mbd2	24.8802	24.32134	28.87821	29.61765	29.73238	29.01336	45.61199	42.20092
Srxn1	37.17921	33.72757	74.17342	64.68316	41.76058	41.21742	48.44792	41.28949
Pdcd6	29.36801	27.86021	22.37887	18.12208	27.53335	30.69738	27.18126	28.63524
Nup62	53.60072	49.3965	88.58946	63.16857	63.19674	58.25683	30.77518	26.69473
Psmc7	90.8684	98.04101	94.8457	94.8311	70.27737	71.1772	71.99056	71.04266
Rarg	25.62574	25.56475	18.03053	13.37002	31.46229	31.50025	17.34452	22.63569
Fis1	25.5456	29.48043	46.00106	25.47228	37.32997	35.95671	22.14898	36.11706
Plec	57.29021	56.95339	37.94019	33.0307	43.03696	38.727	102.50647	55.79412
Nomo1	44.11997	44.73862	68.20868	50.67383	59.12843	54.64297	42.72458	29.70806
Zfas1	31.34848	34.90796	53.12408	8.60906	61.97318	59.67357	26.11488	20.63622
Rpl18	262.67137	276.98809	326.27142	212.87566	419.25717	389.92577	126.39133	173.61129
Sars	69.48446	72.18254	136.75556	138.84354	270.10809	236.6656	42.35828	34.88159
Rbm17	45.83095	43.69261	37.64581	32.60332	30.34744	30.46571	46.6083	51.0172
Pxn	25.79107	26.12844	16.56357	12.2853	23.33719	23.38007	24.04265	24.29737
Slc1a5	25.29393	24.02252	53.27343	24.16399	62.89083	55.50436	38.57503	22.02405
Tle5	237.59836	227.64508	196.15958	132.05517	150.62209	142.84166	125.22705	292.57652
Pigs	52.10849	48.99526	65.61652	44.19078	48.65606	49.63954	40.61577	50.37532
Hnrnpa2b	127.88093	135.86807	84.9591	89.38285	43.41565	48.08849	123.95878	171.81881
Axin1	34.35696	33.54199	37.82898	27.80295	36.97477	36.2023	29.49364	27.57035
Scaf1	25.49473	24.92082	32.39395	19.15292	21.82095	21.87074	22.52413	23.76391
Aldoa	3.26352	4.65873	12.95021	6.87084	3.23554	3.07263	2.81145	2.78571
Fn1	39.9306	39.3105	225.61987	183.9597	155.57154	147.52368	203.08098	102.82865
Irak1	26.90859	26.38246	25.73641	24.85202	18.89247	18.83047	41.40223	44.22701
Dnaja2	64.53146	64.07011	67.14389	76.96345	60.30052	63.21479	56.66092	46.66666
Efemp2	39.53837	39.47589	65.63984	52.41953	41.19191	41.37834	34.62039	35.9653
Rpl41	1046.3421	1129.7448	1129.4682	649.15622	1365.717	1300.9385	371.45583	456.20168

Rragc	23.93444	22.24427	46.28531	55.86751	20.32551	20.73966	37.39662	35.4198
Fkbp1a	102.25367	104.09577	107.61699	92.28852	158.60038	160.46728	107.58261	89.50699
Rnf126	55.59924	58.67916	76.6933	47.83944	34.78569	32.24293	59.26994	47.92164
Ndufb9	29.87558	31.91262	75.12022	39.8853	59.55225	58.21661	19.82716	33.46233
Nde1	35.66232	35.937	39.08053	31.30059	20.10771	21.9631	36.05377	34.31852
Nras	22.06181	21.17998	22.92265	27.10482	26.94859	27.93293	40.36776	22.31978
Mapk14	34.5608	33.52624	21.11533	21.26776	22.89221	22.09267	29.39354	32.46784
Midn	28.71971	29.57323	29.79	21.70468	14.93074	13.79817	24.31505	24.12731
Rpl37a	474.006	523.77116	243.08629	145.4912	337.71888	333.97216	288.74385	436.04725
Atp5pb	46.07948	45.67241	50.47578	49.91075	59.35556	64.80693	47.42238	47.82771
Sf3a1	39.39751	39.83412	34.25507	32.29435	59.05892	53.70381	30.55068	23.12114
Calu	256.4285	272.60384	153.8769	172.92043	192.43824	204.17912	320.08709	192.51271
Trp53	28.92805	28.54822	40.67263	29.01298	68.21344	63.21493	37.41884	35.57174
Eif4a2	21.93111	18.97206	29.66733	19.36569	30.63199	35.81796	47.85597	42.60041
Rac1	77.19666	76.04481	70.28561	83.68744	74.85252	74.94983	87.96546	85.97522
Acly	36.37724	38.80585	104.95206	100.73611	50.47541	50.94774	41.48028	29.10125
Gnl1	59.00256	58.15021	49.04589	41.6412	53.93574	54.21361	28.10678	33.75689
Mmp14	37.53462	36.88439	76.14582	69.12656	55.7146	56.27656	66.59906	75.00197
Eri3	24.29857	26.52206	24.50024	21.46029	20.29566	18.63734	21.26078	27.21781
Usp19	35.40157	34.49293	25.00187	21.83906	24.33969	23.62041	24.15912	27.05385
Mef2d	33.52931	32.97722	22.27635	15.68862	37.92637	37.34213	39.14695	27.84555
Tes	46.82119	46.31581	38.08867	41.60676	44.604	45.52367	27.02853	19.09773
Eif3e	38.77631	40.32097	37.26786	55.6909	45.90997	54.55601	30.8585	30.60081
Gltp	38.41529	38.17169	36.3797	34.06658	25.04709	26.44909	48.34374	51.23915
Cox6a1	384.29217	404.99775	585.1633	246.41114	364.31569	331.69116	204.66762	369.24668
Ganab	62.03337	60.37327	142.51617	136.32305	107.18319	104.70282	60.04275	53.42726
Mgat2	61.30676	55.66674	23.21593	19.79297	9.76618	10.02339	71.3264	106.09871
Mapk1	36.39939	36.44876	45.06353	54.52218	32.35389	35.54732	34.49461	31.14194
Mtch1	84.42234	85.0601	56.01135	50.74834	65.67401	65.68214	50.55192	77.39705
Npc2	32.66634	31.52644	40.68105	32.4858	85.41818	91.08571	45.24924	67.3643
Fads1	14.24707	13.8172	118.75005	137.90379	50.03039	51.39722	13.32313	13.43319
Flot2	31.54362	30.23079	49.41364	42.03734	50.89855	51.75158	41.48373	42.90119
Psmd12	39.47669	40.87944	48.96278	57.6168	38.07805	42.91938	42.21344	36.21766
Uqcr10	142.3215	136.92766	142.8944	85.93339	222.36278	200.04403	65.6981	117.19671
Ctdsp1	54.73137	49.36866	41.35474	34.65652	27.08373	26.48366	55.73432	72.94941
Rpn1	55.34742	54.73334	88.50863	88.17718	156.55103	149.96851	47.71506	43.85261
Drap1	170.92878	179.25106	156.51582	85.52441	83.76374	78.14055	94.8345	79.34392
Trappc3	37.18553	36.72591	39.0478	25.7015	28.11843	27.39024	28.91677	35.98587
Atp5a1	373.80473	390.48595	462.02731	476.68834	386.64534	371.71818	259.24406	283.10418
Hnrnpab	169.08401	171.81795	176.7991	125.43677	127.2917	120.65503	158.37508	151.21254
Klhdc3	43.03183	42.27381	35.77433	22.42995	79.45653	76.93506	26.71712	33.31595
Idh3b	39.06821	40.60979	26.17042	20.02308	60.58544	62.06975	29.13299	35.06922
Ewsr1	53.71705	52.31731	47.38316	28.22312	26.83728	26.6638	61.3326	56.84254
Ilrun	52.00187	52.65823	31.05927	28.29039	67.0852	68.40397	48.33459	57.75484
Rer1	59.23535	54.4133	57.58279	56.47289	72.2747	73.52592	56.44362	59.48411
Ccnl2	14.86243	12.67833	11.15492	4.98477	9.92731	10.94694	39.0792	46.82737
Rap1b	49.06868	47.35462	52.4716	67.97068	52.45494	56.8436	109.87185	85.29666
Uqcrh	79.18045	81.03961	44.5424	36.17388	62.80868	73.74065	38.71643	62.82698

Hcfc1	32.67239	34.27431	34.18543	32.05938	47.12502	45.59391	34.6841	23.83422
Prkaca	50.91786	51.98553	46.64151	42.48578	39.63292	39.74219	38.73332	44.93541
mt-Nd4	377.39033	344.33175	1097.9467	2298.4806	635.37738	592.31774	461.17051	688.12091
Snx6	86.99454	90.82246	27.07603	36.17396	28.08655	29.97421	81.08746	117.84421
Cd82	7.44809	7.6743	27.94266	20.52666	111.08594	107.58817	39.61952	40.42953
Maz	48.46448	47.0696	59.59387	42.70637	81.73357	74.34451	49.22953	72.40718
Krtcap2	61.81945	58.35895	81.64922	52.40311	179.19713	157.7433	42.24086	37.5656
Pip5k1c	51.46087	48.19882	14.36512	11.92178	12.31045	12.80187	73.67878	65.51757
Ap2s1	67.53598	61.62016	63.61572	44.78902	65.67107	65.44761	66.59701	82.43997
Slc9a3r1	47.86158	48.76415	22.73701	15.28159	32.37489	31.92752	25.50922	35.94016
Anxa2	273.55662	293.47676	268.40095	282.59264	298.00711	291.12378	267.98479	252.54592
Angptl2	31.43983	31.21436	31.02026	26.36493	9.87764	10.15445	50.1802	18.67066
Calm1	106.60484	104.1176	104.92336	145.99536	111.18252	115.88525	123.61141	190.29055
Itpr3	58.59453	58.25046	14.57605	15.07377	40.65663	40.2209	44.12006	45.94892
Nfkbia	106.826	109.78021	36.69728	26.603	27.95657	27.71048	159.58865	219.29508
Tprgl	41.02166	38.7396	28.38332	24.53239	38.79274	38.55223	45.78871	64.09555
Ap1m1	31.52977	30.1271	25.29934	24.75669	20.87828	21.03114	34.11859	39.04502
Eif4a1	189.38202	194.07395	211.75512	210.48448	292.20633	286.32547	189.04809	174.39764
Sar1b	30.60325	32.3532	20.81811	21.7892	51.38755	51.23225	29.31892	33.73409
Esd	66.15394	67.96586	68.62795	78.80912	133.45922	127.4246	58.95506	38.62832
Aaas	39.14126	39.05422	33.94835	28.65327	29.43421	30.70985	17.13265	12.42955
Isg20l2	25.06829	23.11561	20.67298	19.2626	26.87193	28.79427	26.54003	15.99646
Cbfb	25.46048	26.42116	32.4986	38.70901	29.68835	31.61232	69.31416	44.8115
Srebf2	37.61999	37.39546	69.01267	58.25722	110.23757	106.42727	37.91657	20.27419
Rpl6	333.21041	318.26007	351.19585	380.14964	439.47133	442.4236	199.86809	228.57414
Txndc5	85.06571	83.16086	93.29083	83.13937	115.11244	114.5461	75.60184	70.79452
Pxdn	96.82942	92.06293	41.11862	37.06077	23.96251	24.9415	118.11043	95.74011
Sar1a	31.4324	31.90595	53.17475	58.61755	65.41984	67.41947	35.46113	39.60091
Map4	23.65891	23.78155	12.7538	13.87877	33.94255	31.53578	26.38421	24.19424
Wdr5	33.92985	33.8261	28.57283	23.08686	26.57394	26.08431	26.64888	20.11624
Mydgf	42.98003	49.17808	47.26565	33.47044	91.12337	86.58032	31.21843	31.92929
Pcbp1	183.81112	186.15119	219.89256	149.37203	220.83132	197.94774	137.67805	157.12762
Tubb6	198.12553	204.62161	182.84901	143.44956	90.79399	89.90174	237.83493	169.55586
Ube2m	50.93597	52.93253	100.2236	77.96057	84.06309	76.03624	45.38451	53.86613
Arf5	87.88129	83.66358	77.15651	52.38809	80.97494	78.53016	49.00275	93.34892
Jak1	41.28987	42.76755	26.40138	29.83317	31.97063	34.59699	37.05066	36.00179
Srsf1	29.25506	28.16637	26.56572	27.94516	14.60114	16.39011	54.62845	55.18984
Dnajc8	46.0319	49.73479	37.72382	33.32437	24.26556	24.33662	43.78408	43.90226
Hint1	290.87026	301.01825	415.90604	255.98338	427.3364	404.49602	164.2516	195.10712
Ebna1bp2	27.6895	28.62389	27.34602	21.23808	15.79951	15.15379	31.75114	26.67642
Actn4	164.17789	171.83957	110.43846	101.76385	118.19449	111.50951	92.17852	85.21064
Rps19bp1	55.57804	51.4767	41.08315	26.82782	37.7242	39.59227	39.65859	44.22968
Npepl1	31.61955	30.31221	46.59355	31.18147	75.09765	70.87637	52.83947	82.13056
Fh1	40.87114	37.31102	42.00508	44.73658	33.08524	34.71608	26.83437	31.1962
Chmp5	38.01609	38.02513	45.94602	39.95957	48.29157	53.72527	43.8327	44.661
Cox4i1	230.05348	231.26153	307.11217	202.48456	245.38501	229.77362	124.20152	187.51637
Akr1a1	155.584	158.99023	221.78796	192.34089	216.317	204.36034	147.50772	175.12878
Mpnd	44.4255	46.62764	44.03741	33.00668	62.48689	58.74524	20.50466	41.98493

Dctpp1	88.95961	85.12759	95.43627	67.41972	43.22771	39.82353	27.51449	22.84228
Ppic	136.41022	137.44363	187.73235	116.98106	67.2556	69.36025	117.52119	143.14376
Tpm4	103.86336	106.49725	84.82103	93.06295	102.64476	110.88212	179.00305	109.80546
Rps14	663.50646	667.76547	611.38932	573.20129	632.49182	583.5946	207.67026	327.51838
Canx	117.64224	117.86247	182.22837	226.45285	230.65372	236.4442	152.63514	128.42053
Ywhae	257.57372	266.80843	306.32687	346.5816	335.57123	340.801	263.17657	269.98906
Aldh9a1	58.86842	64.41195	33.46101	40.26287	25.91363	25.91239	47.74245	57.11674
Psm2	173.58665	175.71859	161.69133	176.62418	97.96457	98.80763	110.65981	95.29037
Polr1c	54.30018	55.93269	40.83473	33.55704	73.96808	71.55651	24.53434	28.47776
Gar1	45.41793	50.77324	35.73836	20.6679	35.14835	35.31462	41.88647	26.26941
D8Ertd738	68.52235	73.55463	88.01856	47.83905	111.96315	114.40971	67.02589	87.92331
Snrnp200	52.59405	52.56919	44.02101	56.73188	55.85282	54.55725	38.69276	27.18537
Ski	32.61199	30.62358	22.3148	19.67522	21.09841	21.90988	43.32769	37.13309
Tcof1	40.81007	43.24843	56.87434	52.59707	55.06215	50.75199	31.16568	23.34376
Dtymk	49.49247	47.63139	26.78243	15.19664	20.1431	18.90368	35.6206	38.61566
Rps11	409.28285	410.68957	460.12234	370.55729	701.21536	652.78337	270.70489	350.96849
Arf6	227.60137	219.72798	120.84123	72.58788	88.7171	85.67727	146.67184	172.42334
Pdia6	647.56557	652.98731	147.81743	104.92265	249.55782	241.11791	250.07985	387.3207
Drg1	40.85292	40.58422	41.01506	43.558	22.94867	23.91663	31.50087	30.11403
Smg5	34.05014	35.20132	36.19891	37.94205	17.71972	18.10934	39.23042	24.21853
Nars	82.6773	82.79032	193.56786	177.80054	318.68661	312.52856	67.84963	47.13714
Eif1	146.91826	150.3808	350.2174	203.0646	564.33412	535.53794	177.11703	183.11711
Sf3a2	44.94301	46.10126	44.12556	20.55647	23.93313	24.18979	35.07284	34.05389
Cnpy3	45.57988	44.28176	38.6221	22.86656	31.40693	29.49758	28.18289	34.19804
Khsrp	77.44224	79.74573	50.68197	53.40944	71.05801	67.63293	57.76334	51.63135
Lrp10	33.57062	32.23039	30.27889	20.87638	51.94635	50.93985	30.98486	32.86353
Taldo1	95.46115	99.01125	89.15005	74.69203	81.9728	78.57323	67.19396	66.0422
Anxa1	126.02203	128.16487	156.66566	167.70122	91.93192	115.55543	144.11841	168.40572
Ywhaz	140.37444	141.77961	168.80191	182.36129	148.97424	150.33794	176.07515	145.20344
Nucb1	34.91503	34.6263	27.58167	17.73444	67.11009	64.70353	25.664	33.12905
Hnrnpul1	27.97807	27.78524	30.94959	26.76307	40.71773	37.17776	25.37075	21.83497
Pnrc1	21.31472	23.0571	9.33472	9.44344	24.7017	25.63935	34.61205	64.07763
Parvb	57.64547	58.34537	31.09321	28.40508	56.69121	58.46002	40.36922	29.29659
Gtpbp1	79.78205	80.07409	22.33148	20.0509	34.61449	33.60016	43.45605	37.40006
Tm2d2	16.46	17.30882	23.82961	15.80734	26.20753	23.56001	16.33031	24.88362
Cacybp	56.41516	56.35488	44.05145	50.70712	17.92484	17.1615	70.96216	65.46197
Rps15	1205.0448	1187.7339	1187.3025	782.28477	1396.8698	1335.5541	494.83924	657.28362
Pebp1	306.64805	323.50345	311.08964	236.6901	260.84856	243.60237	154.98304	163.16231
Fth1	800.1401	756.5687	547.9642	550.27332	331.28029	303.97205	844.78115	999.68623
Csnk1d	43.99553	45.74046	57.21267	47.82466	43.27026	45.74428	42.15283	48.51149
Akirin2	46.8628	46.31117	69.63661	60.29625	77.97458	76.86358	33.76749	35.34024
Kirrel	54.93547	56.10305	34.51615	30.04868	27.49562	28.97689	59.33283	40.35595
Mfsd5	28.95836	28.12512	44.09662	30.59012	34.18887	32.57868	34.55335	34.7911
Mrpl10	46.46803	43.81236	60.18714	53.76156	38.24492	37.86734	27.96103	29.80962
Jun	65.63514	68.86705	95.23077	70.74314	6.34052	5.86674	69.24315	54.46972
Ndufb11	108.34891	111.25124	68.8865	54.98474	119.37612	113.74527	59.52338	112.70894
Ensa	17.93526	19.61594	27.84227	24.5584	29.94714	29.98442	18.58094	18.18043
Rtcb	91.23943	94.17678	136.03726	124.29745	78.17018	77.59892	64.85643	61.54954

Slc25a4	141.82426	144.3027	145.0062	101.028	122.87561	127.79398	129.62587	163.96203
Atp5b	438.8617	455.7035	559.42635	522.81987	467.29666	436.23876	232.94834	258.70959
Cherp	34.60938	33.53569	24.53014	19.8936	27.01319	23.74261	32.91992	25.3076
Polr2g	50.53398	49.92192	80.73653	56.816	46.97863	49.79584	26.19243	30.0832
Aup1	41.92037	40.25163	27.4473	25.67398	37.49784	35.07965	41.9511	55.47193
Nolc1	57.52519	58.58065	55.89219	54.82944	39.94464	38.52278	53.25398	34.63484
Raly	96.07365	100.25696	111.01574	85.70936	124.56759	119.30831	50.45421	58.07583
Sh3glb1	17.04583	17.16684	15.90814	21.84125	21.03262	22.73714	38.24845	28.5228
Dynlrb1	71.28346	69.58444	107.06143	82.84444	133.82582	134.53558	81.83934	101.42688
Pcbp2	126.27229	123.79207	159.97124	155.78988	218.7542	200.91028	67.78344	74.7739
Tcp1	91.11964	92.79225	78.7767	118.79921	94.27407	98.58337	72.09763	55.83821
Sdc1	197.78566	201.71664	40.40822	29.24694	32.20222	31.21549	154.23102	204.87513
Gstp1	258.95153	248.89003	185.22059	123.92274	163.60255	157.58215	119.57326	184.55344
Calr	277.41091	279.18904	362.26049	282.11494	542.4132	511.93554	225.27478	246.85858
Rpn2	133.82349	129.45697	158.08123	123.91165	255.46617	243.621	100.36072	101.02073
Tnfrsf12a	39.84324	39.44133	96.45623	41.52363	78.68462	72.32156	32.18376	16.20088
Upf1	48.27756	47.34365	34.15837	31.11025	27.20068	27.08525	33.89472	35.54604
Ik	34.16022	34.42632	31.94836	30.52634	38.11185	39.13226	31.37093	37.31108
Capns1	124.30705	121.10127	186.16224	164.94796	210.61829	192.05739	117.33267	162.94265
Romo1	61.15998	62.48833	67.73481	22.67139	56.7319	56.32421	27.66591	46.12221
Mtap	51.68023	50.29198	90.33771	119.77982	29.43575	30.25689	67.55768	56.61917
Cdk16	29.19699	26.79702	23.52823	21.50647	28.39657	26.84908	27.58426	34.03117
Plin3	38.88487	38.12933	19.32246	13.77526	46.79825	44.72072	22.89072	33.87766
Rab7	56.36378	56.53891	92.55014	93.24293	87.60584	87.62415	91.97133	82.70296
Caprin1	31.89058	31.51016	39.43365	55.9971	46.503	49.87507	32.9336	27.36219
Elovl1	22.8974	22.88371	42.60732	38.87145	36.10493	34.56437	37.42821	37.26992
H2-K1	89.86207	87.4201	390.32757	214.35458	303.99543	296.64287	302.6382	429.02983
Wdr74	24.73242	27.47702	72.4915	54.31495	22.84719	22.42236	20.62264	20.34143
P4ha1	69.86592	74.7755	74.9507	70.03188	101.47369	100.74801	32.12818	20.32232
Cnih4	22.22934	21.22866	33.27357	28.90034	32.71641	31.12792	14.94005	14.68461
Herpud1	16.25297	15.51495	67.2148	59.16072	108.39581	96.92114	18.44839	35.63752
Trpc4ap	28.93392	29.51908	27.79788	30.57261	38.29523	39.73614	21.39847	28.14653
Eif2b2	50.0588	49.14069	41.16931	32.66792	63.91965	58.47349	23.59563	33.50485
Ipo5	88.52435	88.06603	93.19568	124.58743	91.81297	91.85796	61.2553	36.67296
Sun2	52.62013	50.94768	24.0926	14.5243	33.74585	33.47204	37.69064	35.63343
Tmem50a	66.38652	67.5469	42.69247	31.88996	73.53556	73.69099	67.39056	81.45875
Arl6ip4	30.2135	31.83678	29.13295	21.65724	28.17232	30.2344	24.3952	31.73904
Nacc1	67.00699	66.70957	52.7768	44.86376	52.56573	51.63981	45.99421	41.59752
Mcm6	100.62635	98.81152	68.45664	88.67449	32.82743	33.7827	62.52812	45.91337
Prelid3b	26.60709	26.15425	45.75585	41.07051	50.97916	55.70932	35.45854	29.96632
Wbp1l	25.53704	24.28304	18.07228	15.10898	14.68814	14.60573	38.28311	41.73658
Numa1	40.24739	40.26218	29.79121	29.69834	34.81989	33.87215	24.69597	28.63975
Ctbp1	65.22281	66.51033	49.21634	42.97371	42.20372	39.83159	60.89641	77.22203
S100a4	40.74302	46.08213	15.32593	39.02032	5.45433	6.01582	30.61808	30.96661
Dcaf7	60.55096	59.68876	48.22685	49.56124	58.51629	57.42909	55.99581	42.99839
Txn1	406.62902	414.01204	319.96637	187.89494	248.4345	245.51137	363.34903	403.2161
Morf4l2	87.71554	90.97509	56.42288	50.81592	93.06465	94.67465	95.87301	99.01251
Fbxl6	30.51658	31.68479	24.05609	14.20065	28.42182	25.53344	24.32685	30.81395

Poldip3	30.02595	29.91432	33.58612	27.76874	32.52865	33.16364	22.78381	21.84254
Plrg1	33.02654	32.60557	25.48223	27.29306	44.59041	46.83755	23.50054	25.12834
Rab10	89.04006	84.32836	43.73932	53.29435	43.74625	47.99119	79.57189	104.11916
Psm�4	99.22647	98.20205	60.85625	50.97907	87.0675	78.38548	60.9907	63.41267
Vamp3	33.52708	31.94459	18.85708	20.92061	38.39825	40.51137	44.18059	48.98678
Psm�14	39.16338	40.22123	42.72815	40.97335	67.08541	65.14333	37.7419	35.10675
Timp2	109.37311	108.8302	467.8691	438.82436	94.54417	94.99933	206.46142	303.94348
Clpp	46.23983	48.66261	63.36932	41.50024	81.04212	71.36603	28.54318	31.0527
Trip10	34.93479	35.00861	29.26832	15.29289	32.98272	30.57477	29.2167	30.40331
Rpl7	457.84215	471.03655	348.17414	415.32712	323.26959	379.34661	371.15385	450.7276
Atp5g3	101.27532	111.05349	116.4003	80.35736	142.76821	145.44118	86.12561	101.86205
Slc38a2	24.53125	24.24888	37.18935	44.4246	53.43513	54.7517	59.38421	44.40824
Zfp207	18.47245	17.23494	16.5512	18.92558	12.30721	12.71498	26.35027	25.06571
Sae1	79.38378	80.84233	103.89055	104.77776	57.18529	58.49663	45.56712	41.97808
Ppp4c	24.78272	24.6158	29.11289	31.72039	21.84738	21.41621	17.25299	18.35973
Tmem222	19.66296	19.71585	31.40844	20.78864	18.80678	17.26515	19.62614	25.23408
Pygo2	41.51726	40.52291	22.48404	22.09409	25.33881	24.93526	27.60458	26.84407
Ctnna1	61.28257	63.84168	52.4447	54.362	73.61123	75.51211	52.37409	51.00396
Elp5	26.83048	27.82724	32.04751	26.07592	37.97377	35.94388	17.95906	18.31372
Rps8	752.7308	752.28781	740.85137	547.94221	867.67815	857.10839	458.69309	574.15077
Tmed3	25.62598	26.34445	42.72272	35.14557	28.78168	28.76887	25.84843	40.84905
Pgam5	28.11205	27.35159	45.82776	47.73117	21.04916	20.28113	21.92394	18.48567
Ythdf1	28.1941	29.08266	26.19569	27.16039	38.6465	39.44331	27.70681	25.12901
Npm3	87.9619	90.65296	72.0034	48.51824	57.94831	55.52228	40.61223	52.89442
Ndufa9	29.14002	31.17769	44.66887	49.64602	46.29602	43.13402	26.72956	34.5627
S100a10	283.18414	292.54283	98.81937	101.57283	201.1875	217.26358	264.15023	208.16993
Ndufs6	43.79799	47.07338	51.04475	21.62748	47.29516	40.63126	31.21879	40.8453
Actn1	92.3204	91.97335	58.51518	56.84517	36.86961	35.73375	98.5423	95.81675
Cct4	129.04057	133.31582	83.89105	112.74104	129.48171	134.31961	88.94506	81.02974
Dtx3	21.7972	19.82896	20.89961	11.13538	15.45388	16.16106	21.88708	37.37406
Ahcyl1	82.79339	86.21657	30.73233	36.88049	66.00306	66.49127	62.38747	43.50788
Cers5	17.49964	17.46685	32.7477	30.67665	22.83446	24.43848	22.38741	28.74919
Lmf2	31.22408	28.50152	36.80787	28.78145	37.91761	35.60577	33.22404	30.48399
Sumo3	20.08208	21.26407	24.62412	24.28215	25.83177	25.57037	26.64934	32.05393
Selenom	89.6108	93.08189	38.00734	15.49172	46.91229	42.18525	45.44274	107.42554
Rhoc	199.77005	205.99358	133.561	86.84049	245.1153	241.67337	119.70362	112.63048
Arl8a	26.77213	26.35233	49.08066	29.93898	39.19639	38.29603	44.20399	37.13272
Trap1	69.94772	72.91629	95.52981	84.05658	56.12188	52.56061	45.27626	39.12568
Ubap2	58.45319	61.39809	70.26715	70.86965	41.24206	38.29984	44.7025	32.33962
Slc39a1	66.77902	68.84744	61.84696	68.83506	115.80103	114.09265	77.97616	66.84886
Prmt1	68.36103	68.36906	128.81911	105.97038	78.53978	73.74368	45.88461	46.79022
Tpst2	26.78274	23.56026	28.02604	16.61453	15.63599	15.21571	28.10152	26.29821
Ltbp4	31.52021	31.81591	20.93299	11.35499	36.39278	35.11737	14.78567	34.77609
Ly6c1	91.7386	86.6932	14.46883	9.45016	60.23092	67.64428	47.15062	126.14328
Mrps7	20.34529	18.79085	40.49998	32.34413	21.92353	22.14465	18.40881	25.1099
Nudt4	111.98195	109.34914	50.33391	63.92348	28.31691	31.26482	97.90176	86.3705
Hspa5	230.33438	225.38928	492.96711	473.61033	824.5695	812.52245	262.08325	257.5433
Cct2	319.20941	334.76958	224.00093	239.28597	246.04051	243.12618	200.86269	169.2696

Arhgef2	24.08821	24.24385	48.82976	48.63393	53.24545	50.85485	21.29516	16.55282
Stx4a	15.12065	15.04002	20.72508	14.63457	26.06988	28.20087	23.05266	33.20866
Chmp2a	32.53831	31.44463	60.06196	52.41459	82.27714	82.10643	33.94659	53.55355
Glg1	57.74897	58.08906	60.21528	80.20604	83.75317	83.4802	54.20393	46.33127
Timm8b	23.07198	27.67004	59.92599	35.49356	62.11668	56.70992	15.09132	20.05211
Slc25a1	23.62242	21.64969	71.38817	51.16835	55.0173	56.52882	22.422	23.54953
Ubp1	13.05284	11.19775	15.09559	10.25578	4.23115	5.0986	27.521	27.75212
Tap1	8.72994	8.62582	24.48867	18.28182	12.37564	12.29032	20.10887	27.0043
Acaa2	52.99817	57.3199	33.58069	36.99817	33.28328	35.57129	38.52582	56.25025
Ier5	38.23907	36.04624	15.20814	8.67919	28.16917	29.34287	27.03028	28.01198
Rab35	27.83625	28.08355	34.32562	31.86408	19.15323	20.33853	30.01509	31.63719
Calm3	169.00309	171.31784	156.1905	133.93311	119.44008	116.34566	116.57296	140.8722
Srsf9	70.55879	73.81955	77.5885	29.10676	69.20439	67.60214	36.50152	41.15278
Fasn	49.94714	51.58314	85.14457	97.04293	42.98452	43.55002	47.73011	37.59794
Arpc1a	51.89034	52.58577	46.67737	39.78616	36.59685	40.53082	37.48879	58.90699
Dstn	70.32843	73.63731	59.72257	93.33692	91.24131	95.62044	82.49554	64.25386
Ap2b1	28.70393	28.42743	33.14538	52.05089	39.30415	39.07921	27.91583	27.16555
Sympk	35.65562	35.25097	28.92782	29.91702	27.4382	27.21957	17.99385	19.49199
Krcc1	27.82935	30.70791	13.17066	12.39942	6.25014	8.3196	73.43798	126.57962
Sparc	154.69727	155.30573	182.42848	123.9119	333.34981	344.68171	153.71025	216.25699
Idh3g	48.75284	49.16906	76.25376	61.32038	45.99327	45.29003	39.13859	45.7353
Stt3b	61.40249	58.26344	69.32466	91.52005	56.23697	58.50331	60.07302	67.463
Mrps15	22.7179	24.03357	34.0731	26.9201	26.42239	24.70184	22.90138	28.64947
Ctsl	164.06877	173.24459	141.4152	89.97311	102.7436	106.21504	192.37829	151.98866
Ivns1abp	22.999	23.66378	33.84026	37.60179	12.63888	13.94843	45.90246	35.41564
Pja1	29.15585	29.82358	31.54906	23.79189	19.69339	18.59179	23.27448	25.09644
Sf3b2	70.62442	72.41267	62.78557	60.07316	48.83037	47.11195	44.07749	34.21712
Eif4g2	52.41098	52.72619	107.75725	171.25644	90.4938	96.53535	96.5317	80.94998
mt-Nd2	708.20105	635.26713	3056.6665	7468.9238	1252.5706	1111.1345	441.43629	613.4935
Serpinb6a	26.00201	27.17093	29.3353	35.48456	52.91514	55.46718	43.44027	50.27973
Rbck1	38.6089	38.52631	46.45117	34.05055	37.16413	38.34466	39.63461	42.93379
Ppp2cb	53.84328	55.51315	59.132	51.61433	53.92631	56.18782	85.78648	103.31565
C1qbp	59.43733	60.4687	89.90658	70.15373	82.85378	78.93467	46.03988	31.30748
Nedd4	140.30868	141.86281	87.65289	100.44936	115.62479	128.59013	113.5423	130.66247
Noc2l	91.64567	90.58968	53.60158	50.79463	31.50484	30.34196	66.94777	57.50612
Selenof	45.29647	46.35137	39.92011	42.34743	42.30858	42.07356	48.55579	42.57736
Prrc2a	148.72011	148.37775	55.25478	47.80671	117.61554	115.21402	103.35397	85.44911
Ppie	26.79859	27.05505	32.59465	19.76419	30.85669	26.74135	15.55066	17.0214
Atox1	152.12735	147.09924	132.35261	48.15282	99.7522	97.09657	116.01307	173.99656
Mtpn	61.6221	61.12034	71.52908	115.61337	60.8528	66.79511	99.8719	71.37078
Mir703	20.43381	25.12165	21.83358	23.28202	55.90526	56.3081	17.72351	31.4809
Actr3	59.91948	58.32513	83.10621	102.19446	74.8137	81.20133	108.03444	85.07102
Ninj1	59.20281	58.48235	24.61584	16.32889	44.84101	38.79632	90.94148	96.01945
Prdx2	80.43518	84.63076	73.51615	67.90513	65.31098	62.39587	52.51308	81.04957
Gpr108	18.77235	18.02903	19.12536	15.68919	46.47066	44.57619	15.27394	22.86121
Hdgfl2	28.96687	28.9652	16.02164	9.35757	31.57456	30.53947	18.76874	24.17429
Cnbp	131.60514	133.03471	144.7452	143.49887	204.07431	206.06395	114.6705	115.72773
Cox7a2	91.09632	84.84546	89.33246	78.17968	58.7811	56.40765	56.53954	69.45753

Cdipt	18.61101	19.04871	33.93186	26.61462	39.50315	38.04962	26.41543	33.09624
Cbx6	54.65174	54.43241	22.05209	17.52064	22.28361	22.64231	38.14288	63.53927
Dnttip1	19.6099	18.71101	19.40713	12.66698	44.61958	40.51295	13.67713	14.48805
Tmem59	50.91556	51.40065	79.31527	80.63314	103.51017	112.7996	46.65332	70.79623
Hnrnpd	26.50457	27.19317	26.74744	23.27549	14.55107	15.27589	25.48757	23.89147
Kdelr3	75.92273	68.71122	37.17959	36.7783	24.99606	24.86892	41.77482	37.39876
Pcolce	147.14237	137.47706	80.84527	42.82242	146.07591	148.71876	87.11591	168.53735
Pa2g4	135.51945	144.42333	132.49534	136.97544	95.44002	88.58118	88.25183	65.12378
Eef1a1	5299	4978.4053	3617.169	5223.5386	6214.7777	6314.8075	3353.0925	3952.5608
Cd151	25.50712	27.26959	57.05882	41.94642	80.16839	75.97757	24.25831	24.76703
Polr2e	49.44097	49.59571	44.5473	25.70133	45.16137	41.58305	23.67504	32.35516
Jund	19.84603	18.1459	27.80777	15.34767	13.15416	12.61973	28.56788	49.31909
Timp1	39.94773	44.56804	56.45527	50.04092	103.03764	109.68141	63.09011	44.07287
Mt2	9.88549	11.20568	16.71745	24.75027	11.77658	9.7182	8.63394	6.86094
Ctdsp2	86.79649	83.16183	40.91872	33.74265	58.38216	60.43486	48.27786	87.1084
Mrpl38	36.98294	33.70812	51.77668	33.06475	57.44273	52.05533	24.36631	28.49513
Ppp1ca	195.37247	194.97879	224.10765	256.13743	186.72682	175.52748	129.73574	168.64514
Tpd52l2	18.18797	17.16737	18.4119	15.75965	27.38161	27.68917	14.43761	17.8613
Coa3	48.19264	49.4011	58.50968	37.82	53.77138	52.59966	30.47534	48.30698
Nfkb2	29.06999	29.41024	78.36033	59.36035	59.8503	55.88351	28.87327	27.11016
Snrpb	181.8827	180.64654	130.57073	75.05439	195.56149	171.09727	109.28199	118.8589
Fstl1	45.83382	47.03424	110.36824	115.21671	25.34615	28.45134	43.18079	17.99523
Mcm5	81.08469	82.23824	50.16834	45.56484	20.9606	19.63229	35.86962	26.21043
Tgfb1	11.98102	11.9395	24.10315	19.3316	56.64773	55.09712	23.74664	17.75912
Bcar1	41.36129	42.54067	26.363	19.1353	15.81786	15.29474	27.1815	29.18681
Hnrnpk	94.59236	97.28928	78.05222	72.80801	85.36734	84.54503	94.36346	85.36879
Cdc42ep1	28.73232	27.69346	16.08669	13.19042	15.59845	14.86446	13.81155	36.42621
Pgrmc1	73.10487	71.17062	60.14983	67.88279	101.94903	103.32447	80.66061	118.33595
Ywhah	86.04843	87.99309	43.47841	42.2675	44.17274	43.8574	99.8594	88.26525
mt-Cytb	1072.3296	921.52987	4774.2381	10027.866	2197.6011	2072.1557	1484.1239	1985.5011
Nifk	23.13955	24.53896	25.80223	29.17669	13.41463	16.24195	40.44577	30.72489
Plekho2	16.45292	17.15424	30.89989	29.93342	15.0302	13.80415	32.75373	25.32949
Septin8	28.03216	27.17398	49.23726	48.8467	50.18374	48.74657	40.92664	54.02656
Nelfb	49.0689	48.66954	24.60178	20.08546	28.34148	28.66277	26.52161	30.88665
Ubqln4	41.95801	41.83614	37.17714	33.48218	25.01349	24.40478	37.04016	27.42871
Pgm1	40.80346	43.57628	52.9405	61.73738	39.93732	42.45858	41.09724	31.82913
Zcchc24	36.64517	34.35406	29.6089	29.48098	37.17853	39.83881	62.96884	85.02787
Nop16	52.38073	51.62066	34.43465	22.4847	24.2706	21.72616	48.01958	27.16885
Txnip	349.32278	326.32194	111.0595	83.51505	45.23292	52.10036	78.18715	190.61948
Ifitm3	285.72193	292.17701	330.25641	180.1977	706.96576	663.703	270.62246	377.25627
Tnfrsf1a	40.36038	39.99461	53.69293	43.65522	75.90098	75.19742	57.27287	69.15309
Parp3	19.04792	18.63399	16.88172	12.29309	14.72661	14.56711	22.67607	32.60603
Pfdn5	62.58564	60.61765	56.48662	41.98234	73.05466	70.14207	27.74905	55.21883
Atp6v0b	45.50398	47.1452	106.65053	67.82524	51.11598	46.43508	33.6898	53.71835
Ppm1g	67.6899	67.55345	34.92001	34.13641	36.73382	35.4839	37.3668	39.569
Ppp1r14b	189.10171	187.48716	240.27113	128.93349	87.42759	76.75099	149.85493	183.68922
Dcaf12	27.91958	27.16035	30.66288	31.97415	35.08586	37.1017	23.19446	25.87965
Wdr1	47.31605	47.1701	20.63863	19.96199	20.37678	21.13792	45.15927	36.89215

Mrpl28	58.89039	58.03921	54.62283	37.04154	51.51656	50.91648	27.44456	35.34912
Rpl3	735.67561	765.16315	695.28431	811.34266	1023.3619	968.80152	329.75739	388.91351
Atpif1	39.24449	39.57864	47.28414	26.23674	64.0404	59.39454	25.62805	39.74156
Tmem134	40.94879	39.52085	51.65211	31.80862	36.77148	34.26565	31.02105	50.71148
Tardbp	31.30809	31.29321	20.46615	19.21886	9.06585	11.14127	36.55364	32.27973
Rpl32	830.20422	881.74182	983.95294	812.35421	1174.9098	1117.3666	439.84644	578.54799
Zfp361l	19.1315	18.7311	52.46283	47.99725	11.96563	12.64182	39.98356	62.65447
Cdk11b	21.96416	22.8979	22.88964	20.09785	31.48565	30.15543	25.42114	25.94129
Sdha	74.81074	75.21132	99.17131	83.63568	91.43329	91.89909	57.26401	64.08257
Kars	84.12679	85.59938	85.10264	92.48985	68.06736	67.59799	56.92369	50.44248
Samd4b	33.49904	32.65677	50.82806	44.54081	39.11901	35.38822	29.69493	20.55508
Ppp1r18	68.90858	65.53081	28.76225	17.62344	44.03617	43.7891	43.27232	39.64641
Pdia3	230.36224	230.28286	200.13745	200.4308	359.59242	380.7916	215.33205	234.80704
Cers2	47.54091	44.81052	67.10493	61.68098	93.74746	90.39065	71.85149	64.48478
Add1	37.31168	37.04796	18.96366	18.33633	17.08846	17.74015	30.56886	39.60533
S100a1	45.0091	42.41541	42.41764	23.35801	52.01786	60.44266	44.53862	88.19752
Rpl7a	330.94647	314.43964	154.65637	134.40549	507.90977	472.21682	230.9164	291.39741
Dusp6	168.01942	168.24519	26.03324	25.31654	20.53216	20.8127	75.68169	101.56504
Pfkl	58.32813	62.05313	44.93871	34.90726	28.31404	29.17631	27.15814	22.34816
Cct7	75.71541	79.56124	91.64877	92.3184	99.28911	95.97838	40.06845	37.86674
Lasp1	46.90518	48.37145	27.95104	23.41143	60.941	59.50055	74.35961	66.26807
Cul7	38.0928	37.87742	35.16798	34.66686	38.74428	40.2603	31.15184	33.4919
Lig1	43.29729	44.70848	31.92045	31.52525	26.40762	24.56375	23.77615	18.03481
Mrpl52	22.7289	20.33171	32.04932	17.83951	37.92207	36.45031	27.42615	35.70822
Rpl8	1603.7779	1588.031	1584.0612	1122.9682	1792.4206	1694.9639	727.36181	796.79486
Ltbp3	70.79674	67.70921	19.5786	10.45063	35.34724	34.30499	40.42889	45.53197
Hnrnpdl	25.80899	24.81158	16.21451	11.58785	18.00384	18.97651	46.27914	43.99328
Eif4ebp1	117.77626	115.12679	197.02596	87.52046	189.36567	168.65727	106.01635	98.8224
Oat	65.18883	65.19322	56.82202	53.76567	74.99725	77.66141	42.09054	43.77691
Srsf7	42.93893	41.38726	49.55007	38.60224	37.85464	38.30996	36.48582	37.93239
Nup188	48.60525	46.9192	35.15667	37.15215	44.10045	41.33116	24.30998	14.44388
Pcbp4	50.25099	50.55444	66.69448	40.49326	35.83457	33.42219	30.31628	36.47278
Msn	104.37219	108.7384	108.30483	110.07243	91.46741	93.47384	154.8765	104.77523
Egln1	53.41711	54.60663	22.49959	23.86345	6.60222	6.86625	52.40238	34.52629
Cct3	119.54696	120.1683	92.48336	84.43414	86.84955	86.38399	82.73769	56.37257
Plp2	116.30391	103.65977	80.78433	83.89768	271.4136	264.7255	122.72423	92.18486
Hspb8	77.44656	76.22369	70.22844	75.37525	79.89956	79.40328	32.23227	44.82483
Mgst3	49.37197	42.86332	16.22354	11.70836	26.13306	25.23484	45.0499	59.34749
Hjurp	69.62161	61.49458	40.73185	30.95252	31.88992	38.43626	54.00304	39.11242
Git1	52.12322	48.59556	62.6009	56.00836	37.25196	34.62895	45.95782	44.57818
Cox5a	22.36567	20.32353	43.24064	29.43264	25.15849	20.52946	15.78113	20.50367
Ssna1	48.06569	52.40866	42.24845	25.81413	42.65484	41.96326	30.87854	42.37305
Tmsb4x	38.71231	40.13269	31.05675	34.82928	101.48714	111.97974	252.52207	260.63543
Vti1b	53.58263	54.33098	39.82909	32.77073	33.96447	34.87084	51.28148	82.78805
Tspan4	47.97473	46.45357	46.5247	37.99172	55.074	53.50826	38.69149	29.18436
H2ax	76.61885	79.01681	54.50234	44.94257	35.22354	32.23546	64.891	67.98105
Phgdh	335.88679	337.84221	526.43459	490.80245	614.71165	539.06253	131.61851	85.44784
Abhd2	25.15562	24.28804	10.43236	16.14507	19.1241	19.95304	26.8211	41.12077

Ptpn23	30.21224	29.89414	29.55559	24.80308	31.0226	27.29974	25.79367	20.43306
Mrpl20	28.10876	28.02644	22.19926	17.5229	10.32036	9.61541	25.05546	27.97836
Cltc	51.41575	53.15065	117.84435	182.97641	108.02062	113.62214	85.53	67.97626
Bsg	409.25695	409.10215	421.50377	314.48375	386.97501	390.35708	171.48557	156.49409
Chd4	81.21167	83.31905	65.16207	76.11327	55.51907	58.41697	57.49361	64.43529
Dhx15	22.37285	21.23654	17.84822	18.4949	22.36485	24.90067	30.97724	23.0761
Rnf44	26.98448	26.26173	17.79237	10.2944	26.79156	26.34728	31.67002	31.00281
Tecr	43.43753	42.717	62.76487	48.2552	70.84038	67.97851	34.23781	39.92862
Sfr1	62.01165	61.84321	68.7023	61.87828	105.99684	105.32306	60.10604	60.12427
Plekho1	32.48937	30.5131	21.69963	17.4066	34.21931	34.0652	34.0676	19.66263
Cd63	160.39013	169.40986	239.96446	208.89253	170.70218	169.00224	133.87818	176.25077
Ergic1	32.8279	30.6304	26.48506	23.48291	29.10193	29.20776	25.83001	19.10019
Copz1	37.35333	39.39707	51.94802	52.0876	71.31371	73.88356	32.20466	36.02515
Flot1	47.15092	49.05596	18.75948	11.47521	82.5147	81.67154	29.73912	48.26188
Fosl1	37.75693	34.3882	23.23417	12.20251	9.4917	9.53581	28.94954	6.95672
Psmc5	129.419	147.87636	204.42069	155.29751	149.38785	137.73352	113.09109	123.47729
Mcm4	59.95471	64.12433	35.63434	37.50454	27.17886	27.86889	34.88762	19.53531
Tmem30a	19.80142	19.46785	17.03461	20.6025	19.2964	21.53893	32.93535	33.14761
Gnai3	61.03542	59.57416	37.71565	48.93276	53.31101	62.50605	97.99383	68.90186
Prdx3	56.74986	54.5093	49.1458	66.05229	59.87602	61.51616	51.18886	65.50855
Serp1	39.43234	38.03448	75.19743	110.45518	126.5886	122.95453	62.35807	56.16554
Tmem14c	90.57966	90.01768	91.81177	73.03949	68.28664	60.52834	62.13105	80.26056
Gspt1	38.59127	37.69333	46.97996	54.63394	30.02203	31.0131	38.93456	28.23407
Max	24.97274	23.86607	20.77784	17.1004	13.9596	13.08197	32.90238	36.00867
Smarca4	54.17301	55.39955	39.66301	43.83205	35.29154	33.79715	41.72837	34.25331
Men1	28.71312	28.22604	32.02647	24.322	22.11307	21.63316	12.64049	16.4443
Ccna2	58.00949	57.03661	27.19218	30.7471	28.2661	32.32407	45.96136	32.06073
Ncstn	35.35503	34.85254	58.15268	49.43234	45.88546	42.43464	51.39201	62.3523
Asns	71.76333	71.05335	240.3506	324.51028	311.13145	285.74214	39.2434	24.61791
Rxb1	41.73091	40.27613	28.20549	17.2983	35.71828	34.29508	16.29496	22.78259
Plscr3	12.42481	13.60486	19.22847	13.07927	12.61156	11.75185	18.35329	21.57967
Nploc4	35.18095	36.2636	46.28734	54.33893	34.41049	35.72546	36.73369	29.26313
Mmadhc	33.04801	30.77055	29.54512	28.52087	64.77212	66.24819	32.66812	42.82128
Rpl34	204.491	204.87739	124.39762	90.56988	151.95931	145.59413	102.97692	103.70643
Rnf10	40.26851	39.3822	52.57144	52.85987	36.93868	36.38451	27.92183	29.33444
Mrpl18	28.87178	28.49294	15.65406	13.11436	25.45965	25.16073	22.23856	24.04766
Got1	39.00461	40.62836	142.55445	119.63446	123.9833	114.28102	47.98824	31.13892
Arf4	32.20542	33.86725	65.83681	73.32331	83.3723	82.84712	37.40803	42.47091
Psmc4	52.08878	50.38104	72.33008	57.65686	59.54604	55.67434	46.42253	49.09315
Dnajc5	17.48557	17.13751	16.15404	15.9774	17.77384	19.1399	27.16428	22.38163
Ndufs8	41.06913	41.65851	85.23833	67.55645	62.04095	56.95121	31.63337	41.84481
Sf3b3	29.61229	29.9172	26.60484	29.36967	36.61342	34.83089	28.66624	22.16391
Ywhag	65.1592	65.57044	148.09694	116.68894	77.76568	75.83667	59.13215	57.71864
Supt5	32.92051	32.55663	44.90557	36.60564	39.43658	37.54751	23.64827	26.17794
Polr2d	42.06767	42.15302	55.91577	46.53501	32.15575	36.6149	33.77274	36.13702
Rpa1	53.62282	52.93321	37.00736	40.60242	28.88365	29.98181	29.14056	28.95455
Socs3	33.52268	32.49967	7.56983	4.62192	24.91046	25.09528	75.89888	46.99606
Mafg	25.47316	23.19539	27.49488	20.18846	31.2696	31.22767	30.59169	25.04817

Col3a1	111.88557	107.74786	280.92239	251.13906	88.15686	89.53768	271.27858	709.53593
Kctd17	25.26997	25.77895	63.74881	47.18428	51.451	51.47344	25.77868	33.03055
Cfl1	473.34868	470.0668	338.57676	300.76429	223.45156	209.43805	377.97794	226.43941
Tmem242	29.80872	30.62748	14.70128	16.52112	25.28099	26.01442	17.73114	26.22698
Copb2	38.4143	41.71417	32.42976	35.05713	46.49855	48.09988	30.87805	28.90582
Parp1	82.55856	84.67338	61.53009	63.3953	19.65009	21.07211	45.98804	37.35573
Inf2	34.19369	33.58002	34.3385	33.04562	7.5345	7.49932	27.22739	35.85123
Scd2	98.5468	100.69897	343.23456	379.03634	279.30011	289.85956	78.07142	77.34642
Psap	286.36917	284.60655	429.27388	248.81762	293.80882	299.99927	585.54143	811.77125
Cluh	25.95054	26.01205	44.43162	40.8781	18.389	17.21901	28.43352	20.0045
Cdk2ap2	104.56378	97.60073	33.77393	22.12814	74.523	66.00191	73.95386	124.74121
Hexa	41.01518	40.85612	87.99803	63.41495	63.34856	64.38291	57.17168	74.52736
Tkt	69.72383	71.29529	56.49821	54.82551	69.09251	66.66613	37.22439	42.56882
Lgals3	82.42165	80.78089	224.06911	165.35085	234.0758	214.7163	182.94832	128.60455
Bcap31	136.81276	133.62075	189.07656	188.72344	112.47551	109.03233	92.9131	119.78732
Prr13	53.48934	61.5484	62.2688	40.98155	124.42461	124.08491	56.17318	49.30949
Npdc1	25.28445	24.48161	24.57001	15.72546	23.6494	22.45365	23.63673	35.27056
Grwd1	19.01473	19.44787	35.51355	24.47276	17.55002	16.40036	16.9705	14.17941
Cnih1	43.11112	43.18074	67.32387	96.78429	77.65141	75.39784	47.91664	48.74189
Ier3ip1	8.34435	8.46253	12.73671	14.33028	6.02247	6.83574	18.45766	16.85535
Ndufb6	68.50268	69.6641	123.41297	63.65765	50.57746	48.68702	38.10958	51.57752
Rars	47.62608	49.90295	100.13852	121.31003	202.71914	201.47836	47.82197	33.4132
Tuba1c	166.08377	154.47239	184.50356	176.50021	64.59353	73.5144	116.55099	81.77187
Ghitm	44.02618	45.80398	161.22765	131.42073	244.79557	241.39221	39.83148	31.88899
Rcc1	47.98528	46.99936	39.39365	27.20084	26.32127	24.73909	34.86282	22.63093
Reep5	52.30691	55.38601	70.20742	66.20519	49.92941	49.68958	64.46053	79.24634
Ptp4a2	55.44104	56.71474	60.04555	81.33622	52.89317	54.31001	84.63979	97.15878
Lix1l	48.41141	52.08698	28.45486	20.94515	65.43328	64.87199	34.81225	25.64469
Vamp8	41.01922	39.24919	18.80499	9.56927	15.32148	13.86517	40.18355	100.78714
Phlda3	50.73494	48.96023	48.74941	31.52616	36.24437	34.40011	18.64515	26.41245
Nop56	45.74934	46.91876	82.58339	83.94652	74.73666	72.80154	55.24086	42.1509
Mif	875.23659	857.08463	884.51371	495.10429	784.6673	719.6923	459.94433	290.60929
Spp1	783.05048	814.99795	47.24686	49.4022	756.72295	839.83378	612.75792	627.85899
Rad23a	27.19363	26.23236	43.82612	32.07521	33.40947	32.65362	21.217	23.62611
Tcf3	45.00326	45.17934	67.56819	44.533	38.32348	36.68999	29.27655	29.9646
Sec62	20.65138	19.39772	20.06069	26.92682	23.61889	26.11032	29.75136	36.12053
Srrt	30.14548	29.60868	29.06456	21.41152	8.26624	8.59639	28.96612	32.76178
Tceal9	58.93397	59.16504	31.18135	31.86346	70.38147	79.8398	54.32836	76.01723
Ddit4	119.45094	120.96908	63.32145	30.83828	75.73031	74.09236	52.37648	99.26725
Ccni	111.75651	108.44646	59.77141	114.40032	127.54901	129.84223	62.33746	74.89757
Rbm8a	40.1305	44.0895	23.4301	15.23916	47.19804	46.80454	33.30051	28.26943
Ube2g2	25.81006	25.99503	75.93353	49.38323	111.41312	100.20508	17.72317	19.55153
Prmt5	36.33039	37.14258	42.89992	49.33062	24.54003	23.12114	24.90397	19.31909
Rae1	39.49871	39.09981	36.90806	31.79627	31.74014	32.30132	34.51325	26.28994
Capn1	85.30138	87.11786	55.55523	51.09408	30.9049	29.41212	92.28438	68.90442
Arpc3	37.4289	37.90574	33.49173	29.60803	35.43377	34.75752	41.34849	42.89524
Aprt	163.98119	162.76965	180.2915	100.37436	170.76463	163.20584	131.30379	128.05727
Hp1bp3	26.76584	27.64582	20.42328	20.19913	21.10863	21.9747	36.53618	40.4979

Nek9	36.46145	37.29615	36.35743	37.19385	47.65557	48.92179	21.76284	29.30658
Cdc42ep4	14.4198	14.23437	11.51742	10.59127	19.45156	18.81122	29.47451	46.3196
Pgrmc2	37.065	37.26889	34.42158	25.7036	27.59599	25.89042	34.82469	39.43353
Atp6ap1	59.02756	56.55693	88.01634	70.32637	53.15137	50.25944	68.81587	68.02337
Polr2a	58.22902	59.37393	105.76361	96.53851	62.28605	59.17077	55.00972	37.55178
Gyg	17.93805	19.45783	26.44191	33.31921	17.62669	17.67887	25.37688	30.5444
Josd1	98.19383	99.45098	58.03768	53.25098	31.91234	31.11858	53.23332	46.33007
Eid1	39.64272	42.43109	37.35646	44.53196	39.61221	45.40702	62.4887	65.89494
Ndst1	22.88709	22.62521	28.0396	27.05573	29.45832	28.52894	41.05785	26.50384
Map4k4	43.59419	42.88358	30.62362	26.30351	48.3136	48.57199	88.30632	61.45945
Clic4	39.03196	38.69688	60.08063	68.54454	99.89363	99.46344	41.85762	37.95298
Cd9	98.36263	95.639	27.28548	21.18246	84.53648	90.26832	135.96803	127.40548
Atp5e	46.40435	48.51114	49.90943	31.44008	65.09256	63.95023	19.1119	35.06836
Slc3a2	78.24568	73.73768	220.7837	143.14695	214.88783	199.43051	55.72277	73.14952
Tnfaip1	26.24967	23.92176	48.90368	54.40685	49.766	47.92564	27.2818	22.16121
Paip2	31.05107	30.02584	28.34455	25.50771	31.64092	33.09988	22.95199	28.96684
Rab1b	69.26791	71.10799	81.7485	61.93445	71.01402	64.59143	68.8934	65.73918
Erf	23.3893	24.5894	29.38932	14.61681	15.63977	14.46926	16.69039	16.73812
Npm1	277.81693	299.48115	268.96948	327.22335	421.29803	452.52215	345.40717	263.95523
Spcs2	22.0076	21.48895	32.34579	29.95045	79.08393	78.78994	22.82008	23.24568
Leng8	8.1125	7.05841	8.05773	4.78628	4.34571	4.03094	23.8721	25.79201
Atf6b	50.22558	52.59319	32.80185	22.16645	77.37567	68.88881	33.73194	41.47613
Psmb7	34.02993	35.28131	65.27127	70.563	71.87094	69.42511	22.64081	21.82301
Otub1	36.92753	38.39751	52.89483	47.41537	46.34558	42.1951	42.57918	59.41621
Zfand3	19.7778	19.10337	22.72289	18.27765	54.121	52.47651	19.03671	22.5729
Selenon	48.51485	46.10741	31.15031	31.18313	57.64465	58.57403	31.02312	55.82656
Snx1	27.14323	28.14227	18.58875	17.21181	22.32138	21.86158	26.04091	29.58137
Cct8	153.12056	162.89733	140.56538	166.77648	120.32887	125.58633	131.90043	99.82875
Ykt6	54.90659	51.33091	61.09853	44.27541	51.50154	50.93848	56.58037	57.26385
Cks1b	200.74801	191.05201	109.30745	91.85243	193.22542	181.71786	113.71409	79.80999
Dazap2	84.33336	81.63143	65.66917	72.23897	90.8161	89.80867	94.889	105.86868
Dctn5	11.23804	11.96826	15.19467	14.89786	18.47265	18.8711	17.23136	17.71497
Ndufc2	64.843	62.02168	103.40359	87.43958	92.45083	85.83521	42.96074	63.77483
Ptpn1	22.09092	22.85028	12.46416	11.99056	19.89073	19.78323	25.85355	24.57227
Cse1l	23.81892	24.44759	25.86314	41.89018	14.90947	17.26681	29.47139	21.72986
Gsr	80.57866	82.47903	31.56015	22.81119	26.28375	27.74231	175.72769	196.64532
Cenpb	43.6171	43.56466	60.53526	48.70607	42.43213	40.09306	60.68736	62.77007
Elob	139.03531	133.19148	99.73447	83.02056	131.85523	124.38059	72.08251	107.03694
Rrbp1	31.03258	32.88519	34.47699	34.79037	120.68053	115.49912	39.13347	39.94746
Cct5	220.34028	222.80538	286.69955	347.79845	265.03519	265.58394	135.78816	121.94473
Aurkaip1	53.67804	52.93653	32.34239	20.38192	35.55113	31.18286	27.75504	38.96593
Lemd2	31.63143	29.32822	25.92112	13.06985	36.98629	36.00586	22.38056	27.78996
Eif3f	108.62926	109.3978	88.1357	96.25421	156.96783	142.97283	67.02536	108.92499
Tfdp1	54.53125	52.51985	55.24626	45.42615	29.52244	30.44859	60.26589	39.85084
Impdh1	37.07359	38.43405	40.11354	25.80097	20.48939	20.43162	32.50186	31.06853
Abcf2	87.86155	91.41635	65.99424	69.89413	45.17586	40.51574	46.29111	40.10715
Errfi1	24.38666	23.65017	4.20302	4.01948	10.69689	12.97496	43.71042	56.79158
Aldh2	117.51836	117.6304	55.45028	34.53381	99.77625	94.95347	43.74383	58.3476

Yif1b	19.96796	19.17962	52.87483	35.1097	36.00333	33.72588	13.08587	17.45273
Dnm2	42.64385	42.27157	35.82701	28.1496	47.6799	46.92628	39.583	38.2274
Chtop	59.80572	57.86664	37.04174	32.06831	66.53634	65.88389	50.89343	46.31951
Rpl14	410.67119	404.84082	362.56007	369.27863	374.48637	374.36448	286.81465	331.39048
Nans	42.4299	43.54183	30.72996	27.34806	43.07045	40.80357	25.49887	27.78587
Atxn10	116.05204	124.93224	212.74034	265.79784	178.31723	170.55822	82.68709	74.45137
Wasf2	44.01999	45.32181	30.00991	25.59737	42.26185	42.03055	46.54234	46.2075
Casc3	18.89915	18.53401	29.87781	20.8703	18.66737	18.45401	20.27616	19.40816
Set	105.57814	109.63343	119.51421	176.03716	69.54119	71.69787	126.10479	104.78369
Retreg2	50.62876	50.04698	51.63259	39.16675	40.19163	37.40234	42.90465	54.10151
Hnrnpu	50.77392	52.12512	60.18409	67.74438	24.57261	26.27491	70.44857	64.0448
Tnks1bp1	23.79265	23.34047	67.0677	52.27425	40.26523	38.8892	21.42513	26.66756
Lsm12	26.34306	24.90435	49.82958	71.76512	37.11694	36.0002	29.63153	22.29202
Cdca7	40.64971	41.56937	29.21264	27.14074	25.90789	23.13375	23.15103	13.10597
Surf4	83.63019	81.07172	127.45593	126.46947	183.69999	179.25929	95.98858	95.62417
Mapkapk2	64.05983	63.46746	60.87201	62.19641	61.14744	58.4883	78.62601	81.54867
Snrnp70	28.16035	27.79529	35.37587	19.55915	42.25557	40.61125	26.39714	28.66961
Pno1	24.26705	25.51669	33.17498	43.70681	24.27855	23.1486	39.19668	32.54308
Tex261	34.64353	34.67411	29.55083	28.3024	15.71931	16.10085	41.87182	46.83558
Slc6a6	27.94247	26.27222	22.84904	19.6029	33.28713	33.18884	52.15723	36.11713
Nedd8	75.21788	72.81307	92.72291	50.88704	77.86775	76.63377	48.48985	51.11421
Traf7	38.53194	36.94897	31.82405	25.73654	28.67966	28.43743	28.20182	24.52773
Tram1	27.21355	24.46422	37.61584	44.02693	52.89464	55.63435	59.71801	56.24001
Dok1	68.31033	74.62001	15.09951	7.49222	18.91401	19.93299	79.85514	72.07718
Slc25a11	31.97943	31.70553	65.49986	59.04618	55.37525	55.2662	31.83038	45.75807
Mlf2	55.39569	52.91374	68.46906	46.56866	47.89563	46.74035	45.93368	49.2729
Gaa	62.72874	61.63304	116.53873	65.22823	125.61717	120.00205	49.95233	53.16661
Cops6	45.33098	48.394	64.665	62.23077	62.6736	61.82425	26.61816	36.45365
Eef1d	53.08482	52.6903	57.27014	53.73834	49.22378	45.8642	30.98082	34.76359
Park7	112.37337	117.67256	75.6737	53.02322	54.52551	53.9048	73.54333	72.42704
H1f0	271.93734	278.44808	321.69533	230.97854	218.39818	224.55551	148.29202	217.18549
Ddx5	81.60362	81.14022	68.58729	59.75425	42.10334	49.81896	147.94416	181.43517
Phc2	60.39164	59.7565	25.49453	20.05933	30.55829	29.02571	34.46484	38.19791
Map2k1	44.32751	46.22984	38.44735	35.5249	34.52444	34.63894	37.16318	27.8688
Cox8a	271.35684	261.96502	736.59169	254.60228	440.08867	392.16798	202.64344	362.42414
Anapc5	54.89295	54.12752	56.53636	70.30844	41.38989	38.92722	39.48668	45.53583
Phf23	23.26987	23.25545	33.25779	27.32734	21.93257	20.98949	20.06823	25.74251
Gipc1	42.259	43.7504	52.90308	34.38728	30.86513	32.07049	35.44273	42.61582
Mfsd1	37.9661	37.93294	33.79344	35.85503	38.18182	36.98496	65.79552	56.75129
B2m	641.90783	660.48587	957.29834	870.44351	1014.2702	965.27885	1002.7611	1113.1619
Snx17	42.12704	40.30762	28.83898	28.71857	40.83238	39.28809	35.56663	54.87652
Map7d1	55.63304	55.22727	65.70428	47.03982	70.10586	69.97127	45.45603	43.29777
Cdk1	35.98113	37.41764	26.79079	21.33974	39.07208	40.09765	21.17963	15.65733
Sgta	51.49071	51.2799	56.17936	43.23687	42.055	42.31344	37.91305	44.00039
Myh9	86.90247	87.24193	91.11845	90.75775	100.89132	94.51477	95.89045	73.69856
Farp1	25.4607	24.33589	22.55259	24.96712	34.02979	34.33607	32.55665	26.11489
Mrpl12	78.1883	84.11839	149.23096	115.68372	87.68785	78.66075	41.14402	37.68361
Dmac1	20.5273	20.09351	34.002	17.40332	31.27453	29.13274	19.70484	31.91493

Cdk4	109.7683	113.14602	114.4914	91.03606	84.12994	80.03135	71.13102	71.30412
Sfpq	37.02922	34.378	27.41152	28.04096	14.58021	14.72517	71.08001	65.81621
Pdha1	38.08792	38.77491	28.58371	26.28366	42.65304	42.57755	41.43779	33.52983
Capg	191.1544	196.12897	60.57358	46.65045	174.52583	166.6849	255.31491	413.0441
Cdc42se1	48.72155	45.45119	31.53711	22.49346	41.61578	41.09391	58.06868	68.73027
Timm50	22.48658	21.42454	35.00475	29.44578	22.4285	20.84867	17.10709	15.54898
Imp3	50.50253	51.49055	59.85486	38.1143	105.61807	102.33886	38.80062	53.49672
Rbm39	20.2014	19.31068	27.20875	23.15889	43.51237	49.09847	36.50564	36.67049
Yeats4	21.53765	22.67773	23.61945	19.3986	23.45728	22.37559	28.4485	29.36253
Eif6	80.50089	78.49253	181.80395	129.36151	137.04033	131.66845	72.72793	69.29835
Rrp1	68.21027	70.13356	73.34836	62.7478	83.66827	82.81706	42.67867	50.74771
Csnk1g2	65.06524	62.66036	43.11163	36.91219	37.02683	36.66398	40.30889	46.898
Nop2	35.74568	35.11421	48.95519	38.20772	26.36288	25.83667	34.57048	24.40641
Plxnb2	91.28829	88.74628	98.88833	92.05579	178.30021	172.28437	57.92795	55.38633
Cpsf1	48.56107	49.28243	30.92969	27.14941	39.26044	36.28342	28.86744	22.72871
Pdia4	124.27271	129.31902	164.02867	199.36901	213.98324	209.55878	106.46528	98.42378
Ube4b	33.53713	32.88932	18.8866	21.69386	37.19556	37.02186	22.72301	24.55482
Eif3b	219.69895	221.94403	151.14178	177.67614	93.47352	87.5659	156.22418	130.87959
Rnf187	183.98814	180.73448	152.02291	142.03222	118.14622	109.45814	110.57722	135.47137
Snx3	99.84394	97.4403	134.19166	136.97204	133.13452	136.2709	109.88524	110.79041
Igf2r	51.30083	50.50763	26.19599	25.51138	87.76552	83.01921	59.09344	71.66805
Pfdn1	41.39207	45.5245	50.24326	38.24753	76.75993	73.70214	40.06568	51.09537
Ncaph2	92.34308	97.42373	72.23089	69.13639	78.68146	79.22161	41.0101	36.71643
Nisch	28.85784	28.64133	42.50843	38.77821	23.76767	25.15379	34.85777	33.37426
Sigmar1	21.84394	20.35577	52.11554	34.66469	12.79231	11.93179	21.43203	21.29258
G3bp1	66.15934	64.74126	75.08473	72.45113	40.21068	41.01589	56.07612	46.71842
Maged1	104.91491	104.85401	130.29745	120.22182	55.5965	57.77682	46.72371	79.93078
Aplp2	109.73915	108.60552	38.34195	33.3223	92.05336	93.29486	79.85925	86.77403
Hprt	81.67569	81.62071	74.41329	100.28654	39.93256	45.84182	103.02896	92.6331
Tnfaip2	73.45297	73.60379	49.02681	45.12974	21.95207	21.52927	48.86627	44.03524
Use1	34.17753	35.52172	36.30686	32.91278	39.26995	37.87054	28.40825	50.95915
Psmb5	119.10195	110.65168	172.35775	114.58456	178.80279	161.96759	70.91376	98.62116
Ndufs7	36.42682	32.40029	70.85858	34.63761	27.94573	23.65252	22.98653	30.66176
Mt1	160.00736	166.23091	175.38787	63.09642	137.75157	126.98447	91.44059	61.62887
Rpl7l1	41.46967	41.81821	31.69299	28.31813	34.11791	33.85041	30.78691	30.52891
Pygb	51.77105	51.2107	52.94102	55.21531	33.80958	35.87639	30.14755	43.92133
Nmt1	32.90626	34.10374	55.02568	57.1689	72.00215	67.59681	31.39609	29.5396
Htra1	90.26958	85.91244	165.25362	145.3339	71.8359	73.64423	133.12698	107.70393
Bok	54.47164	51.04009	31.88518	18.99927	14.20051	13.68764	20.07067	11.18941
Rab34	38.60764	41.1349	53.16779	41.41077	51.06127	51.53919	22.68015	24.03101
Flna	204.44031	210.81846	187.55089	223.21932	128.8614	116.98989	191.71784	108.63262
Hnrnpa0	204.43522	209.1336	177.44439	100.00344	128.33921	122.02142	183.80158	197.53354
Idh1	65.34174	66.70248	16.37407	18.48463	19.34198	24.11987	86.14123	263.48023
Rps25	175.42764	182.08006	178.27903	165.4374	248.5421	241.82575	96.4988	121.79368
Ruvbl2	72.0514	75.42718	92.66859	65.78228	78.44094	69.39951	31.17955	22.49817
Mgat4b	80.69685	79.119	97.76391	78.66686	88.69501	82.77264	54.54364	70.99685
Ap2a1	38.41846	37.66103	40.26994	34.59131	40.57081	38.9419	24.08298	20.23048
Ezr	81.28789	80.66788	38.02368	34.82092	85.18626	88.97919	126.10979	121.9023

Dut	76.88765	72.73504	43.49267	26.36808	73.51791	67.61967	40.6394	40.34812
Fundc2	25.94289	27.37646	27.43778	30.57226	23.15669	24.65216	24.90749	25.00844
Utp3	42.41876	44.09855	32.10878	33.35073	21.84935	22.89202	33.34364	32.50775
Cd164	43.16373	42.39103	47.10788	65.65498	51.77777	60.48103	87.53148	133.97316
Ech1	29.68318	29.61628	34.20381	32.9927	42.88985	42.14283	27.53847	53.92298
Acin1	16.67856	15.8428	16.82762	8.90974	11.08607	11.536	17.84364	20.27581
Rack1	510.4166	513.80826	451.93035	472.82324	834.51761	769.03456	238.40556	292.36341
Adipor1	50.29161	47.72372	44.98209	38.54664	50.5096	50.11991	57.4172	51.90729
Calm2	184.598	194.09426	151.29371	114.24295	310.75077	326.76645	205.127	236.72036
Marcksl1	106.008	103.0313	49.6731	33.49449	23.64297	25.52876	88.45448	82.51351
Anapc2	63.31232	66.55632	34.6309	30.42792	33.07205	34.44001	45.99642	53.69288
Ptms	190.75483	190.53868	352.7258	178.66	274.56145	261.83848	148.9613	337.71137
Ciao2b	47.15487	49.70413	48.41845	22.67042	116.05403	106.1351	29.85393	36.80336
Bag1	95.7617	91.40643	120.99881	138.32584	87.60588	83.21295	97.54729	126.11817
Psmc1	76.07612	74.7913	95.92457	99.58907	113.58349	105.3277	52.01589	76.69246
Sec13	23.7497	24.48331	41.36938	31.81609	42.07553	37.48913	20.84084	21.5687
Pgd	38.55009	40.50901	18.10402	16.33971	24.97607	24.05621	51.66575	62.40276
Chp1	45.47444	42.17392	34.25909	37.07787	66.20517	67.91377	42.38473	40.51291
Ssr2	143.76631	145.36449	107.94082	74.49067	315.52134	286.53256	94.31304	84.03412
Etv4	66.87245	70.21533	13.56739	11.89649	82.17047	80.2244	37.35718	29.78827
Psmc3	49.08521	50.81348	76.77608	63.60433	36.02424	34.83743	42.11401	42.03874
Eif2b5	46.15972	48.45705	58.41494	69.39342	31.63003	30.94278	31.7519	29.82366
Ccnb2	126.31844	138.36061	63.39446	53.482	67.66325	68.06788	64.29467	49.39929
Txndc12	30.88729	30.23268	38.27966	35.30864	35.77571	35.62103	17.08942	18.66758
Lmnbl1	69.3264	66.96581	53.43036	38.55445	37.73245	38.14107	51.41886	43.28645
Mob1a	68.32997	64.78486	38.99093	46.35659	26.80874	32.67762	95.21458	83.0007
Tuba1a	144.86406	135.04783	126.16951	145.49053	131.50265	138.15929	116.01791	94.9271
Gsn	217.02078	227.77726	37.9704	34.59816	113.04889	123.51187	128.00719	178.91644
Mllt1	32.63878	31.88696	24.54758	18.65149	13.9388	14.27144	24.64222	24.35695
H3f3b	136.75927	136.59384	285.80023	241.68949	158.98413	160.55115	230.82474	245.48637
Abcf1	66.67935	69.35878	51.45454	52.1899	59.13413	54.97861	44.52972	44.91946
Hspg2	116.80089	115.74881	62.34026	50.97891	78.13991	70.60724	232.63055	200.93574
Tbl1x	27.19283	28.45478	33.35849	47.17117	31.32383	31.48202	29.52239	26.80179
Ftsj3	44.92515	45.04337	47.49797	44.06599	36.6411	34.88819	38.61787	29.30344
Phb2	49.35625	48.52762	71.9129	61.54139	48.18806	46.14202	45.09621	46.34557
Ndufa10	41.68484	39.71546	43.05388	47.65482	29.49186	27.37162	32.80173	40.48197
Snrpe	49.49346	52.70203	45.21253	32.61449	31.965	32.02378	39.19655	42.17959
Papola	25.56812	27.05303	35.50532	50.76186	26.62053	29.88323	36.63648	40.29559
Vegfb	43.12075	42.78532	65.04888	47.85387	36.8163	34.4691	29.55947	35.91187
Tex264	24.081	22.58362	69.77353	41.51898	28.31853	26.11267	24.30812	29.91334
Acadl	50.09732	50.23273	47.11727	46.28866	74.02388	72.45398	39.52683	53.355
S100a6	771.42498	804.97113	636.57733	333.89218	322.98048	331.03901	783.15026	1055.7687
Snd1	72.81991	75.48931	69.6213	61.61049	101.67288	91.6669	41.11904	53.07159
Ncapd2	55.17351	56.71939	41.4995	40.79946	46.64299	46.33336	25.52819	19.26
Vim	756.42452	745.01295	572.16222	699.17864	706.89706	699.67738	710.4307	811.74305
Rps26	482.23126	469.72402	407.42179	288.60516	512.14146	494.14834	303.05383	378.56238
Utp4	37.13427	35.6441	48.22806	51.68555	27.70386	28.89746	27.2218	17.50819
Snx5	33.76231	32.65492	36.67479	46.81861	42.10811	49.96891	60.52297	58.94839

Atxn7l3b	24.95681	26.50725	19.0317	24.99636	17.51189	17.12323	22.85342	27.67691
Atp1b3	52.6868	50.96987	39.00239	39.67217	29.35262	34.83347	86.37501	81.73555
Plod1	60.0415	59.69706	18.87431	12.10361	19.37326	18.0888	64.71752	66.90652
Brk1	61.81528	61.50145	99.17267	63.04738	112.35394	105.56913	63.8005	79.48626
Emc6	35.78091	32.53498	44.86233	36.19852	39.73709	36.91374	25.8767	29.36253
Tmem127	24.4125	24.2963	12.44204	10.90499	13.09793	15.07132	25.28839	34.82367
Mlec	72.28432	74.23861	78.48695	79.03521	90.09203	95.82497	34.10476	47.99931
Rpl37	208.71522	210.95396	303.81134	134.45875	428.44425	416.94743	168.7165	196.82686
Emp1	58.86399	61.00242	25.44527	27.28715	43.23955	46.00111	121.60201	55.05082
Tmem258	35.373	37.10185	34.74765	11.76621	44.90334	43.9309	27.10682	34.31015
Ran	200.70735	206.82803	294.98963	286.29675	242.37072	240.38746	129.56849	110.26578
Stub1	26.00596	25.17668	21.85805	12.80104	26.28168	23.91599	16.70072	21.94497
Ndufa7	50.25269	51.74963	54.45309	29.86176	74.80215	71.43455	20.20242	35.36132
Psm7	87.75691	90.79515	69.84626	66.73247	115.76373	108.33582	47.41405	57.33274
Tomm7	56.78671	63.9688	24.60339	7.22767	38.65481	42.29053	24.52018	37.67347
Tmem106	24.68462	22.85165	33.49881	22.00143	21.90618	21.26842	16.13239	23.62343
Rcl1	27.0326	25.45828	51.10617	45.01862	22.50779	23.07994	22.6419	16.96243
Ndufa1	101.51721	105.48265	67.29397	23.60861	59.27526	58.89574	87.70959	131.91802
Srsf6	25.32109	22.19321	32.48296	30.61137	11.54585	12.13525	60.71221	64.61022
Gabarap	74.29782	78.49388	111.32801	105.51915	159.84726	160.544	82.95909	116.68068
Aurka	63.91819	66.21497	45.86954	37.93749	79.25065	83.50237	29.43067	22.75471
Rpl22	215.41127	227.49265	123.6619	95.30824	171.54175	171.62461	118.12833	149.30636
Ctnnb1	121.46525	121.27725	35.88245	32.50878	30.213	35.70012	92.9519	91.44601
S100a13	34.64581	37.87847	17.94483	12.96576	40.86984	40.67055	51.08487	72.70118
Uggt1	34.5268	34.70627	29.41225	38.63443	57.5463	58.00733	32.30147	28.65642
Rabggtb	26.09618	25.14808	31.26391	17.15657	29.63203	29.2678	37.81962	30.205
Tomm5	68.59347	69.35362	104.36626	65.81226	29.30469	28.18626	53.105	51.71274
Emp3	42.09985	38.75047	109.02743	73.30958	163.88072	159.07641	87.92444	117.03034
Arhgdib	3.18243	3.03282	3.15205	4.09592	28.69373	25.39193	73.85195	72.476
Tmem11	29.07658	29.74131	74.26873	34.4875	122.11685	111.36308	20.00476	20.72722
Atp1a1	113.52389	107.10378	105.53349	93.15053	160.90767	156.12678	112.80936	118.50468
Taf15	41.09196	43.28367	81.06918	38.9982	60.63498	56.29253	29.58197	28.34018
Rps27l	120.16527	125.78673	131.30572	117.03661	105.05748	112.14887	74.43794	97.11667
Atp8b2	23.95435	23.4642	15.33168	13.06713	25.38734	25.29999	30.13329	18.37813
Vamp2	4.54958	4.09993	6.49248	4.20144	3.69653	4.81179	18.54169	23.09395
Tmem184l	98.61971	95.42527	45.44239	34.27741	47.7547	45.70397	71.3845	59.63473
Lamc1	80.43528	79.86558	79.33036	84.02825	129.85353	122.00559	88.81128	59.93635
Saraf	39.46508	39.07677	44.87867	33.7294	85.49328	79.84532	38.92667	49.76424
Dap	69.42187	68.85658	203.71929	207.70051	115.49441	116.67179	98.32603	111.53012
Gars	115.87616	117.88939	283.84359	336.1657	203.92761	192.30201	81.38434	72.80423
Eif4g1	151.90042	154.71512	148.93704	142.22732	86.22037	84.80125	139.41474	99.03512
Hnrnp1	74.0077	74.43049	67.84008	56.90616	64.97728	64.37748	56.45879	62.58812
Ifi35	11.70153	12.41195	22.79744	14.1547	12.42985	12.89207	13.42348	19.94979
Col4a1	129.36163	126.07452	51.84007	37.00419	89.60083	89.47097	118.39695	95.28196
Eif3g	90.27536	90.87567	100.57769	66.59165	79.90314	73.09288	59.39699	74.74441
Dbnl	48.99814	49.78854	57.71244	41.5252	30.14644	30.31172	63.96262	72.52064
Prdx5	76.59713	79.62989	55.00135	30.28988	97.48651	97.47943	57.76033	75.72333
Plpp2	36.0299	37.35308	75.94634	72.01838	62.32445	53.71632	22.59933	21.9517

Gnb1	135.74642	134.97223	140.97724	154.47385	155.86363	152.88914	135.90745	126.09564
Nono	138.54799	148.21811	135.5545	152.87403	100.64321	100.60073	103.1114	97.05481
Hdac3	29.35963	29.71965	28.98192	29.1913	19.83671	18.92969	25.61085	30.0825
Tipin	30.63538	32.80436	23.11377	21.25382	13.11567	13.83762	31.20134	23.07361
Coro1b	56.73164	56.84678	73.51887	70.86455	36.72675	35.47163	44.80084	57.68816
Myo9b	20.42949	20.58786	21.25763	20.67893	13.76427	14.62512	26.58703	19.38085
Gdi1	28.95764	28.07537	38.51305	27.14908	46.85192	49.21535	33.79986	50.43981
Sgpl1	21.97545	22.16924	30.40328	36.3116	17.64505	17.43289	34.87824	26.94064
Sap30l	39.74008	36.98644	23.95773	15.61368	27.27337	29.49364	33.80262	47.13597
Cnn3	97.00335	97.2496	57.71548	60.09552	83.54244	86.3985	80.74145	81.8393
Tmem256	25.46592	24.93551	14.79512	7.78031	36.68069	33.51777	10.44909	15.27499
Cap1	135.96554	137.49099	109.92811	122.747	123.17938	121.60562	133.0581	102.40265
Rps9	414.45224	420.6431	334.13069	261.15033	514.231	506.8973	215.265	290.9097
Myl12a	46.61195	45.21746	50.19634	33.66389	70.48283	67.67466	40.62153	35.0125
Hnrnph1	43.17467	43.43713	34.56453	34.16655	24.34643	28.29364	83.1404	84.17653
Map2k3	50.27513	49.12436	29.365	20.8944	26.7457	28.0357	45.56421	43.90787
Ddx21	48.59466	47.39691	72.26265	87.78493	33.26996	33.7268	49.35292	30.20308
Nap1l1	107.8866	109.1651	69.58578	88.69945	73.66488	76.35003	96.62822	73.11202
Kti12	29.21292	29.25896	18.10287	14.68831	11.67566	11.43302	28.46207	29.66119
Nt5c	24.92234	23.30674	45.56407	29.21172	41.06183	40.95435	22.58175	33.31355
Aco2	93.01505	93.23857	137.10908	130.07845	126.01257	117.88323	45.42832	46.69388
Hnrnpc	79.19844	84.4421	72.81599	69.39366	107.08981	109.86517	40.47799	41.07041
Selenow	121.19572	126.32132	190.98775	82.0487	151.41352	145.04295	107.9836	214.71564
Xrn2	38.31747	36.36913	29.31842	32.27644	36.17992	40.16975	40.5596	30.20315
Mrpl2	75.03216	78.54945	84.81183	54.13668	89.7637	79.48287	45.42623	50.53197
Atxn2l	48.11005	47.41994	81.60715	66.33573	135.12341	123.51466	45.64106	35.78151
Smarcc2	27.01524	26.79477	22.23385	20.40095	17.86867	17.18438	27.07599	31.86302
Ybx1	517.5914	507.40578	558.87662	629.03793	370.20725	346.50221	389.77002	381.90175
Rtca	40.59854	42.26188	23.55644	16.8044	34.30392	33.14205	42.01156	33.44597
Bex3	157.05394	154.5636	124.36869	67.43957	156.4743	152.8686	63.39653	80.25482
Ppib	42.06208	38.88868	36.20744	39.08193	37.02913	36.92347	34.22883	32.28398
Gga1	36.53345	35.50102	38.036	26.45241	32.28428	29.70279	32.97036	38.29108
Vasp	77.67692	73.0146	71.7228	40.03531	90.45853	83.79908	63.34764	74.79172
Nfic	72.31732	72.77376	45.84458	40.1592	48.80314	46.24814	56.86015	47.4406
Itga3	71.6297	67.8121	5.59946	4.54415	46.06717	41.49049	50.64717	29.72261
Rnh1	88.18753	87.45094	203.45411	213.73109	179.79831	166.48966	86.09572	93.36669
Idh2	73.90838	76.16381	83.24155	57.83418	89.92028	86.88067	41.15997	39.92021
Pik3r2	78.14282	77.00537	50.6211	45.93688	35.33064	35.537	40.76354	59.70648
Lzts2	37.79193	36.3106	41.01032	19.22052	30.47758	29.1886	23.52194	34.62366
Cyb5r3	82.54774	84.19688	87.2821	70.62465	244.82702	237.56161	58.12919	81.84428
Serinc1	16.0546	15.99257	30.43891	41.57327	41.05476	44.70347	31.4402	29.78518
Gsdmd	12.43259	11.91581	25.31304	16.12328	42.4159	42.47062	22.54857	37.8065
Mknk2	58.34389	56.81257	32.84684	22.80809	34.07752	33.29046	30.76325	52.87573
Tmem160	39.68176	38.27905	54.66566	26.68712	45.95507	41.89673	17.19744	25.99479
Nap1l4	50.46129	51.4696	55.03022	50.53518	44.80642	47.02064	43.11195	32.41739
Tns2	24.63114	23.43304	12.52598	10.81029	28.49275	27.04903	21.47466	49.24528
Tmem165	35.5793	31.3781	28.22696	25.01478	26.5783	28.75305	31.38643	36.19337
Plxnd1	42.30741	39.67355	16.72335	14.62707	26.5629	24.9586	29.66009	31.19736

Maf1	74.25635	74.82109	63.34026	56.38563	72.13633	70.75752	36.22848	51.04217
Pfdn6	47.76689	46.65859	31.7442	18.23307	42.79765	39.1704	21.46556	25.73116
Eif4a3	88.50054	89.01846	106.276	80.32181	97.48432	94.57012	67.94103	66.14682
Pes1	65.21039	67.61608	67.27062	57.95615	86.83264	80.77903	48.01726	38.67276
Naga	20.1528	21.13531	24.97466	16.27877	25.11533	23.94818	17.10261	23.50015
Aldoa	3.26352	4.65873	12.95021	6.87084	3.23554	3.07263	2.81145	2.78571
Larp1	53.65581	52.67813	94.00227	98.9626	73.10288	72.706	65.61098	45.33161
Psma1	30.40084	34.08911	33.89486	34.7376	34.51367	35.24479	26.87708	25.3844
Atp6v0d1	37.59962	34.69596	49.11034	54.04363	40.62861	38.10242	42.87237	63.517
Rps16	614.85698	626.77446	547.56083	408.92488	894.11211	840.9127	257.53201	319.72212
Slc25a37	26.17406	22.6824	23.73279	14.05512	29.97874	30.80584	26.4742	20.93258
Col16a1	48.10292	45.74543	69.41069	36.01557	39.88586	38.62836	58.39849	79.32449
Necap2	14.16462	14.22491	8.77591	5.4719	18.59992	17.75184	24.63366	31.26826
Dctn1	50.19276	49.94359	30.30723	27.11667	20.66715	20.79015	49.83457	62.74873
mt-Rnr2	39.14626	39.32355	62.88781	247.8223	97.28913	102.90398	34.41945	31.77347
H2-T22	25.63445	25.17742	33.65726	36.05925	26.12455	27.27649	29.06966	34.70318
Eif4b	279.76629	283.50538	209.57289	222.74133	362.81458	360.0167	173.27277	161.54955
Ctnn	48.06484	46.18405	69.58209	50.92578	57.80435	64.4111	44.777	38.46142
Clptm1l	41.94707	43.03634	58.14409	55.80826	54.8764	50.8269	49.58375	45.11603
Actr2	58.29081	60.8811	43.71323	66.67891	50.35126	58.94546	115.38237	83.67899
Eif5a	642.76953	669.13929	787.2724	684.3245	634.68478	587.64374	524.75991	424.6111
Pdcd6ip	41.23684	42.37004	37.9533	44.96322	31.41813	32.90964	55.52261	42.76996
Ndufa13	47.37611	50.27531	58.64252	32.4985	63.02833	61.98656	24.67216	49.26172
Syf2	22.7879	23.99999	13.39618	10.57106	21.94098	21.23659	23.24419	35.54392
Stx12	16.11999	15.76937	15.62794	15.43321	16.26173	17.14104	30.22851	30.93792
Ctsd	86.97389	85.91641	97.02444	78.55606	156.06677	155.0352	138.8706	129.8611
Vars	147.24058	150.02326	114.55192	106.86892	169.09857	152.61686	90.27066	89.66509
Ppp3r1	24.40206	23.65917	23.89669	32.15253	44.04762	48.11091	43.14555	41.38583
Atf5	19.97968	17.81827	95.26919	59.53451	104.21108	93.89502	17.08715	38.29697
Jpt1	93.15218	94.17149	113.3909	93.00137	46.35753	49.61593	77.18503	77.78767
Man1b1	24.03317	24.26962	26.96688	26.78394	20.41466	19.51916	20.70094	21.52087
Nop10	36.39563	39.15879	60.55316	28.76737	78.59152	71.98458	22.84838	25.29681
Por	45.77214	47.19047	23.71292	14.21955	54.78625	50.86537	33.50813	28.51885
Lrrc59	136.7735	135.19213	252.35028	275.09862	265.49291	244.5887	133.47994	100.31603
Gpx8	31.77541	34.04862	17.13018	12.5523	26.20963	33.40209	42.95505	42.07859
Ubc	64.44523	63.60859	85.07039	64.71588	101.91866	96.50761	40.37688	61.62967
Poldip2	23.65098	25.33415	32.1795	29.00986	23.60073	22.1655	18.74038	21.51209
Nop53	40.45706	43.23018	39.48458	30.1966	67.59628	62.52948	27.10571	39.49991
Ndufa6	24.28142	26.93978	24.58973	15.75861	38.96145	40.65947	19.45757	33.44547
Hmox1	14.11618	15.78487	57.70451	39.78205	25.41535	23.2551	300.27478	46.26458
Rab8a	16.8732	17.78911	14.29987	11.62466	14.18083	13.31012	16.52831	19.11123
Rpl39	346.17359	386.23146	150.95108	143.9591	293.08144	286.99907	217.71129	303.21918
Hcfc1r1	12.53195	11.61188	70.96162	36.7616	69.5836	64.81775	10.69245	28.89686
Prkar1a	86.94861	89.04613	84.87786	89.67769	134.05884	134.25304	83.023	97.76334
Ralbp1	30.22412	30.89654	23.08143	20.52162	33.75094	34.61365	34.29087	37.61917
Scpep1	108.12994	108.66695	239.93018	179.57534	356.17092	340.42173	88.71858	73.03853
Sf3b1	35.91023	36.89246	20.8082	28.92895	28.61611	31.13372	39.66777	38.76444
Prpf19	39.41067	38.55852	43.31957	41.00268	22.64443	21.42579	22.9697	22.64369

Szrd1	61.94931	61.8053	40.11997	31.30475	38.13021	34.89815	48.66758	55.88992
Tmem234	31.50361	32.18161	36.72258	29.81626	29.34284	28.0933	26.62187	32.8598
Slc50a1	18.12036	16.69386	38.07862	25.47137	43.36159	43.30985	18.786	23.94439
Thap11	39.69028	34.76454	27.70256	22.40748	34.43915	31.55414	21.9078	29.77502
Card19	63.62936	60.07904	18.59978	9.29215	50.41492	51.49878	48.39466	37.39152
Tmem123	32.67479	32.79428	40.7532	45.51043	52.54907	54.92177	57.26788	51.99344
H2-D1	372.13747	383.30931	419.6863	214.67296	325.85223	302.63237	581.22941	827.51317
B4galt1	37.70862	36.79295	34.76363	41.44227	47.15638	46.00713	53.44768	46.07481
Rbbp4	52.44778	53.42782	44.52358	49.75902	29.67622	30.24062	29.73899	29.84598
Arpc1b	177.01242	173.44155	140.40055	115.25561	135.38788	131.70139	129.2915	173.54266
Prdx6	98.79871	99.01006	70.61482	60.78173	38.90899	40.10778	71.51479	60.28939
Pigt	38.3762	37.62578	35.56857	30.26043	63.42787	57.80604	32.93795	40.29761
Incenp	60.08395	60.47663	50.03905	43.57158	39.95778	37.25347	32.98178	27.95727
Dazap1	49.84008	49.99371	63.00065	34.3922	31.50267	30.55276	34.91612	34.88814
Cyb5b	48.47432	44.94708	58.92758	63.33515	64.99293	65.47607	59.67675	60.22654
Ier2	30.33448	29.75882	28.99123	20.45797	14.32786	13.47057	22.3456	34.59532
Grk6	40.82705	41.41073	33.47702	27.73176	15.974	16.50012	43.78301	35.27999
Dbi	44.65878	49.07373	38.38368	20.86921	31.03584	34.20187	53.71024	78.58856
Llgl1	36.04469	36.49336	32.73144	26.88595	20.2811	21.09443	21.46555	18.0351
Atp5c1	158.33118	164.36916	134.73621	167.50515	128.08869	125.6534	109.25653	134.97999
Btf3	256.75052	242.88478	195.78797	241.44131	277.43643	288.77588	211.56269	248.89153
Tmem259	23.59128	24.26917	33.92859	19.04801	32.72975	30.62732	23.3451	30.08166
Cox7a2l	133.568	137.79303	121.07928	134.03185	218.70207	218.85776	85.14251	127.81696
Txnrd1	100.37602	99.11992	39.46283	32.56099	55.18073	54.98598	60.65721	39.09363
Cul1	17.03677	18.04608	31.1185	36.07395	25.07035	29.48303	32.09392	32.48231
Plekhj1	32.75188	32.02078	29.15217	14.86165	15.12044	16.2442	18.59589	25.34921
Cdc20	145.34875	144.68674	122.63782	72.69538	112.24719	107.7238	83.28819	70.69766
Rpl10a	316.98325	308.64915	344.76546	337.82132	569.10514	568.06093	191.51744	239.8067
Fkbp10	60.30244	58.12097	141.63529	93.69953	94.4675	89.35784	57.49436	78.82197
Rbbp7	164.67145	178.61288	63.52745	66.37174	70.00008	71.60428	115.72303	120.19033
Nfe2l1	44.13016	43.09986	289.3171	216.29074	131.34862	125.71642	43.73801	39.2969
Gcsh	44.10602	41.72855	49.60637	55.59536	17.04479	15.57483	41.59806	32.15688
Gsto1	65.19957	63.80786	90.2249	84.76456	99.01454	92.54446	60.71702	74.01403
Reep4	29.4817	27.89955	32.97442	21.87538	39.89114	39.22967	21.32003	20.99061
Dmwd	41.86946	42.78532	50.46091	30.98116	52.43139	52.18154	29.31858	33.45353
Tm4sf1	59.40018	64.11117	51.91009	50.2604	68.75282	74.27509	53.70092	59.92634
Anxa7	19.89433	21.32481	22.26267	22.17374	29.70505	31.12261	25.57189	22.76342
Skp1	66.65811	69.41245	42.42313	59.73136	52.59502	59.29005	51.59193	61.84832
Cav1	91.8177	89.99327	136.82126	168.18413	28.22932	31.85673	147.30433	140.68684
U2af2	59.27698	64.25599	69.22046	44.49988	75.79547	69.07527	52.02711	54.58936
Mta2	47.39582	48.24193	85.46	87.90358	50.60804	50.22914	34.37857	34.62211
Cops7a	27.69303	26.07206	60.24746	44.18726	36.47499	34.97421	29.38238	27.91467
Zfp36l2	85.8258	83.31622	27.59747	25.63121	31.96184	31.65619	155.28465	104.85253
Plcb3	50.25753	50.6047	35.7321	25.67207	19.50039	19.80787	26.53665	39.76804
Litaf	22.87383	23.42571	25.77774	24.83056	29.43907	28.90563	36.69274	29.74152
Ehd2	31.62446	30.14781	13.45199	15.69198	36.2622	34.14201	35.80823	43.39932
Clta	115.13675	113.9991	157.62265	160.14806	104.30542	93.21601	104.90464	136.81877
Ankrd40	21.64024	21.11614	23.94087	22.04296	26.34234	26.94876	18.34037	23.28879

Arpin	25.64705	24.40849	35.99033	29.25021	19.15905	20.52274	23.99266	20.12036
Eif4ebp2	53.94834	54.29533	33.31898	39.57719	33.93675	34.91488	37.63339	38.86657
P4hb	396.63563	394.20514	469.53088	464.28712	850.23756	826.4421	370.65985	345.66373
Fhl3	42.89758	38.8449	62.3108	56.37575	22.41007	23.41504	41.05632	36.86497
Pttg1ip	32.54958	30.65711	109.53054	113.65346	29.19644	28.84472	36.47932	42.51926
Abhd17a	85.64725	82.66665	41.73669	31.70375	52.16225	49.41477	56.45647	73.49741
Axl	89.73772	87.28782	139.0594	133.96819	94.76821	93.12531	94.51371	63.29534
Cfdp1	76.27499	78.08865	61.26643	49.59236	45.41961	45.3824	88.70993	108.64399
Csf1	67.99504	66.66926	44.18288	35.86409	14.80821	13.95443	71.63145	25.97311
Prnp	40.22714	38.51226	74.83297	53.38212	135.89177	129.91113	39.42381	35.0698
Ufc1	30.28499	30.07374	34.34077	32.07515	33.71993	31.6541	38.22054	54.77097
Rcc2	140.24881	142.87515	144.93579	117.74105	122.93785	112.11104	94.8712	82.85311
Sec31a	22.82105	22.06016	38.72989	40.66259	30.22572	29.47509	22.10451	19.61513
Cavin1	168.12127	170.61644	144.23223	137.30936	100.39778	99.47766	162.56148	205.7134
Sbds	31.85157	31.31557	28.57828	22.2906	38.26201	40.07954	28.55176	27.02856
Tubb4b	247.18992	240.09365	107.90743	89.0213	63.54209	67.2223	144.67884	130.73908
Mcm2	34.51091	36.32077	40.81767	33.6907	25.91592	22.68536	17.55487	11.75928
Asah1	29.88623	30.08855	44.04436	43.46439	61.72928	69.13599	59.39911	63.41407
Nxf1	22.97144	21.59078	22.56662	18.63619	14.58859	15.62327	28.78091	30.73212
Ddrgk1	16.31806	14.14543	24.87503	16.1535	35.81934	34.56935	22.57131	39.89555
Timm13	86.4588	91.18796	90.26459	40.68452	66.23265	61.53174	51.3171	64.87137
Uqcrc2	40.9346	41.6788	67.93404	77.84826	69.7347	72.58151	23.46698	27.34625
Gpi1	150.47721	153.61467	125.50735	110.38816	136.1171	139.15414	100.52181	77.59802
Ncln	51.54903	47.93437	46.79392	31.17899	25.54019	23.73553	47.46837	50.93396
Ppp1r15b	33.24118	33.18654	35.32926	38.30135	18.43597	19.53724	38.22091	30.63736
Ifitm2	147.79452	144.42494	126.06232	61.99059	172.88665	160.91162	185.53838	324.02723
Mprp	40.90505	38.29072	23.96779	25.18997	39.93599	41.50872	28.27366	29.66224
Fxyd5	8.55292	7.9508	14.00775	14.75143	22.39932	24.78903	32.28059	16.31596
Pkm	1170.9049	1214.2953	763.14111	729.65621	697.68759	673.71259	752.32352	639.9242
Nsmce1	41.93864	42.49557	32.31073	30.43526	39.59908	43.37919	25.75952	31.85574
Tcf19	35.6368	38.0554	13.2679	10.72432	8.60074	8.52739	25.56454	18.96976
Plod3	29.80068	28.91488	56.45291	36.66257	43.04844	39.35891	26.21655	25.83779
Tbc1d20	27.5332	24.4341	41.11848	37.2505	32.14117	30.94187	30.88128	36.60947
Srsf11	19.90037	20.957	16.96155	13.4658	22.63936	22.86803	34.21391	26.63312
Mfge8	65.63092	65.00743	71.89488	42.64395	183.36841	172.91963	24.23418	21.44661
Slc25a24	53.19986	55.0186	27.14223	37.34479	47.1195	53.25872	108.05536	60.79119
Junb	33.61904	35.68232	37.16635	22.84549	23.77426	22.68171	54.20142	38.97461
Clic1	249.93882	260.65984	145.02788	115.09663	237.95471	230.15788	186.77561	172.36221
Rpl23	289.39052	292.92229	244.9719	130.93953	375.96429	375.66837	279.9183	359.38457
Adprh	43.53614	44.67502	48.61379	35.55147	57.72858	54.14465	39.27708	44.30682
Prdx4	57.52259	59.34279	44.21889	42.07679	45.85731	49.86522	44.26572	47.33932
Gatad1	24.15125	23.24039	45.51734	63.57023	12.77047	11.51635	23.28273	22.88487
Hsbp1	42.82286	39.29076	44.11886	27.0224	43.50993	46.33125	76.6729	96.20449
Cavin3	39.87684	40.18525	39.7515	26.33157	29.85951	29.74686	39.92613	60.43233
Psmb10	11.72507	11.06647	45.66735	29.98084	17.87001	17.70087	23.13545	32.71773
Crtc2	27.1222	27.22417	18.19736	12.84012	21.04113	18.93084	29.85991	23.00403
Grk2	30.99722	30.3206	48.8927	46.58378	34.15903	30.71534	35.22095	37.95835
Slc25a5	317.66022	316.28902	192.51739	189.51083	222.21074	205.75187	308.92116	291.54826

Grn	179.51635	173.97391	189.14802	110.15567	363.08122	337.61396	249.27135	268.30561
Atp6v1f	64.08497	59.04615	94.4196	61.77845	75.04395	70.04255	44.58892	71.36609
Ndufa5	17.42369	19.48556	27.47227	17.96612	15.79066	15.42189	23.11653	32.03699
Ndufv2	33.50024	34.17644	38.94063	50.80159	39.97169	44.49681	24.73394	31.94317
Rtraf	36.73285	34.96983	54.17927	76.97369	51.93771	50.12603	30.44874	31.93237
Swi5	20.49262	20.2789	18.7428	12.25024	16.85729	16.36394	13.99367	17.55915
Itgb5	55.51661	54.41791	97.86612	91.68672	62.05465	66.15487	18.46143	28.94731
Nrbp1	32.40514	31.16031	20.27869	19.23776	19.85877	18.13724	28.28926	37.66708
Mrps21	60.05782	59.69102	34.02401	12.54468	48.85033	52.69541	49.72979	58.41806
Ndufv1	56.71643	57.74556	75.73819	56.03767	54.48917	50.90949	38.66727	47.10991
Grb2	37.27791	36.10928	43.11342	32.6977	37.01367	36.6815	45.17355	40.1846
Psm8	47.42912	46.8861	95.9411	95.78806	81.25924	76.4593	43.60436	38.20979
Twist1	109.08184	112.50856	41.69396	29.87185	47.38351	48.75018	61.5953	84.48092
Chchd3	38.80287	36.24601	40.97927	52.32545	27.20588	28.25277	31.08549	45.65221
Psme3	55.92667	54.27598	112.1212	114.48727	35.06537	34.16108	62.3098	43.03699
Mcl1	72.45852	73.65383	32.0891	30.54706	51.43161	54.7492	160.58327	110.32329
Exosc10	34.87076	33.7854	22.61475	24.55515	28.51544	28.77231	33.55152	28.52677
Psm1	61.9022	63.73569	41.95184	48.75869	90.15831	87.99098	38.32731	54.95839
Shmt2	96.41684	97.51584	171.24999	120.72259	151.23264	128.12811	64.44985	39.40524
Spg21	27.94634	28.89538	35.53503	38.41826	22.53206	22.26174	26.63882	24.42674
Uqc2	101.37888	110.72042	86.84495	42.63289	162.81564	146.60613	49.22114	71.3009
Mbtps1	26.3914	26.39219	24.31435	21.84356	26.34324	26.6283	21.99247	26.59738
BC005537	40.20665	38.59383	20.2911	20.96771	19.51066	20.85651	72.55613	74.95866
Rplp2	301.771	312.13457	265.99647	135.92534	399.68118	357.86904	131.02997	195.55287
Ddost	246.86681	248.94192	149.20496	100.40537	220.39046	206.13014	187.73992	177.25785
Mbd3	50.3871	52.06587	72.04519	49.73149	60.40609	55.70616	51.0997	63.2898
Ctsa	32.76724	31.77819	45.65725	28.8885	70.83731	68.12903	56.43751	56.51007
Psma2	34.32781	36.2155	25.31167	22.75797	24.60917	24.97281	28.59772	31.86474
Pim3	77.9383	76.5799	44.55231	29.14955	76.88325	71.59336	39.07745	48.26202
Slc25a39	147.04543	142.96443	226.97431	188.29531	156.24803	146.55126	93.60343	108.92696
Hyou1	51.27346	52.66204	41.71805	44.93533	123.27052	112.27792	38.11652	31.05477
Senp3	30.15342	29.66229	32.83362	28.24813	25.15389	24.5438	24.04685	23.93852
Mars1	67.27419	65.39666	67.04684	68.85745	98.64005	95.9463	34.82075	27.31024
Txn2	32.11934	30.24865	66.1332	50.04292	55.05036	50.41557	24.59883	22.9869
Higd2a	44.76702	48.99183	50.13931	27.01424	61.26729	56.3069	40.6978	59.68057
H1f2	25.0378	27.39906	39.76384	36.65181	11.30431	11.72164	84.0366	174.36502
Cst3	246.00287	251.57495	145.40051	101.29032	256.12738	242.66806	177.40147	386.97035
Sdh	90.64301	88.28164	118.30798	74.93019	118.42933	115.70613	61.4234	61.85246
mt-Nd5	483.97225	445.84457	1034.722	2545.9172	798.028	679.50152	452.30001	480.86527
Serpinh1	475.75215	469.97296	431.10594	261.11539	985.15099	893.32683	202.47511	221.79265
Vdac1	189.63646	201.74419	171.73621	185.67525	217.65887	215.93822	150.79709	141.80174
Cd44	35.92473	38.88943	68.64043	97.17618	67.29098	68.67706	71.52788	38.50066
Rps3	309.24584	319.22446	335.51721	274.67621	490.27955	462.31449	116.23105	147.2106
Os9	44.24029	45.61706	55.45543	29.6678	57.61305	54.85433	51.48922	74.41506
Sqstm1	171.55125	172.72213	419.31524	342.7964	519.45718	467.36289	144.86159	177.84114
Arhgef1	16.63726	15.84252	15.39637	11.51423	16.64586	17.83016	22.91674	25.47619
Txndc17	41.3995	42.62374	42.70964	33.83601	54.63692	55.244	49.67763	56.35208
Cdc16	27.66096	25.97729	27.51033	30.00951	22.79199	24.47203	19.43026	20.59251

Agpat1	46.7936	43.02768	28.20402	27.42262	54.64019	50.98843	40.22624	37.30037
Sf3a3	30.27321	30.31075	30.22429	26.51828	19.12872	20.04698	26.8917	23.55988
Pitrm1	36.48459	37.87846	33.17941	36.25451	35.51759	35.75832	25.80935	17.22306
Ecm1	8.8745	8.88957	203.04676	103.99192	191.39285	182.622	95.85741	41.36941
Cpe	141.2966	146.59177	125.38419	72.97136	147.67586	154.46776	81.15797	50.4406
Ak2	75.97748	78.9729	61.91409	51.18558	53.88698	57.14301	51.70808	51.22425
Eef2	2577.5965	2691.7292	1179.2687	1271.8302	3062.6135	2792.3213	1241.9677	1301.1365
Pimreg	45.17336	44.79854	27.08525	14.417	34.1531	34.96383	26.86029	19.94904
Bax	49.87745	48.37781	45.56454	21.1303	52.54985	45.92712	35.66226	46.51763
Lgals1	3070.7211	3145.1708	2673.4902	2029.0676	2495.8825	2240.4861	2497.4558	2980.5507
Ssb	36.54297	38.98218	37.82005	41.45646	43.0652	51.8324	72.79844	63.86679
Rpl18a	761.47349	770.01266	700.71327	509.59693	1223.2316	1165.8864	449.37373	627.72182
Banf1	146.99442	146.48823	191.48582	106.45462	104.76432	97.50189	87.72184	64.2244
Prcc	72.44066	70.28288	44.02128	43.10538	62.04344	60.13462	42.23013	40.31738
Tfg	29.9114	28.82222	52.21012	48.60453	27.6542	32.74338	32.63679	27.85872
Rtn3	27.88676	27.44156	60.51331	78.62437	48.51744	47.92471	29.82611	31.07064
Cdr2l	43.25367	41.06234	29.43365	21.76605	61.89744	59.93438	37.28944	44.02692
Capn2	34.24682	35.72523	33.16981	34.4781	36.10192	37.55165	61.35426	44.01727
Lypla2	34.67322	35.34892	29.9485	19.31432	25.86903	23.16302	30.68775	39.57522
Tagln2	207.06794	217.8311	67.14262	59.1786	212.17345	213.95847	338.05331	327.28851
Cdc34	53.59832	51.30427	102.22158	72.38165	40.43772	37.66991	24.97852	28.43586
Dynll1	39.6328	40.02462	31.83965	27.47964	13.9798	14.47209	29.92441	39.64738
Ppp2r5d	54.32402	55.87747	42.0793	43.56987	47.60258	49.25843	30.40037	27.32889
Ptma	1100.1544	1142.9415	754.98612	675.75759	584.15698	581.65026	822.20783	784.71468
Ndufb10	56.73446	55.86349	76.77518	52.81195	68.279	68.72674	32.74469	58.60135
Prelid1	211.39738	210.94448	141.73338	147.62033	146.67206	147.72931	159.18939	165.61383
Rps5	522.93922	519.78977	686.02547	720.7974	991.6249	951.96855	288.6057	345.4523
Gins4	37.5315	35.61743	22.85746	19.7718	25.25513	26.1374	24.77814	23.75243
Ube2j1	19.15961	19.82912	21.31	27.89064	20.49272	20.87629	30.90166	28.66302
Ogfr	31.12051	33.83025	35.99469	28.42461	34.08635	31.71331	30.45635	42.00306
Ddx39b	105.575	102.52416	83.54635	63.8655	66.25043	62.26704	68.65536	65.27174
Srp68	71.71089	76.05062	97.17767	98.96415	140.98884	138.24311	46.86397	59.31427
Baiap2	38.7951	37.75427	16.84118	12.29404	22.14808	21.95264	32.6153	42.74782
Ggta1	24.23758	25.34955	16.79858	14.95758	13.30321	14.32811	33.27787	26.9912
Ccl2	81.00867	82.14931	20.59442	17.43041	15.98303	16.84943	336.95279	111.97379
Psmb2	83.96762	77.89486	104.03081	94.80606	52.68239	47.63675	73.62213	79.06866
mt-Nd1	581.49979	511.45664	1700.4797	5138.2559	912.14072	962.97663	1107.2144	1479.3502
Dctn3	74.13509	71.60997	80.73215	52.93378	57.816	61.37989	45.91871	63.01406
Fam162a	121.55799	121.5103	115.88887	87.9831	53.82201	58.56225	71.67184	42.71543
Rhbdf1	23.6174	21.98723	14.22671	7.74047	26.19624	25.56985	19.69744	32.24513
Lmna	207.80475	212.46082	99.60839	81.93526	127.92019	122.96772	167.27203	106.2042
Chmp3	54.09001	55.44977	25.78846	21.76799	21.81791	22.5316	72.71268	120.9771
Hspa4	62.01862	64.0464	94.76841	133.31771	74.79968	80.10803	47.0401	36.84141
Kat2a	37.9956	36.24457	49.0601	45.88231	23.65251	22.23445	39.27243	35.79057
Rraga	33.00403	34.58788	49.30597	39.97927	17.17605	18.07711	41.56723	41.55577
Mta1	80.03343	81.3941	104.10557	97.45777	61.21514	57.54666	36.30058	57.66436
Shisa5	30.07017	30.72964	47.37376	33.67882	52.04498	47.14255	43.34635	45.23129
Mthfd1l	32.83939	33.40824	54.75744	60.24526	29.98851	28.15514	44.81561	12.86037

Fam120a	108.2756	109.47342	92.48651	88.08968	82.7067	86.9199	121.83544	100.75254
Cldnd1	26.57914	25.85816	54.62266	58.33768	72.7856	74.13621	34.04148	23.21239
Casp3	71.31545	69.69023	16.13575	17.97321	35.43793	41.98772	65.12212	76.92505
Aurkb	78.44345	80.10991	36.56299	22.27383	46.02316	45.90579	31.36963	23.6732
Psmb6	84.446	86.75911	113.44909	86.95399	148.84992	140.52858	51.98289	66.5833
Etf1	51.70229	49.52207	66.2847	88.54253	39.8538	43.36667	69.39526	61.08556
Ube2z	60.67111	64.82559	67.91577	56.48117	62.16054	63.30691	49.46808	52.83245
Nptn	22.36198	21.60076	22.11869	20.82372	18.66626	21.39054	37.49019	33.54495
Ppp6r1	23.96615	25.0741	21.79755	18.64123	25.54286	26.91956	22.70714	26.96644
Anxa5	601.66073	626.10543	274.92628	279.00477	302.6781	296.55912	431.26923	456.05934
Lonp1	79.88389	83.44799	121.21435	86.75578	296.90097	264.52679	40.65414	30.86067
Ldha	643.45247	679.07146	500.7148	546.43001	459.6196	458.15434	404.84555	257.44741
Cebpb	60.75333	54.19284	48.4338	17.80302	45.15128	40.27367	83.22256	135.96673
Cotl1	25.63032	23.9394	85.09227	75.64154	43.90805	41.10817	87.51765	88.99303
Hsd17b12	34.57599	33.95096	44.08423	59.5366	38.45418	42.09955	43.37783	30.24583
Rab31	75.45241	74.9781	55.73876	55.25418	58.30756	60.43391	66.31245	46.16377
Fgfr1	64.37466	61.5372	22.10376	15.47687	27.56294	28.33736	57.24728	90.04097
Usp5	35.73794	36.19299	48.07505	44.09094	35.25502	33.91932	31.05323	33.61636
Prpsap1	30.70974	27.66541	16.14191	13.66591	19.68787	18.49916	23.92065	25.70998
Itga5	32.92699	31.68351	28.73645	22.90839	68.93278	67.69244	29.21669	23.82916
Psmb4	173.85915	174.07987	151.99966	119.03079	229.51955	216.5006	116.10565	119.59837
Rhoa	40.87712	40.23898	52.06057	73.46332	43.20116	43.18669	47.6488	41.64931
Derl1	30.55726	30.67481	91.85956	80.20697	107.44826	105.03183	33.60078	37.82931
Gorasp2	28.17772	27.97303	43.24863	38.44625	79.49819	75.00611	39.89781	39.36739
Samd1	38.37005	34.15817	22.9019	21.51209	13.86366	11.77066	22.63874	25.84378
Psmc3	78.18325	86.47327	70.13248	77.15946	94.01062	89.98184	67.96787	75.14976
Ociad1	22.40928	22.49041	29.89718	27.06447	32.9804	33.60925	21.12345	19.3806
Sdhc	44.06096	45.20762	62.17883	53.28855	54.24647	52.53901	33.27366	36.08339
Eif3i	75.19079	78.47442	98.37126	106.72894	67.30095	62.29168	45.15762	48.87567
Rtf2	21.65564	20.92338	29.17493	23.2901	19.4155	19.05087	26.08283	33.56776
Hpcal1	43.93996	42.73483	26.89056	22.76342	63.8128	63.67953	14.04798	25.3328
Fxr2	63.32514	63.5304	73.41416	49.39773	82.58315	80.20545	34.44088	35.27656
Rpl38	307.30158	315.04833	334.9483	158.62067	475.86592	453.58291	236.40575	312.78707
Hspa8	744.97549	747.70348	222.64206	299.43664	464.11057	497.25005	408.78278	417.32383
Srsf5	24.13796	23.4418	23.6886	10.29838	10.81177	13.09753	61.67892	95.29908
Rab1a	55.98277	54.12641	49.99295	62.5059	109.49869	118.36062	79.0924	69.85482
Mxra8	123.03889	117.30039	28.15522	16.61275	41.63953	46.17222	83.75706	166.74633
Srp14	53.09662	58.43149	44.54933	27.60721	99.82282	103.25237	39.28766	61.42638
Tspan9	42.95693	42.17471	45.89174	36.15453	50.4512	49.95999	47.3382	32.80889
Arl6ip5	59.29682	59.13393	130.16545	91.58533	122.74168	124.40134	48.16727	64.37848
Tbrg1	28.49191	29.42656	43.72569	49.04242	38.77981	38.13983	26.29286	30.2282
Uqcrfs1	76.72322	70.91125	67.6403	80.28874	75.93552	76.92358	62.06721	70.96764
Hsp90ab1	2284.9782	2328.5255	1146.1125	1212.028	2157.2792	2121.7994	1233.3588	1224.4351
Wdr43	21.45657	21.63011	30.92248	35.67315	18.78472	21.91313	34.48327	24.85071
Psmc13	33.50813	32.64962	36.43128	47.02102	34.31215	32.81466	22.88259	24.63391
Ywhab	71.14166	72.37575	67.38543	86.59843	75.04752	83.0543	100.70724	104.3268
Plaur	26.27979	25.03031	17.57485	8.35141	48.72201	46.25851	48.63519	15.68128
Srm	153.86711	155.46134	157.50553	117.96209	177.52571	155.86503	158.77592	111.70683

Niban2	82.9046	84.38011	63.54061	50.53796	44.07929	43.73245	83.77662	47.43251
Tnfrsf1b	15.92158	16.51796	11.53154	9.67174	19.16455	17.15077	35.58391	36.31426
Oaf	46.92653	45.89372	19.71836	11.15005	21.87926	21.62294	51.45505	111.17282
Grina	70.88142	64.95419	154.63262	117.31186	226.28717	220.61018	71.11818	65.68595
Kdelr1	36.96005	36.18715	61.37105	54.66479	101.41834	96.85333	31.90923	45.15805
Scd1	31.28184	30.60217	83.2304	104.03644	122.78995	126.14518	34.15447	98.33354
Hmgcn1	104.66777	104.71178	114.97268	111.89408	45.1036	45.87631	77.73312	56.86542
Ndufb3	55.46319	55.85082	34.51334	16.15487	35.69708	31.73225	41.74741	63.63031
Ubxn1	50.27691	49.53941	70.60017	48.78209	64.04202	61.23483	35.78534	55.25807
Kif1c	34.30716	32.50061	45.40774	38.55823	25.93722	27.03394	34.00401	29.86424
Rad21	87.19827	87.69372	116.87078	136.52552	123.25359	132.3355	86.65865	55.50875
Hspa9	147.14122	158.89136	340.07783	418.33832	327.83001	325.50451	160.9347	116.3136
Dnajb11	24.9125	24.1031	38.62621	31.83298	46.32111	45.06196	34.94479	29.16069
Mdh2	99.71097	103.39584	157.86628	127.51365	104.498	97.85861	56.49304	56.83707
Itm2b	92.68092	89.25092	92.41295	73.36371	213.88957	211.73375	223.38539	417.64013
Tmbim6	97.61237	96.66416	144.07679	124.11418	170.93254	163.3767	111.6012	129.69158
Myadm	31.76482	32.00063	48.1669	49.83646	74.37392	73.48599	66.21196	43.48206
Ptbp1	96.832	94.19991	93.88902	103.40639	104.31743	92.80047	73.80735	62.50236
Pmpca	34.52024	35.51121	43.83432	45.34399	29.486	29.69495	29.70305	22.66546
Rps21	463.09554	505.87033	338.90339	178.64562	847.7683	806.27301	236.28294	405.08364
Pfn1	326.14743	344.50629	314.0306	219.26484	339.04286	311.69716	359.08006	361.57431
Src	23.16632	22.14147	54.77801	43.87568	41.67556	38.73544	29.0263	22.85108
Ipo9	27.42265	27.91725	28.33452	29.71685	16.10392	16.03565	28.96001	22.88393
Prrc2b	43.82292	42.50418	52.35168	46.87919	50.00916	49.96166	40.12397	29.17612
Syngn2	72.12615	73.52522	67.17536	38.9596	81.43717	77.62545	71.89338	93.52431
Flnc	83.86654	86.7538	135.26112	140.46591	78.19729	72.2532	38.21809	47.84024
Cs	85.34484	86.35541	71.9865	77.3588	74.51455	72.85658	59.27819	46.98033
Fkbp4	202.52463	207.75753	172.2007	149.88702	111.05832	103.81378	91.15608	94.5328
Ddx1	87.95573	90.5819	33.0887	39.61777	39.17595	43.79464	53.52331	72.54977
Elof1	30.51338	30.0905	20.27496	16.31009	14.4297	15.56841	25.23516	29.45154
Ndufa2	100.19553	108.98288	130.60652	52.15278	146.72465	143.93053	80.03611	134.4907
Degs1	46.54548	46.66588	58.12574	63.26409	25.78139	23.23066	81.01085	71.92709
Epn1	43.76854	42.64828	50.42889	36.62204	54.29632	50.85404	48.65231	62.37742
Mcm3	149.46346	153.85381	72.46088	73.88996	44.40473	41.58358	64.58861	45.98739
Nenf	110.25873	115.3243	132.75679	63.37718	74.03691	72.6196	56.49182	113.17655
Ube2b	25.09228	26.30311	26.6711	22.41174	30.70375	34.4638	30.07111	38.3222
Jpt2	21.32555	21.0479	26.80871	29.03056	29.00523	28.09925	28.20935	20.22482
Vapa	37.88058	38.41122	41.39481	48.09763	73.71464	76.02583	45.54459	41.07216
Cfl2	18.76225	18.34031	26.83434	34.68036	23.52027	24.23566	21.06041	38.74621
Mrpl24	17.89922	15.78598	11.95322	10.15142	56.80959	56.10593	14.60378	16.45074
Rps24	66.61119	63.94544	67.39917	56.66667	77.27484	85.54943	47.8427	62.51421
Leprot	24.9009	23.9174	28.04871	18.14581	19.28778	20.38353	41.23441	46.66369
Sbf1	60.36445	61.72092	45.52868	41.73749	36.06704	35.41402	40.1816	33.58567
Rpl26	446.17931	436.32725	416.97004	418.95157	635.81261	647.55631	238.72934	286.70079
Pitpna	42.40405	41.52113	30.44774	32.28603	30.64569	32.80458	66.36232	62.09314
Emc10	57.88106	58.40628	60.40904	33.44995	45.72106	43.06821	45.92816	59.59652
Chmp4b	83.88465	81.20134	128.3576	84.21403	255.41756	236.92909	92.35864	108.34275
Gdi2	33.48043	34.42925	29.896	50.23071	39.87225	45.4713	40.42072	40.93324

Trip6	21.62673	22.31741	41.72541	27.91021	19.13847	19.20363	13.44667	22.06847
Psma6	298.3419	290.69051	134.41324	146.18045	121.47093	129.04257	159.02861	270.63244
Hgs	37.89201	35.75486	47.12114	40.62315	44.41484	41.85974	32.60299	32.01773
Nudt9	18.37297	19.12103	40.66215	22.97234	20.65037	20.12003	18.87612	22.11904
Marveld1	13.17711	13.03242	19.13659	16.85842	15.67051	16.30578	16.39879	22.17252
Mybbp1a	119.67574	126.01134	124.9405	132.75638	119.03408	108.11441	102.4736	59.25165
Hmga1	730.85624	732.18259	490.19042	385.51708	623.31432	568.73108	578.61797	266.15583
Psat1	75.68841	73.48132	199.41628	257.99124	175.74731	169.22308	35.08407	20.08953
Dync1h1	41.11945	41.57209	67.75784	97.07183	34.23544	32.51791	42.12376	41.98163
Gatad2a	32.8724	31.88421	34.32411	28.64283	20.03835	20.96338	37.17795	37.42662
Fam111a	36.83498	40.24413	14.58644	20.37725	12.45594	13.54501	31.6722	28.69913
Anp32e	69.00949	73.98044	44.58358	48.18879	52.53345	55.77678	52.91463	32.82086
Tmed9	44.625	44.68882	57.81385	26.50522	97.3757	92.90286	42.65391	47.50315
S100a11	887.15064	895.30994	139.31287	84.83119	719.38443	713.86313	613.41673	438.65961
E2f4	88.6421	86.68738	59.52184	36.11824	59.7574	60.98914	81.81045	62.80443
Eif3k	56.45833	57.69199	76.933	65.97639	92.94436	86.77429	32.78775	39.37541
Eif3a	63.74409	63.49437	44.23434	49.4772	78.87726	80.74395	67.24905	52.80747
Gsk3a	27.3306	25.0958	24.15541	14.09062	30.42061	30.41789	20.21717	18.56419
Rplp1	4019.6512	4095.6436	2889.2383	2420.5621	3354.0736	3086.2231	1856.4141	2564.7819
Zmat2	24.62605	25.4533	20.13955	16.86392	16.52792	18.64921	22.16886	26.01185
Cox6b1	119.46682	127.50991	178.66492	87.85384	163.922	176.90539	79.19342	113.76494
Xpo1	37.59788	38.25118	34.01283	53.83886	21.79958	24.47972	49.11255	31.08587
Atf4	121.20385	118.81181	300.25807	259.04088	319.93859	295.32775	122.30138	105.24808
Psma4	35.84927	37.11671	50.38267	56.59817	49.55346	49.68647	36.16911	40.67692
Nsun2	50.39436	50.49667	42.60991	54.48079	23.02979	24.11901	57.11224	40.84194
Ehd1	85.12963	86.19422	73.58954	63.91003	57.1165	52.38181	72.70783	100.46319
Rela	33.72263	34.16419	45.99326	42.8048	24.73511	24.7052	46.21401	37.75151
Sri	24.8444	25.8987	69.79895	61.27986	17.98234	18.73885	25.19507	36.34523
Sptan1	29.55444	30.9159	24.34459	27.89466	28.23608	28.17465	30.61033	33.52376
Ppp2r1a	136.34359	137.27426	116.57686	106.07129	154.34079	147.5467	92.14587	144.75322
Zdhhc5	17.60929	18.59089	24.79684	33.41197	24.86116	26.6113	25.35213	20.26815
Csk	41.69154	39.01856	43.06958	37.91787	18.45579	20.05972	39.40884	42.16404
Uck2	58.13188	59.26048	57.66341	51.24085	51.27571	49.93545	77.93164	47.92355
Flii	52.57755	55.36024	49.59027	45.13049	45.65115	44.62979	50.1874	49.94101
Ctdnep1	44.19117	44.53045	61.57592	51.07854	69.30976	70.84438	44.88586	49.83449
Tspan31	29.40384	28.03579	43.38472	42.46216	42.75398	44.00739	20.22024	22.77293
Vasn	30.73002	28.14412	24.93037	17.05111	22.41427	21.94533	27.67039	44.04196
Gps2	12.05695	10.50961	16.25623	10.88119	13.15276	14.30291	18.37415	22.95398
Trim35	25.91508	25.27465	49.28261	46.40743	54.96118	53.8772	32.98022	31.08772
Trim8	24.45972	22.43662	20.74187	10.98927	19.77754	21.23826	34.65523	43.92009
Galk1	172.59276	177.5621	262.47056	179.24117	152.67673	144.68643	78.89393	73.64534
Manbal	33.02626	33.70262	59.07356	32.18784	59.05013	58.61704	31.53415	30.57857
Ssr4	35.67207	37.71354	33.35441	22.282	41.21377	36.2305	26.32353	38.22272
Ahsa1	55.41621	53.62583	27.9661	18.65976	19.1006	18.16136	30.00268	35.5539
Kpnb1	104.3285	106.80098	156.9119	177.98207	152.47492	156.65914	123.48459	80.4553
Cct6a	114.96696	121.10482	131.90562	160.43395	123.09571	125.41183	79.73618	68.06486
Bnip2	28.25478	26.27799	25.12682	23.89413	16.86229	17.04152	42.27433	51.75244
Eef1g	641.67119	650.30388	798.08905	854.62467	479.55715	459.56982	303.70678	335.47282

Anp32b	204.88641	206.34689	368.273	307.7859	249.14135	251.67493	186.56764	173.26791
Actb	1019.4018	1037.6916	911.26218	916.64926	395.98846	368.67683	1328.5423	1033.0118
Kdelr2	62.72955	60.8679	83.10588	117.88097	122.74273	118.69935	55.12098	57.72863
Xpo5	27.73622	27.434	23.51092	28.30777	17.72802	16.87202	20.57382	14.42022
Ctsb	107.07695	103.33951	207.0128	150.86978	188.81466	184.93998	348.43513	294.55353
Ppp1r11	21.15199	22.59498	18.17967	13.92446	63.97539	59.6452	12.87529	14.53334
Drg2	28.06208	27.93018	30.24924	32.93166	30.03392	26.46289	23.25752	21.35844
Fkbp2	14.21037	17.08804	33.15527	18.25303	21.5902	21.34475	20.49111	38.65152
Ppp1r8	24.70963	25.16783	23.72712	17.81852	15.89854	14.50507	19.72856	18.58627
Glud1	55.6918	56.32214	54.48881	60.13123	54.772	57.37929	76.47201	91.73872
B3gnt3	51.76342	51.04827	12.43021	10.01907	32.15627	34.583	63.0155	61.16961
Polr1h	25.86858	28.41906	28.17375	14.73408	64.08875	62.22601	14.26255	24.96874
Smu1	35.09551	36.48892	47.14139	47.07482	30.54918	31.36274	27.55544	26.16611
Eif3h	271.92342	280.0421	459.84792	547.07843	516.65518	478.18739	154.06741	167.01439
Top2a	114.84411	119.56438	64.53093	89.05479	85.34715	96.73062	78.39427	44.86822
Lamtor5	64.09497	68.96954	43.24998	28.59029	100.99722	94.95106	48.89119	50.04239
Kmt5a	38.95934	40.25383	50.21531	41.91458	41.64085	42.00912	39.40746	31.036
Sod1	77.6683	81.42143	67.89549	44.57645	117.32914	115.83201	48.76338	81.16592
Rcn1	23.79651	22.12895	56.2363	45.73	67.09407	71.01489	21.36705	23.60602
Ranbp1	35.63995	39.54945	55.05889	51.41756	20.97617	21.03704	47.19227	35.32064
Myo1c	38.11344	38.61399	43.91872	44.04364	42.07005	42.09032	44.84517	36.72319
Nhp2	137.99061	135.30016	152.18359	97.57061	74.60391	69.54967	91.97106	75.38243
Brd2	56.34399	55.22837	68.30937	60.57899	48.6417	46.79571	37.90611	42.00365
Ap2a2	28.58654	27.41041	36.34226	42.97441	39.89538	37.70143	39.07216	41.02353
Anxa11	48.70113	48.28998	16.36537	13.90268	37.02067	34.43577	58.18242	86.03496
Sdhb	55.60994	61.09185	62.45765	63.91132	62.49382	58.07597	43.50238	48.35871
Aip	47.61196	49.03872	53.21724	36.96356	65.10751	62.22728	30.05666	42.08514
Bag3	31.65721	30.84484	32.71369	25.79423	45.60561	45.4342	24.30479	29.80962
Rplp0	2999.937	3051.3229	2404.6216	2553.973	2696.445	2461.2586	981.11012	1366.5186
Hars	38.96145	39.09602	54.4635	53.82244	45.12658	42.8298	38.42758	34.0341
Eif3c	126.50334	125.82124	218.65907	300.77199	303.93945	286.51979	88.67684	73.41888
Csnk2b	55.9272	55.16346	48.05676	43.84788	89.89398	87.83041	41.7102	45.7648
Srsf2	41.85411	39.92139	49.67225	46.45047	11.86098	12.70703	81.81946	88.61816
Zyx	31.26403	32.36284	61.26745	49.74396	29.37721	27.51723	51.37853	47.19641
Creld2	48.0008	40.93734	64.08308	35.07051	71.54436	68.41916	34.27085	35.30405
Psmc2	30.13682	29.89274	30.82982	29.31816	33.06094	33.57815	23.27169	29.23619
Pqbp1	20.98581	20.05889	15.84339	10.47842	25.19842	22.01789	15.40591	19.9824
Rsl1d1	52.44746	52.39212	78.15405	110.09518	69.36895	71.44048	69.32055	48.62948
Arpc2	165.80451	167.96341	146.09786	151.57605	133.36069	140.95505	251.24225	218.48654
Chchd1	21.57423	25.32288	41.26367	31.50738	34.17877	30.03483	15.32165	15.35481
St3gal2	37.73909	36.64888	16.55432	13.62316	22.32658	23.4522	24.13458	27.78919
Gramd1a	17.94901	17.9504	16.89644	10.45895	17.94931	18.0333	21.30154	25.94235
Trim28	100.57391	106.06807	96.35507	100.3552	93.28319	91.12057	59.11396	66.36626
Eif5	24.38209	24.01498	30.19204	41.84256	6.35604	6.90781	43.78081	40.31923
Uqcrc1	61.27382	62.27928	92.66205	93.14794	52.25987	52.70802	42.87354	51.97759
Lsm10	25.00172	20.78014	38.56891	24.9891	32.55481	31.10648	14.00695	24.43918
Ly6a	46.2994	49.14098	31.42807	21.06008	87.80774	98.07487	87.65433	271.2194
Maea	70.37947	70.37037	57.48237	46.60958	63.89939	65.62555	52.54874	58.80536

Trir	79.67925	80.25804	51.10517	31.29255	52.20341	47.91247	84.5246	116.54318
Pum2	40.36889	39.74438	24.73499	33.50695	23.48905	25.43188	50.93588	49.87704
Ogdh	42.13696	44.81636	65.05891	63.70358	73.76455	70.66071	57.9045	60.54684
Stt3a	25.85673	26.66193	37.17159	40.36519	70.39678	68.18958	28.88525	25.52244
Lamtor2	39.11508	43.73376	23.23452	8.5042	44.98924	42.84944	28.21772	41.30707
Dynll2	60.37988	62.6611	94.11205	74.20291	49.48815	49.10438	39.86946	92.24953
Ctsz	207.5321	197.32908	278.75023	144.26613	284.06514	267.83354	228.5324	220.52542
Snx9	61.42805	59.40499	49.43322	42.82712	60.76519	62.80764	79.793	74.35692
Tspo	139.45406	135.03225	181.39632	109.2974	252.8269	243.25601	99.25841	125.12538
Smtn	34.95094	34.75574	18.11945	12.62839	64.51393	63.51156	28.54611	11.91023
G6pdx	61.41437	60.19116	30.73931	33.07536	34.95289	35.73156	47.69851	36.78025
Ifi27	29.03206	27.06528	91.65789	52.88502	48.46139	48.15657	28.60385	73.01696
Pld3	12.05756	11.19383	17.12741	10.75133	18.51936	18.86238	29.43919	38.74253
Ddx56	27.94481	26.77249	42.95342	47.72178	29.36064	27.0713	23.48338	24.14635
Laptm4a	241.28691	242.45012	212.0509	193.92997	188.79669	187.00308	191.28833	440.71602
Ifi30	57.98258	55.00969	45.55944	28.59053	60.86136	63.53543	116.53524	119.80626
Hspd1	327.67133	340.97079	304.73777	337.71709	223.27253	220.74086	294.83157	194.90709
Tmed1	20.17034	21.74474	43.8684	31.9472	24.16098	23.76953	18.39672	28.23747
Tspan14	24.51756	23.95978	21.0849	17.64789	18.29147	18.81606	27.24443	31.21698
B4galt5	30.39018	30.21191	15.44397	11.18042	35.79118	36.68833	45.58405	54.60483
Bmp1	29.87515	30.20055	14.9084	9.348	28.27101	28.70393	31.98582	53.39666
Gas5	28.89576	30.26833	48.07605	17.57575	25.63586	25.12671	39.10803	40.79619
Tomm22	94.9601	96.3771	54.14899	60.98179	42.94863	45.58417	67.40416	71.17073
Lgals3bp	7.84235	8.16032	94.56785	62.41432	25.31166	25.26011	68.58198	55.98014
Spag7	23.675	24.89065	32.12532	23.30577	39.67625	39.69695	27.56335	30.79879
Alkbh5	45.44998	42.70671	36.5013	46.51379	54.68456	54.05024	42.52573	37.72687
Sh3gl1	13.91701	14.69145	17.83719	11.01532	24.85977	23.33454	14.56633	15.79299
Cdc37	62.28633	62.73683	39.86597	30.94542	39.18942	37.06942	30.11767	32.51708
Mrps23	36.70354	35.79156	47.62374	36.51902	35.24458	35.11066	23.2699	31.65679
Mcub	27.98635	27.72281	25.55402	30.41421	39.54429	42.29604	35.07581	40.67095
Smc4	34.20015	33.63698	24.4679	37.80416	28.83268	32.68449	53.05012	41.21724
Smdt1	35.00392	39.34282	65.20358	30.14991	65.04812	64.9089	39.36812	54.39678
Hspbp1	24.57789	25.10132	24.66489	16.53358	21.76451	19.2177	19.11536	23.65092
Rad23b	71.56975	70.57749	74.03505	79.19907	59.78073	61.28834	62.94331	51.17499
Lgmh	103.90083	103.32571	37.97247	21.13538	100.51592	99.48848	288.22542	248.14113
Carhsp1	42.50123	43.78833	45.27361	46.62604	80.95693	79.22089	45.16283	42.93085
Cad	102.10898	103.86537	33.47072	34.5123	38.28869	33.56044	50.30752	60.89424
Fkbp8	57.46664	58.07051	40.78116	29.26301	44.37022	43.74875	47.12925	71.81338
Uqcrq	50.25936	53.06688	77.81607	32.83937	128.105	108.72164	31.0637	35.12611
Serbp1	60.00297	63.03906	38.31408	41.77849	31.88833	31.62671	55.66022	57.54996
Ehbp1l1	28.56614	29.89566	23.07472	17.06026	24.60013	25.04193	22.81834	14.16285
Paics	228.25089	223.79487	90.78128	103.05324	86.90162	91.12892	149.12227	223.50617
Bag6	72.35628	74.63163	21.12731	17.26631	81.28314	75.85015	50.61611	52.44382
Lamb1	137.3959	135.52207	36.41403	33.51741	81.84985	80.13198	106.14506	90.36101
Sh3bgrl	16.62005	19.03155	20.92661	38.64666	14.36157	17.08271	61.79171	86.11868
Odc1	769.31114	764.4561	311.69291	309.8006	97.03292	96.91345	645.97297	785.68399
Adam15	19.21895	18.79212	30.01452	21.46634	20.464	20.05163	17.48828	19.95177
Ubb	426.48413	410.2537	341.52004	255.89197	636.18388	606.59408	375.69733	524.38821

Dda1	27.58194	27.25572	37.77499	24.73065	32.10082	30.9058	28.43064	27.27486
Gart	58.64333	62.01542	58.06231	61.83863	14.00003	13.48675	30.08819	19.69665
Dars	33.63153	36.3253	15.08871	19.43039	19.79827	22.0965	30.43245	26.37735
Hdlbp	82.52261	82.65276	78.55478	102.14462	103.72262	100.42841	84.75811	79.68191
Rala	21.45602	21.37052	14.93726	14.61356	24.95319	24.86542	31.59925	40.72416
Csrp1	61.26728	62.44994	75.64685	75.11756	116.99176	109.8671	71.52495	103.24314
Psme1	23.80519	24.9468	54.07816	41.96704	38.72442	40.66109	33.09022	48.97347
Ncbp1	44.87427	43.77092	59.6814	75.55983	30.13079	27.70207	32.3618	24.48626
Ddx17	59.29229	56.18687	27.39448	20.7691	22.81331	25.01587	101.09318	104.23203
Arf3	68.67079	69.23345	80.73577	72.74734	130.84639	127.06344	53.53247	53.06079
Ptpa	39.0467	40.61636	44.71563	48.3765	31.08163	29.78799	38.71796	47.31794
Comt	23.60048	23.96113	50.16277	43.77247	35.55299	34.25371	34.77764	43.84321
Cnpy2	32.68808	33.31845	42.48902	25.30001	54.49497	50.67216	18.2032	30.67383
Mgat1	17.48056	17.81742	23.0424	14.60817	20.87289	19.523	25.259	29.44082
Adss	42.22671	43.22913	23.31607	26.54111	17.01483	19.07616	62.55676	50.31062
Gtf2f1	48.5341	50.53501	46.37266	35.56268	76.62664	78.96161	38.88269	41.64434
Mcrip1	58.64622	59.93949	107.83062	82.21052	83.86615	83.30261	39.63532	51.3982
Crtap	69.62182	68.11364	79.96906	57.10996	70.54889	67.4814	97.71377	123.96
Dnmt1	82.01256	85.69823	49.57605	45.94951	51.33318	51.06691	51.83936	35.74119
Cnot9	37.37084	37.36167	40.53968	43.19494	20.65685	22.61337	36.308	25.79102
Pgls	26.75854	25.34207	22.87641	18.28469	20.47388	18.75014	19.55577	32.60696
Dctn2	40.9781	39.76045	32.54141	26.65677	28.03548	27.5773	30.50729	43.27592
Ppp1r9b	43.52976	41.80049	39.24737	26.50155	43.05812	45.99221	28.99089	47.36488
Tpt1-ps3	118.48708	125.96524	88.51957	206.26432	166.3334	171.27	165.94438	262.4982
Serinc3	155.06397	152.56753	64.65665	69.48573	102.71532	105.76528	205.13171	423.97622
Col4a2	94.90905	95.3119	42.67701	28.66128	62.14973	60.73282	93.16642	84.36225
Atp6v1b2	18.99549	17.7432	31.86086	34.59866	33.39833	33.04868	27.19335	25.21752
Cdc42	97.36565	100.25554	93.37267	130.66389	118.58562	124.28723	177.22399	179.58802
Ly6e	287.42634	305.0489	73.44776	59.35937	131.12387	126.85024	232.19823	366.72409
Pole3	29.07933	25.67119	25.31011	24.57515	12.24256	13.30017	29.20258	26.41301
Slc48a1	102.7042	101.80759	57.07709	45.25795	92.12701	87.01044	46.41317	66.19302
Pabpc1	806.26321	804.65178	517.60624	767.63339	618.58603	611.89428	655.46076	495.66108
Mrfap1	183.93693	192.55988	111.06937	92.86483	179.22238	175.3485	145.82204	207.03534
Napa	19.19851	18.52222	40.12076	36.77051	44.23763	42.49586	26.64057	38.86256
Leprotl1	15.17072	15.57451	53.76673	50.44142	73.15076	70.73316	23.47005	17.89428
Eif3l	130.45827	127.0156	82.9569	110.05682	80.08643	80.56192	88.55775	82.71256
Col5a1	35.61305	34.23725	42.62078	30.56971	37.51279	37.90197	42.33923	54.37795
Hsd17b10	118.567	121.82937	50.3012	49.07738	109.00866	103.24418	43.85405	65.48317
Eif1a	20.81465	23.2096	33.43979	34.99097	20.2799	23.57093	40.50763	30.88401
Smap2	30.84092	28.25726	21.12012	19.47065	26.74893	30.1923	28.4064	28.95222
Ptprs	42.74529	40.8644	11.88308	6.0359	34.33211	33.52367	32.81862	22.79858
Colgalt1	74.26544	74.70122	62.53538	53.29907	51.33979	50.77226	63.01832	45.37364
Pafah1b3	28.79921	28.83491	26.51874	15.28892	34.26711	30.55583	14.81931	19.58698
Ppt1	19.88727	20.77545	13.88454	16.54931	20.36803	21.44058	28.43096	28.81434
Khdrbs1	31.77858	33.36708	34.04476	35.12144	13.95929	14.78419	29.94903	26.40352
Cops5	21.10357	23.41491	31.14332	29.96594	20.56917	21.54622	26.29294	27.10077
Anp32a	73.49014	77.30006	54.08923	49.95847	35.69486	37.04716	46.40285	51.9215
Vps26a	13.58101	13.17967	29.37742	36.38018	11.78317	13.70485	24.30144	21.36935

Sdf4	30.96869	31.21264	31.14319	23.66361	44.24666	42.39738	23.22394	32.42524
Itm2c	106.18373	110.66471	80.66761	62.33169	179.67155	168.7009	102.56928	140.74968
Zfp740	30.51792	31.52381	32.09244	24.92378	54.01691	55.70588	21.5325	26.70563
Efhhd2	176.98087	177.91575	36.13487	24.70984	71.89282	67.98105	202.57736	187.2543
Farsb	33.19571	32.33394	54.57961	67.76267	41.10727	40.7772	27.05911	23.59233
Selenoh	102.74013	106.3391	61.34227	34.80182	55.42968	59.1696	50.80609	50.96246
Get3	63.27695	65.34939	60.04248	50.22119	42.48283	38.81769	44.85538	47.01147
Nudc	160.41789	166.84772	117.52264	102.27282	93.00869	90.98326	95.18227	93.61962
Sdf2	26.85722	27.78927	26.9096	14.05012	53.32497	53.47597	22.27076	38.71861
Klf6	20.30192	19.5462	19.74714	21.74946	15.24438	17.01416	58.46347	35.83128
Cuedc2	38.33553	38.37614	41.31428	30.7493	31.01106	28.00336	30.38958	38.22912
Ptges	96.52844	99.1975	31.11273	29.11657	29.60568	31.47423	130.31241	77.6656
Prpf6	32.40578	32.11948	31.51894	32.58554	51.34405	49.92946	22.03858	26.08717
AI837181	52.84438	53.30129	65.9283	36.87814	28.8601	29.26188	34.84613	28.83873
Akt1	110.3581	105.89835	95.32926	75.51217	25.80824	26.3389	64.90192	110.54015
Cnn2	66.13839	64.02144	99.83385	88.25456	26.49749	29.16513	60.66977	59.45228
Kdm5c	23.9912	25.11757	17.2963	17.52577	68.62946	68.60614	18.14774	16.26555
Rps4x	1066.4629	1068.741	760.21299	834.90521	920.6232	925.82138	819.84271	972.21708
Emd	36.92825	37.87274	47.5635	35.61762	31.54645	29.71548	28.13072	28.59239
Mogs	107.50221	106.54905	48.033	26.36092	40.73686	38.80081	79.35246	68.12874
Mcm7	67.88662	67.21335	46.10194	50.9247	25.49148	23.79405	22.159	16.07148
Sdc4	118.97111	127.14647	52.04079	60.85955	98.79898	101.44133	103.10112	75.00845
Qars	43.67744	45.60425	22.79002	26.69911	37.53123	35.41731	26.1687	24.29301
Ddx27	33.61842	34.17851	39.68547	30.50238	34.34761	30.31599	26.8984	23.77728
Col6a1	23.97451	23.7566	86.71112	68.52205	78.01537	74.9537	119.60029	161.10048
Puf60	38.35175	38.82939	43.09526	38.05759	48.96438	45.53754	26.68371	29.13295
Wsb1	18.13526	15.41001	14.67608	10.40488	6.59985	6.79459	41.73809	35.60074
Arhgdia	325.46297	325.87328	459.27818	403.1089	505.49583	454.71838	383.9292	335.14914
M6pr	25.8202	24.82985	31.04166	26.0816	39.59935	41.38415	39.77713	33.61584
Ehmt2	79.62047	80.37154	71.84051	60.8108	81.05856	78.5874	42.89718	68.58004
Slc7a5	119.70917	114.08264	344.54457	319.94806	196.01106	176.97233	108.91293	143.58852
Mrpl34	64.79505	60.75938	42.2753	20.73331	43.42628	42.39789	34.63897	52.40555
Ap1s1	73.08287	73.13213	62.18689	49.69353	51.14186	51.78363	44.02768	49.02869
Nup85	40.07299	42.11541	42.26006	32.28307	17.17008	16.78121	40.05607	26.89079
Hdgf	272.54663	277.62055	230.10229	212.0116	337.7072	330.30106	209.32591	160.40033
Pfdn2	38.22594	37.59453	49.83973	21.17613	32.19815	30.30932	20.1789	22.93389
CLS1	119.71794	116.37018	81.92104	60.52236	60.45311	60.66854	57.50314	56.45625
Nop14	28.91312	25.92195	30.28362	31.87114	31.90909	36.54486	26.33087	21.8434
Tln1	66.0025	67.00894	55.41004	63.27321	64.03921	61.04566	79.09561	68.72544
Ppme1	33.62832	36.85058	29.57302	28.43471	48.94893	48.70469	21.7244	15.57152
Nelfe	40.24583	43.65091	27.53776	26.11983	61.73015	59.78139	21.48967	26.40171
Cdt1	65.11963	64.53225	39.44466	27.7591	56.48497	47.31587	28.63026	17.97227
Nadk	58.36897	57.82355	68.11161	63.63596	51.07999	51.19595	81.5569	78.67023
Fscn1	244.18757	238.17443	122.29782	95.80918	104.60511	95.49131	147.60889	166.88458
Stom	24.38528	24.51794	13.46932	17.31239	43.35547	44.49922	21.50205	18.99436
Ergic3	76.53003	78.65155	100.03288	51.47317	151.63881	150.23402	48.04079	67.62093
Ppp2ca	40.94972	39.13514	46.38981	49.97897	67.10141	67.3012	41.30408	35.8644
mt-Co1	3905.7743	3484.3586	4635.8895	10356.378	6453.2159	6286.2382	4300.8698	3398.9136

Fam168b	50.75377	47.85987	64.48426	55.70045	43.52826	47.17817	58.39052	51.96803
Stoml2	37.15677	38.90604	53.722	40.41107	37.8082	34.97466	19.51992	20.99102
Manf	51.78048	53.94301	44.58642	28.4672	138.21747	127.74119	46.30392	50.89703
Mrpl54	18.04216	17.73646	34.3026	19.71182	32.06313	28.88576	21.23824	33.38677
Uhrf1	90.42099	91.2365	41.98168	31.85992	58.68348	56.31165	48.19714	29.69063
Cox7b	60.99147	60.3717	50.24453	28.92424	28.32975	29.74128	50.81122	70.12872
Dnajb1	29.38313	28.64373	14.06434	13.3356	14.01927	13.97728	21.10337	21.9985
Cstf1	27.44107	26.30125	25.7204	22.54015	30.98692	28.39997	17.9503	18.19619
Aldh18a1	54.88434	54.71099	100.46104	99.52394	91.37607	80.84137	32.11754	15.88577
Syde1	12.90361	10.78742	21.21054	16.75949	18.64539	17.0188	8.81324	10.09772
Slc38a10	39.46762	39.78015	36.49969	30.65817	76.44663	72.84319	28.33741	28.50404
Hspe1	158.36522	159.67573	179.0055	129.61706	109.80438	100.56527	98.57126	97.743
Arl2bp	31.52422	32.14243	33.88142	32.77114	20.97324	22.70493	41.99283	51.61657
Mea1	20.76922	20.44136	33.97637	14.94176	59.15726	57.43224	13.10778	22.10395
Tapbp	36.98466	36.34629	72.67011	66.06586	75.71029	80.46783	54.04123	61.9509
Tcirg1	22.30554	20.67229	29.86375	16.95599	10.83148	11.66944	47.03528	64.55404
Prpf8	108.48786	107.19554	107.27908	133.72125	137.19322	132.55561	79.73782	55.00944
Cggbp1	19.55761	17.57017	30.12409	40.92168	24.38882	26.60253	28.58361	24.20044
Bub1b	71.87291	75.09198	38.38758	40.65714	78.57091	79.40861	27.76544	20.99961
Ubxn4	24.27616	24.28083	33.14708	32.55949	25.6732	29.17272	35.66005	40.08029
Ndufs2	122.95126	129.09586	169.12091	167.64214	152.84279	142.41146	95.25387	128.96736
Ciao2a	47.57733	44.19999	47.689	46.11035	35.62833	35.77412	40.03579	45.32344
Myc	228.8327	232.74456	118.41988	86.13977	5.04629	4.61139	343.64141	119.34818
Rps19	122.44647	122.566	103.05257	78.18889	146.51341	144.78308	62.14028	89.08879
Sat1	24.10702	25.03265	33.86906	26.71678	75.71992	75.7909	55.89157	65.126
Fcgrt	27.96318	28.37428	8.76216	5.88866	29.64874	30.44728	70.51109	115.77186
Chmp1a	64.0034	63.69415	37.42645	29.64664	28.17539	27.32184	50.50173	62.76742
Eftud2	37.33118	38.82532	43.59514	46.64548	27.36857	26.90447	26.36219	19.49826
Mdh1	98.73014	100.9682	81.10246	86.59654	100.8606	104.43702	54.07447	68.28415
Ndufa4	81.15167	86.00437	92.98262	65.47893	38.81001	37.57735	38.38806	62.58844
Brd4	30.84415	31.11575	34.61387	34.52147	72.54016	68.30298	29.37294	22.76635
Pea15a	28.57604	28.51246	29.17107	29.41642	18.53263	19.57992	44.35687	42.13099
Rab12	19.12893	19.81977	12.3498	9.71607	17.22976	18.84043	22.63387	20.97604
Tpx2	61.30472	64.06362	59.58999	64.15967	77.64112	78.16726	33.82256	22.80354
Rpl4	1108.8651	1080.697	918.10312	1001.7237	1186.192	1188.9636	833.48947	986.00299
Cyba	66.76783	66.62814	14.83865	7.42714	28.88039	27.37683	106.37201	125.00848
Tpi1	329.89068	346.83614	349.35493	373.69001	351.9747	350.58723	237.90279	163.8043
Mthfd1	75.18778	76.18907	38.88943	36.20212	20.55668	20.07776	36.08727	25.51318
Tpt1	459.40321	452.01427	378.76043	428.81751	719.75403	742.59238	448.6097	718.93778
Dpy30	41.57257	41.96396	36.97371	29.37513	26.38529	28.1449	22.81635	25.32979
Malat1	27.53154	19.28188	41.7045	28.50226	16.1373	22.53097	80.91757	69.86455
Cdc42bpb	34.8705	34.35588	25.32438	24.27663	12.20612	12.37991	33.44399	30.36876
Strap	73.2759	76.19663	87.31513	116.25231	53.82834	54.09511	82.94782	64.96374
Myof	51.06967	52.36898	27.78717	31.72858	36.77971	38.29115	51.10125	29.0225
Cops9	27.54253	29.88407	28.16321	13.05994	20.04862	18.04382	14.56607	28.02647
Edf1	72.22579	72.83575	171.1966	92.2557	96.78005	89.60585	46.80326	77.46023
Lsm4	142.87532	150.57298	143.69478	65.7112	121.10317	111.40706	77.47534	115.52423
Pef1	34.60852	32.9324	24.74688	17.52497	29.43419	28.97766	27.28467	42.68993

Actr1b	40.22825	39.77212	39.84914	30.8514	44.15517	42.32816	35.5506	37.34378
Lap3	55.67423	57.35552	54.55837	50.77084	41.35107	39.63653	31.94779	26.37342
Tmed4	38.36104	39.7208	51.94989	34.93131	72.29846	77.38784	27.7442	33.51111
Tmem183	35.04235	32.95334	27.72614	31.80966	33.7553	35.48724	33.17844	28.24646
Naxe	112.47705	120.06276	98.17324	58.5211	137.52658	126.47168	64.22389	84.00825
Wdr46	28.20562	28.56797	20.64788	15.14817	21.3803	19.79416	22.09807	18.69908
Klc1	21.58429	20.99207	29.56814	20.98518	12.63976	12.70178	21.29351	27.38451
Ppp5c	33.19032	31.36589	47.1663	32.98018	31.38458	31.89459	27.64961	29.79483
Sdf2l1	71.9254	75.95552	47.39363	30.80326	109.49413	96.76645	42.45362	30.59282
Cic	16.90304	16.87472	23.14907	17.27192	19.52134	19.61388	16.75053	17.19862
Ube2c	68.55274	65.69192	43.95579	41.05401	120.50629	117.20015	42.71525	36.07983
Ppa1	24.63488	25.52081	33.83705	41.60024	26.61361	27.40683	20.46642	14.68453
Ube3b	29.03985	28.83604	30.1289	37.09671	24.65171	23.88255	19.72241	20.78527
Slc29a1	38.39819	37.35175	23.15733	17.92255	40.04813	37.95594	19.02225	26.14705
Spop	38.314	41.16004	64.59233	60.06989	81.42667	81.25291	56.20502	58.08424
Ssr3	98.40044	94.60559	82.56447	96.87773	220.22045	241.48964	139.15321	110.63569
Tpm1	70.23171	72.79771	68.21028	55.91149	50.92654	52.29502	88.12905	59.77041
Actr1a	46.0874	45.74661	43.00563	44.05798	40.58602	38.97718	48.15097	53.02554
Cstb	116.12548	113.66845	282.18911	196.34051	224.16044	214.16784	156.31331	251.07749
Tpp1	17.93619	17.18372	18.74482	15.81599	23.18937	23.59032	33.06018	30.76402
Tm9sf2	24.63552	26.08155	48.07278	58.8916	62.03267	63.63528	38.53574	39.11719
Gpc1	111.4069	109.63789	162.24818	137.11109	54.53978	52.4856	121.32652	50.69387
Rps18	527.30431	555.89489	434.02599	303.36913	780.68523	771.457	226.79814	278.10956
Vmp1	17.611	18.66734	36.22331	34.14264	27.32557	29.14308	43.96149	28.78046
Hnrnpm	42.86654	44.99557	34.98494	26.03851	14.34362	15.96616	43.94447	44.71526
Babam1	45.96996	44.84812	38.94184	32.48214	43.38206	41.13185	29.20444	38.69991
Rras	52.43407	53.31943	80.95015	45.83076	136.35114	130.68488	34.70724	40.20708
Arpc4	29.58447	32.16733	40.96982	46.88154	40.85362	39.17315	44.15277	41.99518
Spcs1	24.73746	25.68226	55.14948	42.37718	81.16059	86.10741	27.34563	32.30339
Eif3d	50.44217	52.26733	54.10005	54.86593	67.85244	61.35368	26.18935	24.70667
Txlna	20.65085	19.6486	27.17403	23.92943	15.54632	15.74247	22.1947	20.34996
Iars	38.22878	38.84926	97.34866	101.587	107.98498	97.33389	35.82573	21.0919
Smarcd2	42.48747	47.52997	42.35181	38.02403	29.62277	28.15194	32.24632	41.57713
Arsa	52.08021	51.16798	52.52339	35.85937	42.58897	43.21383	50.10341	45.57667
Zfp598	32.48284	31.87753	36.66024	24.81162	42.21742	39.82868	25.39906	25.15556
Lgals9	13.7526	12.67342	35.85455	34.09892	22.72566	22.28319	32.71243	45.13368
Ldb1	28.32964	28.48948	27.56413	16.73131	18.05074	18.8023	26.69677	40.02804
Cdkn2aip	62.31448	63.43502	51.57756	57.50397	79.92676	78.66811	50.11269	53.26215
Ssrp1	113.8813	114.31934	105.86726	100.24122	203.8414	196.74608	72.60219	57.24035
Slc2a1	68.17619	70.65801	80.54068	62.57416	74.51316	70.02376	107.08935	29.58666
Ints3	32.11404	32.56568	17.03272	18.22752	15.05195	13.87576	20.62354	26.04002
Srf	47.35748	44.0424	39.87954	30.59459	26.18577	24.49268	33.94763	27.2004
Tmx1	35.68359	36.26182	21.90825	30.37733	24.48843	27.7141	50.53781	65.58497
Prdx1	162.8114	167.2747	93.47522	112.29524	66.26526	73.45876	137.97015	147.69077
Lman2	41.40835	40.92156	37.00568	31.21169	51.39263	49.17976	38.06319	34.45587
Xbp1	35.03966	34.73672	44.98237	54.97968	89.11622	87.70582	57.08556	64.95869
Rps7	1304.2888	1310.6745	389.62547	351.35364	532.52627	490.69152	488.04365	821.11477
Grsf1	52.46312	54.05944	37.2684	49.09531	32.84409	36.15182	41.90823	36.12196

Prkcsh	59.17824	59.38902	37.18948	20.4376	87.09104	79.95319	42.39431	43.78895
Rnf181	76.31956	79.07803	29.08799	25.37015	24.00215	24.67169	43.65463	72.2472
Ddb1	232.79908	241.471	220.72401	282.66244	140.34375	137.94131	146.81727	127.5786
Lsm14b	34.61936	36.88236	25.31348	16.04578	36.395	35.99064	34.62738	32.88587
Lrp1	55.30828	55.02901	29.06706	25.78568	45.59877	42.02474	148.27926	70.71915
Rab2a	50.45283	48.80294	55.27734	51.35355	76.72389	78.34579	61.62987	70.30578
Yipf3	25.53814	26.75472	29.25885	23.30866	47.17558	46.71344	18.80162	28.0496
Vdac2	34.28713	35.62602	54.93638	54.46213	54.13088	54.1772	42.42115	35.77209
Rps20	203.64852	199.81162	154.92933	121.99988	220.09456	223.84125	132.65589	180.18581
Micos13	38.38464	36.05093	41.203	18.16437	65.39598	65.17595	15.98772	22.64975
Cwc15	38.24467	39.78953	34.87494	28.12055	56.30209	53.10554	48.81633	55.34355
Srrm1	25.95258	25.92676	23.96489	22.15948	28.72691	27.9926	34.75244	28.27083
Rab5c	110.30699	108.71838	130.21274	86.1367	102.5754	98.50846	122.78146	113.49574
Bzw1	87.6081	89.97329	51.92852	74.99557	38.48351	44.03892	126.6156	104.99765
Rps2	2963.8356	2958.1253	1901.542	1681.808	2363.1524	2146.7315	1033.3219	1153.967
Spcs3	29.7011	29.39176	28.83847	37.49066	40.6101	46.77347	70.70889	58.79931
Copa	52.26678	56.04255	63.68913	71.55202	49.7684	50.21726	55.63099	56.91664
Magoh	47.48061	49.89768	44.14366	32.95766	41.90749	44.03228	37.86708	42.81745
Rhob	89.24496	87.66527	177.78365	137.8878	18.04118	17.3349	130.76465	125.7472
Ltbr	32.65442	30.80761	43.14272	32.78165	40.69273	38.40822	42.57953	59.2928
Stat6	34.1222	35.57343	25.48021	23.6952	19.15992	19.91404	43.24304	40.76644
Srpr	46.47579	44.92204	48.56796	48.7115	107.93144	103.29127	51.64473	47.7903
Capza2	27.18968	26.4775	27.88831	37.44048	16.65516	18.58414	48.3061	56.07762
Rrs1	59.39038	59.89526	69.9751	45.44322	25.96736	24.59497	65.85497	66.49912
Hsp90b1	201.03392	208.89676	219.8271	268.35549	260.40633	285.91452	184.51062	148.73756
Mapk3	71.99076	72.77485	77.84484	64.11296	144.48553	134.35486	52.73005	67.49098
Tmsb10	703.78561	722.89077	366.2478	229.77008	286.68107	293.90868	813.08786	1004.0524
Gnb2	125.11132	121.5772	155.16268	104.5403	134.1774	125.29234	80.18724	118.59783
Wbp2	38.4902	38.2334	44.978	33.04361	47.45743	45.97874	33.47255	44.15197
Ank	91.13194	87.14693	40.94461	42.52281	71.0238	72.19237	132.36675	141.12821
Ccdc124	60.08955	56.63504	46.48928	19.08557	51.00925	44.54939	34.03965	42.73415
H2az2	88.15595	82.08597	44.76614	25.40372	72.31353	71.33318	27.89713	51.53857
Ostc	35.6631	31.80515	26.19716	25.58467	63.49883	66.25411	44.4371	41.92056
Bop1	39.60859	40.586	47.86945	39.11005	37.15616	33.39587	32.14935	29.15211
Polr2m	86.73019	90.68934	89.15086	90.88995	86.27219	82.38624	67.77978	70.51226
Fkbp9	115.20496	117.3304	191.5672	147.46414	86.29667	86.27843	57.10099	93.20277
Rnf19b	25.80013	24.98293	37.1628	23.37069	37.00208	36.59499	39.01394	23.15296
Unc50	21.70897	21.78556	18.08634	11.05347	20.08537	22.65186	31.18432	38.03028
Cyth2	21.74538	23.60955	24.92944	17.31866	21.33335	20.46987	19.88788	21.96711
Gosr2	22.88728	22.42758	49.47086	45.47932	63.80439	66.03244	30.84091	34.06089
Gnai2	239.53459	241.76704	126.84175	122.35685	139.54314	139.22704	210.97519	297.81919
Scyl1	56.78369	57.04709	35.30989	24.22649	32.85352	31.56975	27.24326	22.24497
Serpinf1	158.36639	157.73798	279.2302	185.75681	54.30506	49.37986	131.73392	183.3198
Ddx3x	36.9881	37.8314	42.77518	61.16336	46.47038	54.72099	73.52471	64.33173
Acot7	81.94641	85.32891	69.56606	56.64293	60.48726	59.36703	77.12052	73.83478
Cald1	42.67962	43.81577	43.98922	48.12599	33.81898	36.12007	65.35894	66.95053
Vat1	172.06536	175.62707	269.67863	266.70477	219.18811	197.47019	111.87905	138.97742
Nckap1	36.46407	36.4675	27.47308	37.5388	52.38575	60.34576	48.94549	39.72881

mt-Rnr1	78.78406	76.87916	50.16506	168.65841	130.46822	137.62191	80.2571	71.95927
Marchf5	26.57546	26.08341	42.9487	46.7578	43.88282	49.20121	27.79954	27.03663
Wbp11	40.31363	39.5694	43.11513	34.09797	38.72872	38.59951	34.07272	27.87394
Aebp1	115.4352	114.69164	38.50247	24.82325	172.39333	167.94619	216.06606	130.20995
H2-Q4	10.5258	9.98764	60.28571	33.23696	15.82671	14.78877	48.71711	68.48403
Dag1	42.7619	42.56994	37.51824	39.54563	27.57361	28.47845	45.30867	36.27506
Eif4h	96.64998	101.91861	98.68165	82.99932	110.38323	106.40373	59.33348	66.5109
Rbms1	26.35306	25.71184	24.90857	29.40132	36.59902	41.26087	65.59692	57.10529
Atp5k	28.83759	34.58943	35.19063	13.53618	23.53175	28.79139	23.19285	30.33655
Bak1	41.09848	39.33689	33.27274	34.96458	50.78636	48.51823	35.93043	33.3282
Exosc3	44.5178	42.30059	54.86215	39.27324	46.12932	41.81664	26.67119	26.8977
Amfr	32.42087	30.17338	60.42556	65.4527	59.32523	56.4034	37.16375	47.29074
Eno1	894.83655	903.78113	531.69207	630.60527	429.69858	409.91188	492.25134	308.82641
Rangap1	95.36586	96.20757	76.79029	73.32476	89.4805	88.72984	43.9108	33.91732
Septin9	69.82773	72.91319	47.38658	46.36166	51.18031	51.51558	83.61834	85.51421
Frg1	20.6191	21.32872	17.34845	15.04497	23.45461	25.42726	16.43476	17.96061
Elk3	27.01874	28.18189	18.52266	16.80064	21.50947	21.43386	35.93176	28.61723
Ubqln1	47.4318	46.19377	44.02148	51.69657	37.48876	37.17884	37.23866	34.79367
Ncl	88.07658	94.06218	98.8257	131.99793	50.29214	54.46406	148.65435	102.92725
Gabarapl1	40.93867	42.95535	51.8389	35.91639	116.38513	112.74892	25.55462	39.04522
Ndufa8	88.96269	91.1362	108.33936	64.24201	79.99648	76.74129	68.77333	103.72777
Tpm2	45.04281	49.94807	65.60828	59.01886	41.68901	42.98294	25.68363	41.82751
Msl1	18.55796	16.8133	24.30159	20.46649	19.04177	20.58365	22.56689	26.50109
Rnf114	34.33291	32.85392	33.2369	27.62371	63.63395	62.34448	19.49159	24.37354
Ccnd1	81.43412	80.46438	51.72511	63.75667	24.99866	26.76858	52.57866	35.89308
Uba1	188.00915	187.18465	87.10002	96.39136	132.80227	128.26688	124.96411	116.05618
Nr1h2	25.33178	25.80641	25.08137	19.73417	29.909	26.76745	20.70877	29.60026
Tbcb	34.24448	34.44782	60.52621	50.56947	35.85568	32.9643	31.93496	46.11326
Akr1b8	42.36477	46.01063	55.70518	53.48356	48.93589	47.89096	88.65522	91.75113
Dlst	21.61254	22.16028	29.98951	28.69911	19.00367	19.39948	18.09489	19.3069
Papss1	69.34187	70.26714	28.9268	25.0047	29.27411	28.89351	88.66211	75.41094
Atp2a2	53.35922	51.86163	100.65611	103.55566	125.20736	122.83588	49.1087	40.64378
Atp6v1g1	66.28967	64.57378	109.80816	71.59424	122.46729	123.62805	72.27909	93.39471
Atp5d	103.12548	104.41126	188.29472	120.50449	67.09132	64.69973	54.59754	74.10143
Snx2	28.38842	28.54993	28.68271	26.25949	24.38057	25.47209	94.24369	86.64867
Gns	22.22556	22.15393	30.49811	33.22892	19.11203	18.25912	35.73417	32.28551
Tm9sf3	24.68603	24.9123	24.11071	29.11942	38.63172	41.78442	42.62963	39.56042
Tbca	102.95441	118.17399	106.15151	80.20839	103.25751	106.78595	118.43898	131.04959
mt-Nd6	236.55548	237.00921	657.31762	1770.0612	575.22893	402.40294	372.74726	614.61032
Emc4	27.42021	28.55066	55.12944	39.03988	102.02637	92.54255	21.18233	25.74181
Tubb5	721.31592	725.39564	468.01966	439.10713	863.88226	814.60392	396.6462	317.34602
Cmtm3	10.5155	8.91241	25.20965	20.93478	18.19667	19.0094	31.98757	42.82983
Arpc5	76.13956	74.47953	70.23926	71.04142	38.33494	42.27236	142.81508	148.48343
Pycr2	52.2855	53.25745	45.96432	31.74319	33.36681	29.34924	32.77639	39.47294
Cops2	23.84808	23.67719	24.69455	39.45951	20.30496	24.29486	42.50916	38.93607
Lamp1	223.6119	218.42103	246.94076	244.60655	160.66864	156.40056	257.97358	280.94464
Cope	40.63366	42.73427	35.65825	21.73259	58.76193	55.01524	29.03576	43.77056
Capzb	91.32496	91.62724	60.51822	70.78625	95.39293	88.94174	88.27435	110.33905

Plk1	70.77687	69.9858	55.21811	43.09996	66.50666	61.71172	36.28487	25.83169
Ap3b1	31.96374	32.86981	27.31275	34.31071	30.0656	30.01502	28.924	22.87938
Rrm2	186.37983	194.39449	98.54318	86.18061	36.21831	35.13344	84.68204	76.40843
Tmem147	32.58464	31.51185	66.43809	47.50577	57.99584	54.43279	29.97829	36.36249
Plin2	45.98671	45.74569	73.40575	69.04431	40.38052	39.59225	53.92012	39.16143
Rtn4	83.28492	88.31854	98.72115	97.11387	71.59378	73.44308	93.69064	81.42532
Arf1	181.51349	179.27232	307.0732	253.99462	386.13063	371.06536	202.99967	187.96817
Tcf25	59.5347	59.81212	58.16712	61.38964	50.70353	50.72311	77.20116	85.9188
Abce1	25.8953	25.52582	24.07573	34.20216	29.05637	33.64962	40.04074	22.04994
Zbtb7a	17.8899	17.74133	13.2532	11.06104	10.89686	10.82452	21.44065	23.76421
Atic	47.61601	50.81192	44.60902	49.49457	26.07395	24.75018	40.84225	32.79908
Bst2	138.96843	135.60529	192.85018	87.69417	42.48332	39.98441	197.47001	370.39923
Msrb1	33.33716	33.7385	26.1148	17.29098	30.97184	31.79659	38.99867	37.19225
Tuba1b	598.49139	506.71505	468.41176	487.32888	351.58647	320.40722	330.20774	310.57115
Srp72	53.14575	53.06068	39.55545	53.24005	68.9031	69.97436	57.84641	46.44351
Eef1b2	294.9846	299.85206	160.13263	175.58079	318.13545	314.25146	169.34584	215.6998
Slc25a3	107.80627	103.41712	159.34719	154.83058	61.86833	58.29846	105.48545	121.77481
Stip1	260.28114	269.86412	232.24797	267.79772	176.92623	178.971	109.86664	98.63633
Ubtf	43.5952	44.35907	54.60243	41.79135	20.18626	21.2416	33.59928	40.49635
Mcf2	51.36474	47.05325	46.4838	34.22174	78.00719	76.3464	52.25331	63.64259
Arl1	36.07078	38.43274	59.68542	73.63054	51.32819	55.76453	42.04443	41.71193
Sf1	54.46397	52.90472	73.40179	59.62048	46.7365	45.02009	59.63267	52.31334

MC38-1	MC38-2	RM1-1	RM1-2
47.57927	17.18139	49.43708	62.78194
69.23467	40.27569	60.00472	53.92607
28.48104	36.07308	32.81522	49.56913
84.11093	99.67555	116.72569	116.50801
23.93708	32.32139	29.59297	24.27112
43.43538	28.94449	30.73839	45.88654
15.52265	10.64993	35.73794	41.99774
20.59885	11.44126	18.07371	16.95141
33.98342	42.26894	31.85587	31.48451
78.83327	36.2735	138.32998	142.09193
60.95422	37.62924	48.7597	50.56145
87.34119	45.35681	128.67029	182.57025
64.62123	44.43218	58.86378	93.56688
45.76662	30.16743	51.55468	28.71755
195.72678	105.16531	299.07344	390.50603
1357.5783	1382.9519	2065.4643	1918.1049
27.48071	17.42787	30.79479	33.66731
39.07485	24.5238	33.16931	35.51816
38.93828	43.04775	47.83201	55.29088
47.98468	48.56947	50.3231	33.35357
25.86307	21.72726	35.01527	32.90706
43.84991	31.7395	34.60678	25.92357
60.63317	56.60773	72.3719	70.09632
15.88415	8.46129	14.44845	18.69144
46.1206	15.92943	50.58741	58.1459
41.08753	28.07819	54.01518	62.42552
32.83232	34.16462	31.94321	28.36308
32.2476	11.37934	41.16052	35.91485
232.43497	149.07124	265.26448	250.17575
46.2512	49.37321	43.9241	60.74123
43.4601	29.68546	54.69037	45.10183
17.39012	12.37454	27.42838	29.02892
31.87499	16.15447	37.44363	52.77964
99.83433	54.66652	114.53809	100.48539
41.06309	28.65111	33.75715	32.10109
118.8992	105.47445	97.17045	126.54442
30.32439	18.90543	30.77044	20.97304
29.24976	13.19835	23.83998	35.4042
2.76159	1.4101	1.65219	1.33619
641.17808	828.71465	167.7205	169.31578
26.56733	22.46498	25.86717	26.71307
60.73755	77.81304	66.21697	55.65964
62.3529	42.28494	29.87563	38.78145
811.17925	549.41394	1236.5184	795.6399

50.09254	70.51403	27.02996	29.38264
120.55965	122.99832	195.4626	139.20267
60.38183	28.62966	56.72981	59.23897
47.78157	19.63391	33.05788	37.64101
38.82313	23.65838	33.11961	25.76605
27.29055	40.61321	26.92389	36.08791
26.0446	22.52831	26.05324	23.86037
33.80122	21.06681	34.85763	36.20281
259.0254	178.03034	394.11608	387.48448
48.37665	48.45198	61.8319	64.08304
24.5964	20.9193	23.01791	26.10426
197.18898	267.05432	253.35038	191.02861
26.64607	14.4281	69.48383	55.05685
52.5955	43.62042	38.88279	48.44078
81.79896	106.31892	89.29972	86.32834
95.90808	81.96962	52.69594	38.72868
29.71283	17.28273	44.44288	38.8256
115.32361	138.74211	71.69355	90.12946
26.17723	17.22295	23.94601	27.00109
22.82684	16.38003	26.69052	41.95184
23.31461	18.7622	37.00541	38.43244
58.3051	71.12245	53.42044	37.38613
56.92011	70.5617	54.88748	44.23644
40.64457	29.96789	24.89412	31.87098
293.06742	123.25997	257.62708	342.10896
110.05123	87.59571	53.37053	61.76872
44.81142	40.11313	43.01792	27.20096
41.18743	45.3416	37.75824	20.10604
54.49435	26.64687	67.86998	56.33749
64.01276	50.47722	153.54278	144.89792
62.96006	56.60682	16.8093	18.08205
43.24093	39.14573	39.63815	42.17867
48.67387	53.39186	66.93618	59.26505
77.45464	59.29182	151.14201	131.71545
50.83076	27.22625	48.14416	45.64752
60.66124	66.87125	64.56624	74.9012
96.37616	40.44634	54.83487	74.26103
45.92414	21.57781	30.74508	37.18529
283.39941	301.68007	243.10044	196.42795
156.69668	74.59856	220.11075	173.59333
28.91379	12.25306	42.97291	41.46126
17.35359	10.72238	27.44225	28.60915
39.51425	28.00629	39.68824	65.94213
28.83322	22.4468	50.70949	41.37597
65.57873	63.08293	73.63313	91.40075
19.12163	8.70229	15.52983	54.67543
90.01422	162.62014	138.65167	126.27054
76.0813	60.02244	78.34084	85.22813

25.36663	25.59722	25.72451	18.98341
36.99757	27.0951	33.90942	37.73993
1478.0864	2165.0167	938.47723	858.74232
49.48766	55.25634	52.339	46.25866
35.05391	32.23173	55.11248	75.90563
56.81654	31.54887	53.99618	76.46593
46.83308	34.07656	59.61047	71.47845
22.96253	14.36689	35.26979	38.94101
61.36081	41.73998	68.11677	94.75828
16.52081	11.1009	33.22859	38.73925
358.414	286.15264	321.96044	296.69228
52.50041	55.03122	23.23441	25.47607
259.3475	345.08855	184.50239	144.86336
6.60027	7.12056	19.79976	14.62514
78.20815	61.58214	43.34502	72.51177
39.77337	36.45021	40.78822	43.83326
22.28146	19.36764	26.1013	29.08787
182.87258	190.85507	313.21797	222.9704
22.43587	25.91498	54.93659	42.57708
45.20304	77.72237	85.69301	59.62924
15.01775	12.02644	21.16678	18.84928
23.61077	21.97785	30.63497	23.72893
52.50254	76.06123	50.33154	49.19322
25.15899	24.61722	33.5856	28.71153
354.07471	258.65641	365.01594	301.73787
93.36182	60.45543	96.39226	68.66309
61.32185	69.55292	37.70197	35.91368
72.68256	78.56587	79.49823	66.3978
12.82263	15.98656	23.28387	24.64762
23.95716	18.62123	21.22525	19.89164
34.25954	22.53008	46.90738	36.34799
186.81178	130.62431	263.82401	220.02832
151.71719	146.72487	223.62036	152.95796
63.88227	45.10835	64.43442	72.11059
79.83711	35.94089	79.04134	97.72029
31.14878	42.92905	37.34623	34.25032
57.06556	59.3197	57.64026	57.87757
35.55803	38.71699	42.67263	41.84809
263.16207	187.26204	364.63875	341.89462
29.68784	25.13584	28.65972	24.91007
78.1011	76.99945	92.42117	69.09803
31.1812	15.4315	28.31247	30.36252
49.95165	19.76751	75.07595	89.77528
22.04646	26.16282	28.44563	21.26107
75.40934	71.45239	77.10942	74.67698
191.25173	131.46943	194.99597	210.32059
219.32562	161.12109	185.62186	193.91811
18.70843	13.09971	21.06022	23.04293

48.60629	25.16681	47.31141	37.11391
263.90764	198.16492	170.90438	108.51191
150.7459	228.22896	165.67711	146.37535
439.18267	417.55305	415.52137	270.53884
145.04777	226.54301	147.15412	139.92997
273.32978	379.46247	299.71981	302.7202
25.97599	23.03524	29.70969	22.40639
106.25824	102.08325	112.59429	68.3587
31.12213	19.1241	31.16136	27.93239
19.42215	12.62084	30.70253	30.49
82.77537	33.34904	102.08594	136.31184
25.60648	36.96499	27.51975	17.77086
33.96201	32.07298	34.02641	33.97487
24.58502	22.52918	14.49411	15.17492
21.8963	14.06022	39.34175	29.2773
462.87413	386.32516	626.68508	521.28108
90.08791	60.76495	97.79126	77.35701
97.80537	89.81295	111.9821	108.85705
28.2122	31.45567	32.53435	30.64
25.32163	21.5368	19.54725	23.66685
90.72553	115.56485	70.69671	67.04783
219.46694	148.43302	257.57982	282.47584
27.21416	9.50904	34.08846	32.65511
26.26586	12.66925	24.57508	23.40808
42.28129	33.01673	49.69596	43.15952
24.92427	20.93631	37.3769	50.92891
48.96193	38.45531	56.71565	83.84557
300.97198	245.79615	238.06062	219.26312
196.33197	215.39394	191.49635	197.99399
27.25489	16.86168	33.45855	34.23083
26.82176	21.75492	26.68802	23.69261
26.99469	27.60663	44.1944	44.64118
17.64028	16.28607	31.52422	26.48493
13.83521	11.3484	18.53682	20.19961
31.171	20.862	20.44556	29.56387
60.652	65.68332	46.04546	37.61229
994.37736	516.06401	1212.8572	981.52999
222.47448	104.63786	252.27095	212.79882
445.96518	424.88148	330.25945	534.08559
50.47048	37.9928	53.43888	56.42662
53.51857	50.26459	45.45068	37.09517
32.02772	27.02325	21.62839	18.14649
45.69782	28.37024	50.22059	57.88506
39.34584	26.71561	39.90946	42.97347
100.95923	87.22973	30.25638	57.88367
58.58606	37.43169	93.11304	80.42403
23.49034	18.51094	21.98826	25.57209
106.17088	73.50304	76.4343	63.13843

185.46954	80.25092	152.60018	145.85021
260.72584	239.56984	260.45474	219.28107
17.90613	13.88938	19.08828	26.82328
49.35246	35.89934	29.49711	36.68596
23.99848	15.55653	23.09705	40.44301
35.40499	33.65928	33.42494	28.2565
122.11939	91.10583	116.94722	76.01746
36.64866	54.04269	39.27187	37.496
142.90467	120.59535	167.58502	163.79301
99.32801	99.29218	90.55488	68.46252
81.10636	116.13171	89.3271	54.90906
26.96214	28.16929	105.84712	65.30712
99.87067	58.56566	81.78937	84.03692
244.55183	284.26329	235.01847	218.50936
106.29765	108.8524	121.5942	95.54331
66.51417	21.61595	93.70302	71.53367
28.83461	22.54322	23.12871	35.03625
36.25663	33.98544	28.14219	34.9057
177.73405	158.65305	188.27479	189.99018
57.98501	18.40082	83.94234	70.17404
99.20653	116.42755	33.81543	28.24586
18.9767	12.16402	18.24264	28.01947
17.16751	10.13788	33.98048	31.86496
102.99265	126.59605	117.96329	126.51878
59.97484	82.2596	55.72999	32.97714
42.60078	41.56484	30.75077	47.27124
637.2614	495.21722	1120.7688	1389.7375
32.03839	15.42864	17.90178	18.7848
62.00585	83.11748	84.71254	60.49139
26.31058	21.01654	21.25464	21.40597
33.12298	43.65677	33.43598	56.53841
28.36521	25.86384	31.73333	26.41295
28.27166	24.48597	40.07742	36.41792
66.47211	102.52895	44.18611	27.76232
16.88603	11.44689	30.65555	34.85514
87.81482	64.28839	104.65389	132.65354
32.9653	14.58477	38.61607	38.98061
42.40412	31.81753	44.15926	39.42165
50.1882	49.63704	45.07427	29.41324
46.72979	34.18383	60.84349	43.82396
27.07384	23.21675	26.48651	35.78659
26.15537	21.82494	23.15626	30.02379
46.15656	30.0463	51.59923	51.83048
45.50357	66.4943	20.54956	9.59759
42.29727	39.68065	40.05532	28.305
329.06459	270.07282	443.49822	427.504
76.42695	73.92557	130.8811	87.63997
15.89343	5.46895	19.60523	28.0188

22.11359	19.42244	29.43727	25.36084
17.15321	20.0582	35.47864	24.88958
56.48797	68.82552	60.39757	44.37009
50.03465	38.89323	78.27538	92.2949
35.53161	44.88753	39.17234	39.44899
39.56482	59.43667	56.94064	39.69492
325.03758	239.62048	202.68533	175.89925
36.94648	17.93342	51.07515	36.44564
22.24915	11.51474	23.71884	26.40506
431.40553	463.05275	444.95495	342.97253
84.41078	79.15813	125.0167	102.4051
33.89976	50.36757	44.93225	44.04314
29.76186	32.85707	40.15035	36.09502
66.69667	57.09287	53.30415	45.36448
25.39003	19.46654	27.94894	33.06845
19.25412	13.08733	22.43811	26.73041
22.82791	14.66651	22.98721	34.94528
76.52429	91.68285	74.32179	68.11979
22.16466	15.83105	27.56973	24.38672
687.38835	602.35021	597.3007	550.32389
40.68912	28.03162	46.00994	47.6809
27.59202	33.5992	28.54839	23.8673
29.4952	28.4613	38.2901	25.19332
52.49368	26.54532	44.68759	38.36047
28.90389	25.15039	33.07257	25.66143
197.09487	141.88769	425.47898	442.28598
30.12669	10.78997	37.28578	37.09316
119.09991	94.64625	59.34318	59.38175
73.92113	115.84986	81.67269	71.36085
23.38704	6.46859	23.8899	73.42982
23.14494	32.94691	26.7465	25.65313
37.45866	38.7327	27.8678	33.38188
32.42293	24.64084	35.32324	38.43147
35.53015	25.67337	34.16662	27.17173
56.09723	16.86333	38.36898	43.03629
137.41047	58.81726	184.72403	212.69865
48.13458	31.62591	36.33169	51.52333
41.10715	31.00212	37.54667	23.21538
54.39066	48.8491	35.65045	32.52653
77.26771	78.95609	94.11907	103.93913
79.0031	65.11129	97.63687	55.67195
29.91754	18.90563	32.74156	28.30543
28.90084	15.92765	26.2097	24.27454
43.8774	64.38452	92.24338	113.57359
29.88719	11.98087	27.51181	32.15218
93.03635	97.25892	93.63353	65.98606
207.98844	299.1585	202.07783	176.51406
158.25391	184.73856	199.18656	193.94141

21.41588	23.86722	19.37779	25.47033
23.25336	14.79037	32.54063	51.43892
50.65088	44.98936	64.39404	86.73241
44.11131	62.89135	45.89641	36.50829
50.93092	31.39315	84.33095	68.83864
32.65082	17.35479	39.45781	21.70756
22.03266	14.86599	15.71702	31.38664
50.71819	41.93819	67.01768	78.99899
23.31937	22.81588	65.78353	53.87382
16.29671	7.48593	34.8379	43.31084
33.44129	28.48645	32.72598	32.14209
127.27368	102.00352	110.45028	106.62954
58.15318	26.87748	73.03659	75.30803
53.813	43.50459	38.36421	31.25221
57.81533	40.27699	40.88362	46.01942
87.17515	145.93886	196.65596	139.86288
34.33619	43.09798	29.72478	23.85219
15.04511	14.35348	15.58505	17.78686
34.95396	35.16068	32.46465	38.50789
442.94114	400.07605	388.35153	320.15834
38.71511	34.01015	41.98775	32.05619
60.93405	91.34034	47.1821	41.78402
29.21126	18.25659	18.50116	25.19274
69.65624	64.09773	207.70009	206.94235
38.78012	31.94486	21.13138	34.84734
21.03997	17.00404	21.93313	20.2025
53.86695	32.78285	29.39545	37.34782
139.18928	230.51028	115.02773	93.73419
2222.3171	4662.1982	1058.9271	961.52404
34.08019	38.42367	50.84149	46.05814
34.56049	19.46762	49.06276	49.5754
84.37607	75.92964	80.1016	83.28722
49.30859	31.62871	69.77194	49.37635
100.39293	116.76236	138.25704	78.02731
29.16111	26.18071	31.58902	31.69489
60.59638	60.02857	66.39807	55.30731
44.48528	29.32707	82.83969	76.08049
18.80757	7.71215	16.65052	17.6073
124.7514	67.40602	136.97934	169.81231
85.08204	172.09269	103.53844	66.94176
22.44359	27.56387	35.23213	35.26075
105.55787	147.02789	99.16132	104.64078
43.56809	21.57663	54.76863	65.65506
92.28665	63.30303	95.55505	79.66875
15.7881	12.78104	22.22397	25.83246
11.29345	5.3222	18.75455	19.0818
126.36542	140.84652	241.60001	139.50058
86.5857	56.09496	98.77895	93.35996

33.01478	24.05192	42.34129	56.32587
14.74433	9.13672	20.40126	20.40337
14.42195	6.28289	30.93551	23.49563
109.74704	121.23427	134.74794	149.62738
24.85135	23.13914	25.02508	25.03543
42.86834	42.34673	26.70656	24.55293
54.58	25.90494	167.19075	178.40629
90.90591	86.53632	82.49578	72.1327
3496.3485	4202.39	4649.5591	3471.8972
63.52522	54.58672	78.80955	76.51711
27.57692	10.90102	43.68883	38.56617
31.36458	11.69253	24.98097	42.81356
53.04533	93.59338	271.03481	255.18216
23.57595	16.67016	31.83924	50.47578
66.06409	45.08868	76.16819	55.57446
24.04027	10.11797	28.21398	33.41014
191.24252	125.1412	109.86578	107.0371
17.5522	15.4535	27.77416	24.3439
40.98366	19.54087	54.45123	72.47988
37.78605	33.13166	19.75286	35.63382
116.65218	53.5119	128.11818	102.54896
341.95266	304.04585	44.00834	32.00245
24.36224	22.78929	25.53168	16.75087
18.66572	15.38133	53.62579	63.71401
25.50821	18.23689	18.65992	19.64068
94.80773	104.02473	125.67953	96.4587
21.90399	11.47211	40.22191	28.33773
53.75375	66.59729	76.35495	63.61435
58.63721	63.74052	79.07874	83.43188
7917.6422	9714.0435	3027.4582	2768.8522
30.53819	28.97433	38.44577	30.5344
29.65227	24.66481	25.06417	25.90613
30.94612	36.90177	30.26359	24.96719
24.43108	15.50598	21.26041	24.85507
28.51225	20.83816	25.24915	27.86823
51.46548	71.91011	43.1393	35.7639
76.47248	55.53837	42.26797	30.77277
27.94864	14.75769	35.41742	30.06109
145.25464	82.39902	98.02884	85.68628
376.73721	380.21065	926.26748	936.05465
59.37179	41.20844	87.05431	86.05629
25.13148	12.7318	34.50393	53.02008
71.22889	48.35912	84.23904	78.19492
52.59838	24.18877	30.28029	70.45441
20.85079	15.38234	30.8109	26.37746
208.05897	47.3754	118.35792	127.12061
36.70739	39.83618	29.91519	27.01611
23.03785	26.74778	38.09042	41.90569

31.17898	18.26081	37.52469	32.26061
410.3464	412.88876	523.75139	329.39774
38.01463	30.44077	52.05128	61.78992
43.94441	16.05469	28.24897	46.91045
29.44142	33.59594	35.87506	40.33008
867.65192	603.34928	1109.8068	769.11676
63.03176	45.61959	26.24955	35.63485
19.98227	13.28265	18.00781	37.4605
57.12872	43.49952	56.1508	46.47214
60.12077	57.81435	62.50491	53.71569
32.18721	29.21987	23.49072	25.44503
40.02306	19.66089	47.99543	45.41763
222.50946	304.37045	287.65561	275.40715
51.26903	58.12154	63.92232	72.69439
23.1854	19.31527	26.49431	27.03026
34.83531	16.88386	46.94893	59.14969
294.62005	87.19434	157.00279	282.51993
31.25862	40.9732	119.72205	85.42301
35.93802	26.64631	45.36087	36.95475
52.06523	46.89762	74.17815	64.02868
46.69739	37.06428	75.32232	70.29507
36.30266	27.98184	49.33181	35.15501
20.29009	19.59084	18.99369	16.02562
30.92595	21.09761	61.46561	58.48309
930.37509	409.24462	1125.9604	935.12741
31.52357	11.60755	24.15671	25.88109
29.9773	26.40908	33.90055	46.86614
92.39674	51.2715	77.82032	79.90113
52.15468	55.61755	43.35086	47.65825
42.2656	33.67325	43.99782	40.3439
18.82276	20.48989	15.79679	12.44499
40.57246	16.77163	38.01611	39.06008
218.24644	253.18538	135.91395	104.77903
44.77783	52.48822	25.19397	17.68965
62.93027	57.58945	82.86679	65.47326
90.11018	92.22842	227.73904	173.34774
48.38585	57.68181	69.32852	58.99269
11.01901	5.44336	15.91739	17.51788
22.01757	20.29481	19.15887	25.11739
40.22423	27.51865	32.95422	34.42503
30.70753	20.86035	27.67471	32.03868
37.85536	19.63143	38.79615	32.42176
486.60417	767.03077	739.18281	945.0476
43.50417	34.69016	37.37266	36.69106
26.51961	21.45632	64.54948	69.32739
66.9953	40.07939	74.09542	55.73363
225.83008	260.17117	96.23443	62.46377
17.63457	32.43017	26.60003	26.39508

19.05389	14.67075	19.6812	31.45471
18.62206	12.97751	25.63903	26.14507
94.17443	173.58553	78.45304	61.63388
276.40906	278.76983	395.19092	343.82689
50.83293	55.21668	56.6599	52.02953
24.59924	35.26158	25.14322	20.53303
19.28112	13.40659	34.39717	33.62727
37.35925	26.19159	35.95492	46.75354
67.53046	60.12846	89.96007	90.3154
32.72932	19.33119	37.12999	56.35466
262.88418	200.93664	241.79521	257.45175
23.12573	19.8934	21.79289	14.05992
41.47068	40.07863	40.91529	45.49472
15.33705	9.07414	37.97741	41.5533
13.3545	6.35474	13.01627	13.65374
123.49782	78.42529	106.32112	130.50357
31.55521	33.23409	45.19163	19.57348
28.1638	40.76192	43.24463	48.71027
68.28996	98.50619	77.55361	57.09559
45.50113	61.5935	48.19053	42.54577
83.45188	102.11163	59.83554	70.32937
79.08892	46.92417	62.36814	73.06286
38.73292	48.70903	34.33579	16.66923
30.38308	24.47701	31.72011	31.21549
33.56626	28.36838	35.31706	30.04992
30.58173	14.42494	10.89003	12.66664
27.77261	32.80036	23.20535	17.68903
53.16869	43.64028	44.57709	50.31902
53.63259	80.0549	21.74211	24.26048
18.60513	7.5811	20.88762	19.34771
27.70179	16.35609	34.04334	38.83169
34.70023	35.99095	35.37966	32.02181
34.78371	32.51598	63.166	46.64193
157.27878	98.67094	203.67094	150.48838
41.83522	33.39064	33.73478	35.0409
24.42989	20.17481	29.22976	25.5831
34.7997	44.25635	47.07735	46.67409
81.2375	115.15853	66.20004	61.41095
64.08995	51.58493	78.31406	71.66806
27.21594	28.40584	32.98404	28.23742
51.9433	34.93763	34.25521	36.1799
33.30368	31.17552	29.66988	25.55378
79.02455	79.34511	104.08091	90.21365
30.83279	24.01641	24.95338	28.96866
53.92227	37.81478	49.59996	36.39365
23.67425	24.21802	31.23946	20.42215
16.85754	17.22551	30.86372	50.5004
21.91147	13.9036	28.92798	40.38039

639.64709	465.18885	239.01022	155.53647
42.45544	23.98781	50.22827	38.88547
355.7096	210.9541	286.77359	287.2506
17.33834	12.63444	28.15681	14.09348
37.3107	43.09068	39.92756	39.60488
35.66083	26.28833	19.51032	13.5444
23.17141	24.83415	33.42082	38.674
183.73267	162.56756	101.85647	80.4523
718.20394	520.88105	705.47089	1057.7737
21.97719	17.8595	20.9029	18.16854
30.52221	17.19393	35.87079	56.0238
85.62565	60.77412	65.80677	91.54443
33.92628	33.70573	44.40594	32.26802
103.80947	107.41194	89.1351	149.34
164.32566	148.59023	115.87457	116.87737
55.09219	29.88593	69.91587	123.02887
24.97855	12.53782	16.91377	32.23898
23.50579	13.45581	28.82093	24.52354
76.25174	99.33884	51.13156	45.71743
24.9553	38.20771	19.94896	22.52049
97.09995	29.40634	53.81303	47.95367
48.74038	61.47605	67.99791	61.59966
148.70606	147.41503	216.95627	159.81581
62.66702	82.94066	53.59846	43.1339
23.94644	14.84468	20.08474	20.69757
78.77902	100.83206	49.07399	66.05267
85.07494	140.08123	73.26141	61.97887
36.05526	23.88215	61.09872	46.15527
29.20403	15.53584	30.06727	47.791
70.85923	26.20955	52.34536	65.05685
43.55591	42.32927	54.89575	47.23405
486.43722	328.37356	754.12637	651.60476
28.08786	179.30147	504.72413	464.32927
18.78129	14.47143	15.20492	16.01219
53.0744	25.64467	54.28503	42.38485
33.20074	39.3285	31.66724	34.944
24.58755	12.3109	22.42739	41.04341
49.03156	49.68806	152.99177	122.4105
80.98473	27.30551	55.73088	41.70095
62.33038	96.12368	77.31761	69.38057
21.81298	12.06691	37.08534	39.30093
44.67248	31.06732	37.29623	35.39693
25.34118	25.87534	24.4385	16.42696
24.0214	17.98383	38.6483	28.15349
50.17538	30.38359	26.97164	39.9479
40.65616	33.47658	49.44632	58.38652
118.56776	63.71691	189.37711	187.67587
24.16301	22.56553	24.1997	31.612

38.04639	37.8068	36.94312	27.99869
24.26693	12.5667	35.42963	36.50061
33.68981	28.61282	27.41116	25.40613
73.01357	78.30118	58.97357	72.64454
51.06279	52.44629	40.50976	51.35651
21.01655	30.28175	22.75776	28.33012
31.93196	23.75621	34.90391	23.22999
52.78996	73.24597	70.9695	55.33805
29.03901	30.73322	30.73076	29.77568
34.34203	40.06498	28.0448	33.6981
69.09767	110.02721	84.98538	71.68078
26.23672	26.95417	125.64588	110.07844
38.46155	27.52522	60.82483	44.32192
65.52908	47.04848	35.16287	51.38418
36.14385	35.85727	33.58106	30.56587
37.91627	37.23759	35.8571	33.1501
100.32674	44.51483	78.75619	76.40606
22.55425	10.35985	21.87585	19.4018
293.81771	364.97447	388.98366	305.14223
34.18307	35.17128	34.20311	39.19149
9.68354	3.4825	8.00376	37.56276
24.44489	12.34151	31.36264	31.26953
27.63644	23.52588	42.2892	24.23282
51.71838	26.06031	32.01823	43.35491
25.45825	22.18116	40.11244	27.21306
36.66167	35.22086	40.47292	37.27368
26.07876	19.75162	32.85808	25.30639
146.71458	207.67564	138.0225	75.99167
55.89262	45.05686	49.38726	49.8925
72.3349	81.48202	121.92788	87.84612
89.41835	96.82914	110.20176	100.85301
22.99696	15.7652	19.63914	26.11612
96.8896	67.49081	87.30129	82.1244
21.45671	14.64763	38.41256	34.3459
30.51992	54.97687	33.50159	17.34144
66.18632	44.33327	68.00099	71.38769
55.48777	33.66645	62.90302	52.95478
89.82786	67.6971	120.1382	101.79784
37.33245	34.12335	53.89224	50.96882
192.80713	225.13097	152.44148	135.43994
23.71222	13.48265	31.25953	33.64264
19.08275	7.87485	22.57871	29.27514
101.01251	77.90452	105.08609	107.42644
62.30569	57.71514	47.72582	37.32297
34.3812	18.43585	16.12149	25.47502
32.15271	31.69362	43.39773	34.05653
17.19444	41.67621	22.27981	29.80506
29.15865	15.18789	52.78214	61.07662

34.7704	16.31182	15.93669	19.54296
25.93674	20.13779	29.01166	29.41456
41.24138	37.29762	55.40166	58.19497
328.1616	261.13887	426.39329	362.05868
27.73769	19.99531	24.83496	26.36998
155.07152	187.85642	149.90336	125.58419
31.18128	31.86059	38.51693	36.82409
26.01825	15.78861	17.02667	23.6945
111.71634	155.18747	115.18841	93.84277
37.18734	21.67691	29.01195	37.20107
66.02326	69.28666	61.63429	57.70692
77.55457	42.28459	26.45811	26.99368
44.19132	54.5408	32.8669	33.2848
21.3922	17.30005	21.55073	11.40303
120.40893	124.04508	125.03878	117.33702
69.86149	57.13022	68.07506	72.26866
22.75599	12.15214	23.85065	54.64916
40.92757	46.45804	46.09564	33.11043
31.72812	24.80445	30.73627	27.83953
19.30164	20.84063	39.00271	27.10387
68.01442	43.39315	68.6176	54.18517
28.46038	20.38961	23.7689	23.10868
49.37848	77.10692	45.01302	52.04718
27.48982	13.4874	35.45043	42.76949
38.03474	29.38916	57.68378	57.51032
60.97011	29.59827	55.41595	55.929
69.39918	32.9938	72.19886	83.72637
46.10595	31.14526	53.44578	45.66442
38.41554	28.39837	40.30526	41.00651
43.38181	25.95121	51.5571	53.63926
137.29724	80.83172	203.51964	160.89589
131.16146	116.89437	153.95495	188.788
40.00248	21.62753	35.80406	34.92728
37.75456	43.84645	48.0427	34.52204
426.51703	119.28053	232.94238	303.29643
39.0429	34.06507	39.43363	42.72391
29.04733	16.16746	27.33487	28.2806
35.98269	14.59658	47.64978	42.17366
48.15689	52.71635	52.88384	52.36308
2226.2575	3215.2545	2956	2926.5126
30.44729	19.06341	42.20325	42.00008
88.84263	43.67453	65.72258	82.10304
20.0562	20.23171	29.80777	18.00279
40.47897	21.4679	45.10786	45.8823
95.98728	89.70043	104.79939	98.87929
29.60206	27.45977	19.65035	15.5968
61.11807	33.38836	69.52243	48.08459
29.7775	17.02934	34.73957	42.14278

98.97668	56.40879	147.41694	126.74052
62.45	63.41644	69.7841	78.79389
22.85337	21.68459	30.67729	19.85699
61.81361	37.80822	164.28337	173.06037
42.75571	28.70285	53.4112	59.09907
25.61016	16.707	20.07609	22.71272
48.9021	27.84167	102.99511	82.15107
49.08641	45.22264	46.44189	50.62959
30.67897	22.18843	27.43678	35.04652
103.32044	66.81369	115.76779	98.81979
53.74621	38.51239	67.19737	68.94561
40.40792	21.78002	59.09875	45.66355
27.89462	18.29015	46.5621	40.84445
66.88134	75.27695	79.82493	72.53436
15.45313	11.16613	19.29902	23.57962
106.41264	152.49303	100.29967	105.4489
13.75812	16.31295	15.30443	17.77727
116.73662	99.37801	127.2724	106.34693
125.56749	71.73943	96.3031	97.36735
115.52298	126.7009	114.65869	106.61061
11.79094	12.5159	45.64175	29.62099
41.04717	29.73306	52.15919	48.56744
36.907	31.83026	41.20857	38.9103
44.29322	38.19602	21.93687	34.65024
41.02337	28.43029	22.32956	16.34108
60.04786	53.21819	67.22499	49.11886
128.89864	96.76805	93.43414	71.37896
35.32053	44.91351	49.9852	54.79829
104.085	153.45714	98.87511	85.22716
28.63239	32.88391	62.28017	32.99888
35.46951	21.82088	64.6896	52.12085
108.36744	57.06472	112.46712	107.53364
37.46951	17.18209	31.85349	34.98652
114.41405	93.82915	172.21257	215.06575
36.82325	31.52751	50.71643	31.11211
34.80125	36.52492	25.07995	16.8279
46.00766	40.72971	34.60108	33.49471
249.70178	251.48932	31.76352	60.51932
20.72516	12.10357	36.00283	22.7739
38.29369	25.33637	46.01619	41.27225
154.35171	212.39245	155.18614	122.97862
227.30011	116.39765	311.13722	202.58017
20.0976	24.27369	48.37623	30.80332
195.36441	152.6654	284.79384	167.8591
37.04188	27.44859	38.8728	27.51818
71.83683	39.89006	57.00338	65.16038
22.9687	17.07478	20.20624	22.33306
26.27287	21.30063	98.99866	84.17626

28.68108	21.14655	44.767	29.92429
36.51399	38.02775	25.25154	19.18644
29.44608	28.12648	34.91987	35.0957
55.05123	95.70855	146.40395	114.99262
37.25685	27.03226	41.64075	45.31764
19.41125	8.18043	13.16148	20.15664
324.17297	279.61039	434.28691	297.05161
42.11609	27.87722	36.03865	42.72593
196.74264	189.77569	344.81237	260.24534
139.21084	81.40594	124.04713	83.21428
38.69438	25.6295	34.19137	39.09431
352.48384	118.25777	266.81528	335.02343
26.30197	12.91416	33.96178	39.04344
161.64642	150.58501	112.00287	96.90862
88.9871	66.15489	109.20672	87.40322
38.31086	30.05405	47.11426	42.26544
24.1438	23.14978	41.03626	42.26088
32.1064	33.82059	41.1407	36.95011
83.94342	50.12809	160.44179	140.72615
9.55026	7.97334	75.68249	100.1751
56.71716	42.58388	59.81142	56.83068
32.32965	29.53809	32.30312	20.59123
41.70148	37.5803	42.48538	43.02546
27.48613	29.65456	21.59957	22.4138
47.20653	49.22063	33.87167	26.1678
61.8857	84.3634	50.59221	42.64679
239.22644	312.65233	249.90316	224.30028
71.33614	53.78196	162.35676	222.1638
20.35994	12.8445	24.12134	14.49649
298.18611	235.60695	310.22599	238.85065
40.45165	32.17363	39.17315	35.44199
56.5432	42.50409	47.98667	57.21266
25.50068	40.37299	24.79491	14.33683
33.73587	23.50898	33.55472	25.19606
49.02559	29.79815	73.07729	53.02193
22.98301	21.52326	25.79608	24.13437
44.75118	39.14341	45.57209	36.76743
41.1671	67.00815	34.20132	25.52083
51.28506	23.49283	13.42162	19.1905
35.26642	16.34735	35.389	42.96101
35.52718	46.95876	84.39566	82.45413
655.16044	315.44651	915.69741	976.2801
39.51175	37.38256	38.52921	36.16899
21.61492	19.87154	20.97819	19.21609
888.20586	961.90445	971.92963	769.51499
410.49015	368.28494	612.52223	459.19987
27.03481	29.39384	34.34057	24.06857
53.78993	74.72493	67.13001	64.72925

23.58097	25.15984	28.2889	28.31935
56.28019	70.63126	107.04901	127.89956
24.74607	14.81135	26.75155	31.97328
106.53641	61.49543	120.44782	131.52654
40.3064	26.9393	38.5472	39.64896
18.50509	18.38367	22.10109	21.01504
55.68945	53.44836	53.02231	42.20172
282.67882	225.49075	302.69599	251.49866
116.58527	130.34732	111.30445	54.67603
39.45199	13.75413	29.94649	39.89482
204.30673	216.30762	205.18619	155.13939
14.79674	6.04177	27.53047	22.13607
38.41612	25.12621	53.73508	36.91105
64.05581	52.71994	141.05309	80.28857
19.52817	6.2426	41.22991	41.23375
14.24841	10.3533	22.33536	23.20335
30.11628	18.94688	19.56745	16.75746
45.79252	24.73841	75.0417	83.70221
46.51168	42.66992	65.06956	81.88025
128.86758	112.99318	128.24218	150.73435
23.06466	19.97237	27.50117	22.29299
131.46206	107.93253	158.67959	137.71565
59.7009	58.78578	159.25751	108.47871
30.32362	18.12132	59.16549	65.17691
15.64463	23.30252	24.5285	19.86467
31.16611	22.49313	26.64398	36.49125
89.41438	52.8723	66.08814	54.79533
105.923	76.0934	201.24831	200.61435
23.37967	40.3059	98.56662	97.50529
32.98636	18.98234	36.93127	36.61713
70.6179	69.36472	138.50475	127.90138
23.58123	18.79719	26.74414	51.24124
120.50701	104.70513	201.8541	141.30228
21.77904	21.82455	32.60623	24.87906
10.04941	5.18623	10.61779	29.50032
40.70417	25.76668	42.17686	44.4235
67.92134	68.88706	57.84304	49.01205
51.6886	36.55513	48.20615	66.27148
110.23842	94.15281	99.43639	116.74464
118.58887	150.05452	73.93335	67.79147
97.30847	90.425	110.37712	65.56904
57.80616	48.11656	64.11725	72.05923
31.05261	13.83061	24.39103	35.36057
68.91818	64.77163	83.06923	100.31082
65.01263	23.85094	67.89848	68.744
57.16863	38.72439	62.53688	69.96852
78.62302	38.39854	81.15645	129.19716
38.71635	28.06465	37.29435	31.49923

132.94507	178.59231	129.0495	119.56913
129.66072	136.56567	101.87772	71.37784
26.98921	27.11538	21.49158	24.37296
25.22858	27.3279	37.49893	23.106
73.37376	41.21289	32.19354	48.28269
21.59057	23.41224	16.61016	28.24998
24.65377	17.53652	28.87098	56.18907
32.92067	41.09554	41.72882	39.02547
31.83953	16.28178	73.03789	51.38661
118.1423	102.68789	120.58241	112.26327
12.67562	5.30199	24.76213	32.55991
115.74568	151.07223	131.73903	135.423
375.67699	172.8876	468.61732	429.52332
65.85561	42.22789	85.14955	59.1479
63.50256	53.09365	58.28941	116.38343
27.87741	18.31326	46.71459	48.37137
45.38258	58.76749	50.66266	31.68619
74.01659	115.61523	86.30634	86.9657
37.89711	18.58192	32.04672	30.14757
41.36159	12.15621	60.68898	51.50785
46.97531	36.63041	54.34179	45.84897
57.51237	53.12725	49.13389	42.88254
281.02796	102.05373	248.57932	344.65469
32.64115	40.11232	54.84983	29.33869
40.71102	19.67666	64.51789	48.49902
41.75855	35.05834	37.59392	62.83581
23.10258	16.58623	20.7401	34.98792
430.04123	354.19055	304.93111	283.27078
27.37729	22.21384	33.28985	28.08174
46.8831	26.51677	117.85099	76.09379
41.58165	33.47634	48.34873	32.99761
27.583	12.58842	32.17783	41.47119
59.2035	35.77629	96.62204	97.58274
42.92491	34.16839	44.40168	27.66465
4.29273	4.18967	15.42678	26.77457
117.05294	110.32189	121.2817	149.99734
56.60481	41.1256	60.88577	48.30679
49.20821	30.56802	35.0746	34.98645
42.59657	11.36666	37.1537	48.20256
59.50759	38.15869	119.80001	107.34546
50.98544	82.73209	69.94336	45.54476
27.34379	13.4455	41.39997	68.65178
43.82657	21.61483	25.83965	36.49704
31.77926	10.59047	29.76451	37.9651
51.53346	48.57731	55.2726	49.75773
23.60551	14.68615	26.11724	34.69952
34.95635	38.0927	36.81897	34.03339
27.12759	27.14448	43.58376	36.54991

41.00719	22.43693	50.27758	49.39721
25.57203	7.36635	42.55154	26.7128
72.96872	52.22766	91.44922	79.61848
35.89644	30.9239	53.19862	42.10098
19.45138	13.20354	25.24063	32.70795
2.76159	1.4101	1.65219	1.33619
51.60616	61.4784	57.75531	47.74496
37.43818	50.07436	48.66236	49.16753
45.64018	44.80301	40.25972	58.71002
534.23705	330.88238	641.5196	493.79404
19.19185	17.45243	10.0556	15.59491
61.32755	28.33653	24.02855	39.15387
18.24166	11.47908	22.04374	30.87294
24.87922	17.24023	23.32339	26.56331
135.777	297.12266	115.23029	127.31099
88.40438	71.54738	89.58525	108.12204
164.92375	139.92635	159.39928	129.79626
75.57883	58.22399	110.83409	103.0052
52.68939	50.93532	49.71707	53.60705
70.19097	125.07285	96.97149	86.13357
412.65916	328.98035	659.19357	471.31011
37.76681	53.48012	35.70902	43.13464
45.01522	17.32189	45.6151	50.1379
23.59643	16.87528	27.81423	34.77725
28.15166	35.7416	29.47534	34.30909
299.6398	161.35724	173.53129	223.58202
81.37739	55.36262	71.79594	66.95452
37.23884	50.28378	51.24938	48.07254
111.84433	56.1358	45.97451	67.41577
105.8235	63.40267	90.97039	89.74642
21.67487	16.71932	14.29161	17.27872
43.33959	27.70119	83.16253	62.18942
18.93178	12.03914	39.26198	44.53937
184.84644	183.03703	131.43239	85.60393
50.07312	42.07107	67.10451	85.11395
46.27645	50.7321	56.49943	59.72826
25.77802	15.90387	34.75293	24.72198
38.80306	14.74115	41.0066	44.86101
27.9656	16.39025	36.04947	40.30981
29.33945	47.87235	51.71166	60.02679
15.43209	11.12704	15.55915	18.37178
172.50297	272.71148	372.37236	253.131
36.75185	13.76	27.62221	35.0486
97.16755	99.54322	170.95997	141.69833
28.33998	24.05451	31.40539	30.15629
111.76444	105.53942	78.74725	80.03311
28.31231	45.1429	28.6355	38.87836
38.50331	27.24058	20.85077	17.78629

40.29745	31.50531	36.16154	37.4003
35.36114	22.50885	27.24296	24.98519
26.14336	13.85926	30.41167	55.71127
32.43553	16.33129	21.96984	24.12263
17.60222	6.96702	32.41961	46.80312
61.40602	77.08054	45.66457	43.45673
773.49026	489.75407	1672.9659	1659.5466
60.54304	66.47212	66.94905	60.39072
38.36207	46.66124	35.72559	31.23244
104.31913	70.36109	113.00595	100.50004
43.08503	40.58119	51.88584	61.03686
30.99985	21.40757	49.00281	42.66593
29.21939	20.59538	12.26708	15.67269
36.72525	16.7113	38.15517	46.09176
53.38514	63.82936	60.30652	53.86903
29.74373	19.44324	56.5005	75.27262
30.04543	21.2536	33.37245	29.18035
31.67485	23.13562	72.15757	73.12652
27.27902	19.2568	21.0794	17.79728
105.61435	119.91078	123.81476	83.54049
233.52172	223.97408	257.99612	225.5257
30.06852	13.96563	35.1947	45.27585
125.85833	103.51977	153.94985	112.2515
32.01229	30.92018	45.38883	34.51751
44.90439	56.09196	50.75151	35.35821
23.38598	9.60121	18.61016	28.00561
71.72039	51.34767	61.25749	50.1803
298.71761	220.57644	392.98028	271.42773
138.16649	63.31379	78.81369	67.51269
56.44322	68.0884	103.46636	63.25329
70.50127	61.65193	63.55581	60.89598
40.91985	41.83699	28.6533	20.31786
88.98797	58.47785	69.43699	54.35718
22.39971	13.6351	17.24157	24.41102
37.53339	19.55662	33.80547	39.45088
66.38043	78.80127	188.47506	118.71247
24.13196	26.02764	26.8624	28.82442
55.73448	74.24527	100.84917	85.7329
290.27124	256.6093	40.29933	74.8944
49.20389	28.20564	52.85609	63.06287
80.09065	52.00736	36.43091	42.88206
31.86638	21.12599	43.00596	42.27544
77.03363	68.46215	88.34122	71.60294
26.17546	14.01866	8.94036	17.32577
23.38842	33.65889	39.35918	33.66846
35.25188	35.39883	63.34547	64.46581
187.34039	162.34526	120.34279	132.29557
26.57104	20.52107	24.14291	24.68943

21.74029	15.85028	24.11257	20.70061
35.53621	30.83547	37.23322	32.54165
484.60589	450.06544	449.6893	378.70372
40.01581	34.78874	53.33752	56.29889
93.47323	84.72086	54.61868	53.80769
41.67327	19.27555	69.08106	58.1772
155.53037	137.53785	89.70306	89.0282
84.77817	63.50688	66.11725	69.24105
31.95422	36.25437	16.60043	18.91225
70.16014	53.15192	71.81102	68.21267
34.62014	20.61032	33.24899	41.90527
65.42305	50.3636	97.72609	93.19489
33.98622	37.27949	31.50933	34.2534
214.16286	130.0684	154.90484	108.71123
27.98311	21.17015	43.4466	41.19753
83.04747	81.24494	116.24477	124.811
18.66712	14.92837	20.30637	12.82338
66.235	87.48612	58.02226	55.74285
28.72426	23.91455	16.92927	35.2456
27.39037	8.6681	26.28805	40.88093
49.05228	18.65462	64.99417	60.38929
48.53155	49.93211	45.99107	33.88597
116.0086	114.85012	124.0085	118.79972
50.26569	32.90601	58.0998	47.43425
27.89396	27.65995	23.83455	25.35448
183.5221	97.41566	273.36499	271.30517
25.141	19.84451	29.23018	29.75261
27.43952	31.06056	39.72163	50.54118
487.22528	431.7074	802.71455	594.11692
25.33732	28.25867	53.72883	44.4238
11.144	8.80938	16.23023	12.85095
48.03136	27.47497	33.20907	39.58382
52.91279	43.72353	32.038	34.52926
23.23416	20.0585	22.64919	37.39694
44.81002	24.06642	151.00888	112.26584
56.57976	84.13106	80.11705	67.19672
58.18243	32.70829	64.17714	117.31726
158.24797	113.81549	296.22116	201.74345
394.12078	172.58681	445.28923	440.64845
43.66578	31.33868	47.76505	33.00759
35.55438	27.74776	70.77479	44.10385
25.29581	49.765	21.85392	14.81806
50.77717	32.89409	51.81493	61.87131
71.5763	35.68024	124.05307	109.01001
119.51123	55.11117	95.90196	117.28135
17.34053	10.06319	18.3649	30.915
48.71783	29.94561	23.32623	37.32844
140.37683	129.23201	269.65667	195.62172

242.87601	163.24978	252.29962	349.49559
69.17633	36.03658	62.48845	89.18571
26.72617	19.65128	30.64194	34.55273
37.98092	42.80344	43.68299	33.14238
52.7719	60.10483	41.38364	40.36114
18.63921	10.12808	18.88457	22.58902
142.68795	68.8223	48.53745	39.40839
25.0688	24.51308	33.02873	35.32226
40.37333	15.65247	59.76112	76.64018
44.43474	20.5744	33.69285	38.34343
46.79973	34.27157	53.52272	59.91617
73.18325	83.23204	71.05563	65.28984
35.94629	22.0075	47.10444	41.74069
28.26873	34.56941	21.21337	17.05247
72.70786	70.46324	53.59526	51.87845
88.59564	94.58165	106.35125	157.14401
25.79897	24.26391	25.79502	26.5122
44.04257	36.91009	68.40146	48.08343
52.92026	38.70334	40.51139	45.3454
31.83052	30.44892	27.11735	25.32111
46.76418	16.73632	81.00995	60.46004
16.11666	14.94534	24.77849	16.41085
37.83943	43.07132	45.32413	48.75373
198.51484	105.19966	258.49522	277.41559
119.082	91.86992	153.80454	153.64623
70.10473	34.90967	80.87198	79.62802
54.18363	42.42249	74.19459	85.74902
33.98091	36.94228	47.85021	35.19969
17.01696	11.11044	42.59914	37.28082
91.74077	65.55908	64.64223	88.09004
23.5924	24.49696	27.02287	34.36901
27.94592	16.87528	32.48053	28.92443
29.75032	28.46032	32.78084	41.15457
33.78711	20.95555	32.21261	34.69502
59.73751	24.68944	58.70832	66.6437
59.7136	34.25761	88.62235	138.7218
326.98339	264.90762	335.524	338.07879
95.42877	55.70824	114.98873	80.61334
1382.6733	2307.9711	722.68837	434.656
389.45505	263.82815	357.35104	351.09442
136.70785	171.50947	131.46071	114.99297
65.91307	120.49328	81.27557	67.97867
270.66476	197.47149	304.17291	211.85641
52.96696	31.04172	65.2771	84.89364
148.81983	134.9143	287.27526	233.07204
20.6586	10.29238	19.9369	35.84499
58.29303	41.81058	72.78518	68.98388
23.80606	25.80371	22.5477	23.91215

24.79102	17.60779	35.351	41.1785
34.48161	31.79767	26.91055	23.72909
17.76617	23.00262	25.48351	17.09481
253.77977	139.44181	204.28251	435.85198
64.22041	55.49157	145.58446	179.10926
74.50679	53.98204	100.18544	104.36707
952.25344	798.79456	1841.7693	1178.8916
19.09982	8.65758	26.4315	18.55349
30.52765	12.20086	47.21183	60.52766
2258.6769	1025.0272	2228.4143	1539
71.90709	86.79556	89.70149	88.94339
514.76286	359.92209	722.81701	568.40333
117.35405	43.95732	51.30082	76.53873
40.38059	26.49838	50.54232	48.80318
57.55283	66.91875	42.59497	25.47935
71.41662	76.72685	24.30298	36.36319
20.35385	13.64188	34.83517	35.05824
65.36303	48.20989	49.02513	46.99535
27.72036	12.01273	50.5103	78.97976
132.47555	93.42044	306.70998	212.3184
44.2755	24.63104	46.79757	37.25115
45.56312	33.41402	41.98788	42.41651
28.73548	23.4144	25.66339	14.38867
512.22382	522.15882	729.82479	601.3197
52.8945	24.8726	54.82764	50.09116
148.56604	111.20697	175.98595	148.49122
529.2488	596.99384	672.26736	527.22066
21.15698	19.12588	28.42329	24.05898
35.35747	52.34402	25.58275	24.11968
44.3608	25.64855	53.72515	44.07025
56.60261	42.89677	79.72078	93.21543
67.38607	45.36331	60.31164	63.09356
13.53895	6.20663	24.92984	35.73695
19.51711	21.80452	26.16048	22.73986
89.94991	199.32941	364.82656	264.46511
111.23399	111.63797	104.31052	99.57925
2797.6628	4825.7402	3016.6007	2165.4669
77.29147	44.4398	59.54403	61.37262
107.16541	118.45533	79.06504	34.60336
20.20063	7.86646	19.59293	33.3176
90.43031	52.69259	154.23617	150.05709
32.8394	30.47218	40.54472	39.46899
62.3545	94.20194	71.38043	59.46442
50.58659	28.70642	34.74411	32.15123
63.68019	66.03595	51.88294	45.29785
75.79942	58.36632	56.67971	42.11654
66.16832	58.38972	89.45198	101.35402
26.99601	39.66432	28.62908	15.40643

85.86259	93.70184	79.17566	72.72554
47.35006	59.85772	43.2652	22.43121
26.56297	29.26598	65.31344	57.10178
19.97839	12.65882	23.85116	20.85586
70.02972	39.62214	102.70038	95.98289
79.73057	133.51589	64.08161	52.7476
68.62125	52.64573	75.57261	68.5524
31.37185	38.67002	36.46201	29.66757
22.34958	20.14194	22.6046	24.54405
469.60805	354.55016	380.76149	362.94179
29.87287	24.68515	35.51719	29.70485
391.364	477.84331	506.48693	402.14657
39.6116	19.67683	63.23635	88.05712
105.37258	80.66491	122.37804	109.83881
44.97841	75.82927	72.59399	42.44743
59.75516	61.94289	74.40396	41.07512
43.19762	28.24574	49.00638	51.80781
31.55631	24.12964	37.16371	33.06125
13.74125	8.24529	24.00541	28.95446
48.73585	50.20886	102.33523	96.51407
133.87183	87.56597	215.26038	191.47066
55.3286	74.34479	49.72368	43.41558
52.76732	46.23377	40.83855	54.21494
39.72811	35.69837	44.25438	42.69181
22.31881	11.20521	13.55021	15.38551
56.44987	54.56896	86.24383	72.11638
22.25735	24.22909	27.26597	28.80534
39.39252	24.57881	33.89805	34.80432
71.0445	60.16837	54.13716	46.24323
29.53531	19.21821	40.75963	36.01795
40.66639	29.80089	50.69425	54.16819
38.38942	20.64271	41.72925	53.89114
203.72983	109.13347	451.25317	434.03958
455.8211	508.46552	607.88781	432.59472
52.64656	26.726	61.22347	108.10026
60.99811	87.68616	65.92779	68.35954
54.13212	39.78235	85.11293	86.29113
53.62745	30.76745	68.54095	76.87737
64.85036	41.23209	58.99157	32.4899
109.20794	84.90417	121.46586	175.83848
37.3806	31.83721	31.31751	25.41099
63.03015	54.06047	83.68963	73.51128
925.78078	984.99062	1420.9253	824.26172
28.65001	38.44453	37.02071	19.95494
32.25779	34.0304	40.54805	40.40316
104.8424	127.73627	151.99893	105.24648
16.51466	13.51836	73.39514	98.56183
91.01557	73.23258	101.17118	82.55839

58.57353	43.96244	47.00712	52.16974
42.4397	36.93607	26.93769	33.77898
14.487	15.45658	57.19734	41.76661
62.40206	43.13372	143.03011	195.11002
64.68212	51.72436	62.08599	86.59435
45.35945	71.77974	25.57437	50.58742
99.28607	98.68738	50.39204	37.88533
36.0229	12.20686	35.62534	48.97327
62.2462	27.48585	36.5503	51.52383
38.25679	23.25815	29.63949	35.4723
105.16163	127.80677	75.65812	69.85425
142.65651	259.93649	114.35701	95.2805
33.69299	25.43951	31.26327	30.25355
85.08134	61.35234	77.79387	69.16133
285.03189	246.8481	268.4618	277.47496
172.01512	132.1343	176.4752	215.84384
91.65155	114.15144	74.88867	74.32084
72.35629	67.10915	85.88017	61.83846
25.92181	29.35525	27.24175	22.41448
279.04154	215.18067	689.01711	468.49943
297.22003	167.82199	497.10351	496.18675
46.6837	30.98287	45.96106	35.51397
20.60168	22.56175	17.90011	16.44932
34.29974	34.71791	25.1325	24.32048
60.12164	35.92751	76.56007	98.76662
39.24859	33.83295	41.1966	35.78596
43.9503	39.10895	45.74853	49.56596
90.82107	56.52849	53.60707	34.74053
36.04185	36.9052	40.39688	28.68696
32.3824	19.79291	37.51176	30.17179
113.88128	46.02552	139.73126	140.63804
72.97898	85.80864	46.50308	45.36652
54.69338	27.74583	40.61529	71.57975
36.00132	35.74405	44.55574	30.47489
111.1919	38.92236	84.42712	78.27274
45.28274	42.28999	60.76677	65.7845
28.39408	28.5548	30.90739	17.66862
45.31653	60.23765	65.21131	47.98469
45.35339	56.19567	34.94457	32.96669
10.33804	3.99707	21.89973	40.26645
121.03095	100.0967	102.50486	84.41446
59.97222	45.64867	63.86171	62.85892
27.18121	22.31009	24.80711	33.57223
355.83771	450.01907	523.66996	399.58014
50.477	55.24673	61.23998	68.94651
48.03344	27.61643	53.85408	48.73268
126.13106	93.00936	192.44729	164.96187
44.97821	76.05062	46.96145	42.3892

36.61262	11.41052	20.38036	20.56998
119.84143	174.78347	167.56584	107.88644
41.0508	28.4502	37.87018	45.45071
17.92772	9.82856	29.35013	38.22802
27.81768	18.83024	20.61965	23.45335
59.76327	59.48218	86.19668	66.85716
261.98247	148.63249	379.42746	210.40851
62.77292	77.81302	31.44112	31.08237
38.4495	52.16746	31.14436	31.52464
27.95325	22.04025	26.48625	25.12883
20.84995	30.66372	18.09597	19.95474
41.22852	61.19927	52.95425	42.6478
55.19281	29.85678	63.7212	67.61472
408.99242	377.17461	1146.0783	1147.5318
48.39805	27.52354	44.3428	53.18493
58.7595	47.78687	78.95357	73.48277
41.74302	51.7935	45.92275	45.03532
22.51172	13.63663	21.56031	25.21785
2804.7147	1622.876	3087.2967	2560.4627
24.4835	16.18434	30.30331	32.04499
136.04389	78.7186	153.31713	157.72989
34.82181	68.89845	30.95077	23.38618
108.42564	105.54797	88.04763	107.82572
56.00276	59.77231	76.61362	70.0483
32.41601	43.26409	39.8079	31.29159
63.06357	38.03219	31.64621	41.81141
51.35601	30.70967	29.41637	50.5311
32.8715	32.96579	31.30089	80.32433
28.62489	33.42578	27.83332	26.3069
91.42123	78.34854	110.38686	80.799
25.76587	35.47968	28.27248	20.63524
43.77034	29.96824	43.8354	40.33919
85.86599	67.84646	37.88731	27.68693
35.04048	31.89893	36.09333	39.3762
54.93639	34.07902	51.23226	69.55169
31.71597	24.96868	44.18952	41.1371
14.29299	11.74008	21.87069	22.82933
19.67751	10.34891	20.27591	31.44945
54.52193	53.54422	45.36086	25.68477
38.0353	23.66348	31.23999	47.59518
116.81458	47.65256	136.14157	91.19547
44.71783	24.86755	42.98441	32.45286
31.3742	22.87797	51.45753	35.27689
25.15097	15.26427	24.21026	22.00116
119.72992	146.88353	104.74875	78.70234
118.39062	135.92635	118.46601	97.21144
42.66415	43.43643	43.08877	49.56463
566.83024	310.16735	293.30766	321.86606

247.10617	244.24384	195.33003	205.77762
1137.5087	1298.9755	1122.8654	1348.7684
114.21498	133.26242	110.75775	93.54055
16.76316	19.21318	22.01077	13.16038
207.18608	201.07327	212.04443	219.92809
12.92091	10.7438	30.1087	24.37951
20.39862	17.00795	26.82096	24.58743
21.5562	8.28975	13.72059	26.23474
21.19502	14.57791	21.21918	18.80379
54.43931	74.7012	51.28194	43.42742
19.5325	14.94855	41.52208	42.05818
22.60747	14.62795	28.50041	24.18107
48.96731	50.00613	37.76507	27.62318
386.80627	303.59136	271.88241	202.56248
58.90981	96.12911	45.20493	31.46705
55.51009	32.62764	73.17317	68.77919
43.15915	30.33051	29.4879	32.20756
46.50568	35.88137	78.55025	51.09503
85.60938	54.45352	89.8381	64.73849
54.58985	45.80632	63.35432	33.77156
41.22961	39.62605	41.77094	46.29584
82.70865	39.81698	98.80358	83.65796
47.62443	44.83562	44.15629	39.81396
35.85505	44.17429	23.84083	26.45949
15.32413	8.99159	28.03606	29.87263
38.34843	34.01657	48.99	44.53571
42.78783	20.3152	29.65577	35.76598
36.4719	32.52781	60.47314	66.75733
1764.2792	1172.469	1773.8103	1419.2745
40.93032	37.57112	33.34958	35.42727
123.20491	180.4196	108.62716	87.5136
43.396	33.17699	57.74039	58.70087
81.79476	65.65277	79.37743	93.08265
57.31202	48.40444	67.01825	69.75165
41.82247	24.46899	52.53707	63.65844
20.64202	19.28923	33.47908	31.19454
17.65069	8.6314	34.11026	32.72677
73.94838	91.74386	93.35543	44.44465
178.09147	197.44028	210.17884	192.70149
29.70935	21.56668	21.71788	18.20469
17.2421	9.97564	26.56825	23.65658
22.30373	10.93913	9.4033	25.74794
94.12415	82.03922	93.61486	80.96996
33.08503	61.55953	48.78682	32.01286
46.25081	36.9745	43.12794	47.14556
29.14684	16.96581	20.17126	23.60532
163.20949	225.9268	303.06116	392.6705
45.28557	36.74152	56.78651	48.56866

92.42551	33.05907	106.90419	149.49008
30.48524	48.72422	37.63932	25.83751
25.45205	28.23566	32.49889	45.68095
28.98538	42.77278	34.50204	28.09236
20.24251	4.65593	31.82516	48.91054
68.74314	50.63715	57.08782	53.69303
271.02897	161.14319	284.8246	401.33813
71.13591	54.25184	48.60763	41.69227
170.10038	90.9057	261.6571	245.06437
16.61346	10.68367	45.00354	51.82087
27.92404	30.83719	39.45115	25.96251
54.9323	36.04535	46.46582	115.27646
25.14858	14.46231	22.63516	43.32175
20.83081	16.10169	30.91439	27.43856
290.10564	334.31628	324.35713	264.1344
101.51525	89.36741	122.21369	185.96149
147.4797	197.84301	176.69821	141.49363
29.43112	18.0238	35.82902	26.00516
28.87111	21.79652	25.67749	32.85441
31.15449	35.14969	67.48441	39.30457
42.11637	28.90143	39.66264	41.7779
41.00215	22.02406	23.01245	36.75613
52.29667	43.67479	67.45533	63.27459
136.48966	130.25139	197.36008	186.56114
39.41127	26.16216	35.35413	47.24928
31.08645	39.53173	32.06198	30.17218
17.38014	8.73704	20.24501	17.14748
30.24176	16.41289	32.34572	24.7165
34.16159	20.31864	30.77165	31.89164
20.08965	27.78215	35.37456	49.16871
29.9867	62.36709	32.20215	32.99163
51.9893	20.49189	57.57045	66.59073
19.80061	8.29721	22.23219	22.26083
46.7712	63.81796	62.87255	42.44956
201.86479	175.81534	236.14426	282.64511
43.38573	45.59781	65.00161	38.79358
13.66988	11.75368	25.88496	19.4723
34.99341	16.94944	51.40612	63.37578
40.94673	19.42399	59.77531	60.26119
33.92335	31.74235	31.41172	26.22208
25.15478	11.85347	17.99969	34.57798
72.89129	88.18847	90.7048	61.5776
20.96222	12.63542	56.85724	53.80172
36.65896	54.67306	58.92164	42.45385
57.26158	82.43367	62.15164	47.86149
100.78141	142.07222	86.73809	82.86967
26.97742	16.06739	15.32098	17.91234
354.41663	257.26265	500.42141	463.02718

33.27062	19.84676	38.30941	38.95715
25.00026	23.43585	29.15081	10.61598
15.15637	22.59551	28.88708	20.97018
52.12035	70.74552	49.06923	45.12852
25.26617	25.76697	31.29601	34.91208
144.71227	111.4193	114.48752	87.82189
84.86086	70.18118	95.8337	104.65935
51.75011	58.50759	34.20233	32.50778
55.63697	39.79644	31.71779	62.55821
60.33744	49.4749	75.67759	71.10809
34.64434	24.56906	33.47218	34.83955
42.9663	32.00844	37.60959	28.94626
40.49684	20.28875	64.69474	62.30835
27.58673	15.06833	25.58409	28.74875
28.86953	31.07407	35.69029	34.47195
39.02786	21.45732	55.25187	50.39626
93.61553	39.95794	63.09388	95.31107
113.88261	68.5414	141.24135	96.2181
33.22039	32.21539	40.3041	28.85041
31.91994	28.96683	24.13676	17.67735
21.33734	10.90811	21.3916	23.46209
34.33265	19.93315	28.49442	46.91281
43.42853	22.25418	38.20092	47.77288
254.71848	402.18687	315.63174	233.78554
255.04059	247.30085	168.9664	232.7906
49.25038	45.80567	50.54937	78.09138
20.91408	24.29621	28.52628	44.57629
182.58765	284.52993	163.86992	171.84102
262.71932	303.0465	305.85913	314.1063
30.75574	28.16683	34.53213	26.74276
24.30641	18.7028	37.95282	35.33499
438.82348	527.64138	349.10083	301.47943
106.73388	72.62758	192.02965	173.61736
27.27797	26.19778	41.03334	48.60112
28.22412	37.33401	29.53341	40.53163
56.93112	58.68154	72.27279	53.8356
158.47432	59.65747	22.85493	23.23212
29.04668	19.93523	69.52781	42.03023
37.48337	61.89314	44.02457	30.6735
22.815	20.4774	18.05838	24.64642
13.15191	5.7198	21.10773	20.05967
49.26499	51.038	41.25151	36.03146
22.69756	12.03139	29.27615	24.09359
23.27881	25.92309	25.10268	28.97154
41.04789	43.09055	35.57843	28.51581
31.02741	29.26877	29.81116	25.28716
38.80139	40.41457	51.17269	42.18538
36.84789	48.12654	29.26803	24.8613

24.82709	19.89258	40.59518	36.02663
58.53943	47.94354	138.0518	124.71963
26.57961	17.15866	30.82151	35.56627
81.02728	61.64131	136.76841	153.05802
33.15628	35.4343	29.08626	26.60893
49.45208	32.17643	70.77479	50.40739
35.06408	29.64929	35.12238	34.11153
78.06107	50.62782	99.12358	106.4995
33.5932	19.08775	50.34059	61.02683
40.64853	63.05196	38.53639	36.60437
33.93133	16.8348	36.77134	41.02041
22.12297	33.73427	53.53257	49.46998
22.56059	19.1623	37.36495	30.32155
65.79223	22.23633	28.17342	35.62186
106.75089	66.06627	104.1956	72.42498
106.05534	76.5008	137.32786	115.74533
9.35741	12.36013	16.86208	17.99633
1013.85	1065.7458	1012.4278	644.82509
29.13888	29.43883	28.91765	21.16571
35.52792	16.25858	40.29362	34.84892
25.08928	23.42781	36.91659	24.9778
50.73612	56.10511	193.39564	145.99571
19.51697	17.62355	26.02152	29.81758
20.10519	13.8466	25.66114	19.27119
355.68354	163.34189	125.68111	118.98569
34.59168	24.45713	36.61198	35.72965
42.31309	49.40558	44.98472	66.19387
350.49537	236.49492	396.19588	361.75108
42.92934	41.91476	58.82477	47.09549
44.71681	26.5333	52.70226	46.17459
73.06402	95.13521	40.92555	37.11323
46.46621	13.11668	43.99028	52.94115
49.47348	26.02249	54.95427	58.06808
30.43857	20.24794	27.84857	27.77066
149.44608	97.72606	192.75444	222.77637
20.65309	8.97693	22.2733	21.96414
59.05929	47.46431	35.58838	32.97659
18.64238	17.74613	21.23244	20.00316
74.94917	76.9355	67.09434	61.17476
25.88707	34.17575	32.17027	33.56106
21.28045	13.98392	36.13001	28.1818
15.78045	11.69731	26.90657	18.25829
46.08583	47.24791	66.2502	61.1166
163.79398	80.24866	172.64305	146.63786
14.52435	18.85095	20.69494	27.24746
86.66294	47.40066	111.15442	91.96307
45.22666	51.97639	58.74694	45.71226
5934.7026	8161.0274	4664.7549	3764.3354

46.76365	46.27009	45.2651	42.81515
36.15829	25.40172	29.66481	18.9359
35.96214	28.78494	52.20615	64.8629
24.30362	14.43052	43.20339	33.19319
27.85256	22.6093	37.15249	16.89537
71.00321	50.76526	71.52127	63.75803
23.74429	20.39546	21.556	19.65962
16.7969	13.45105	27.34804	18.26588
26.52829	29.83618	15.5022	15.4558
23.23981	11.74189	20.8958	21.10557
35.11852	26.06854	43.94988	41.27643
89.10141	86.67893	82.96446	80.75938
42.64363	40.26322	32.05819	37.35898
19.97786	5.94701	28.34279	23.73769
141.24548	102.79185	107.30722	137.93979
50.87511	22.50246	21.3269	65.12859
53.58672	73.40012	59.53021	36.18823
36.81906	56.30044	29.21946	19.06459
23.31621	26.07381	26.45822	17.56886
34.60385	30.96195	25.66847	27.69297
122.37666	69.60726	81.27746	89.12965
57.52252	59.36235	61.02092	49.63559
47.50865	47.16242	6.27212	14.87277
129.02637	76.06547	155.44871	125.03769
37.14295	35.29484	78.3479	90.86677
30.28216	9.70161	49.01432	39.61662
40.93085	21.21121	43.11463	44.73421
28.6549	25.76787	28.43344	24.13107
43.06639	48.47545	68.18718	64.32975
64.29265	42.64117	60.35232	49.70875
19.56487	23.04623	25.23405	21.98069
29.28252	23.81159	23.00103	26.64204
24.24479	23.477	35.29456	28.10723
43.19859	55.39818	33.40865	21.85682
877.54302	781.05528	1154.1415	807.52183
79.17666	45.1103	118.45012	194.5139
233.63547	265.87795	353.46766	211.19663
17.41825	14.88027	22.08638	13.95209
631.39962	649.28881	845.48661	625.20651
28.71363	21.46512	36.75682	26.36437
31.4747	16.53788	16.59303	99.08674
22.14643	21.89183	20.62535	13.9695
83.2371	107.40465	75.38456	50.37495
24.9068	27.35257	24.24375	25.93862
18.23987	7.1153	21.53605	28.09706
92.47525	44.39965	62.05499	83.37466
76.29539	29.1618	73.5896	99.25343
21.89229	13.88485	22.59185	31.49889

28.70877	18.91848	35.08465	33.4973
29.8056	27.76072	44.29657	40.14765
35.63438	25.65794	54.16404	49.36137
27.22744	20.2426	31.26508	28.9371
59.21999	31.76524	83.79513	73.13413
15.60734	7.14977	27.79035	16.66651
24.47823	16.08013	15.96664	22.78871
31.52467	21.64008	34.30754	32.88642
24.93626	16.06628	27.83612	26.64225
16.72857	11.93	12.13618	17.1385
34.25998	31.77796	43.04184	32.99348
31.52114	35.10986	46.23382	35.59337
22.1898	18.99071	16.97904	21.19505
14.15812	9.94179	27.92136	16.30194
55.30176	55.5193	50.98216	61.74538
131.11776	184.5922	166.71013	146.81016
101.12783	70.54231	109.47969	87.08036
43.38187	36.7212	32.87758	37.62609
260.20272	192.13857	241.31249	329.66887
20.63056	22.61055	25.51711	38.76418
56.86029	94.62072	50.23246	45.04815
40.50148	42.33123	36.11449	32.36583
363.79885	251.04601	541.14411	312.92379
58.48776	44.76158	61.23215	93.22991
38.93605	25.52811	40.68193	38.69374
26.49586	17.82572	32.04741	36.05316
53.74433	32.12844	56.36482	87.99985
47.16166	62.32867	72.82778	68.67525
54.14203	45.15924	63.22618	52.13784
28.52184	25.52855	36.21057	31.98769
30.65697	24.01659	22.182	22.42835
31.00793	43.88868	19.38316	18.37752
35.69842	23.49198	22.35339	28.14059
33.65558	22.27833	23.52902	30.11377
21.60084	11.81151	20.24293	24.39485
60.56002	62.4055	59.47122	45.56233
35.98096	13.54323	33.78034	47.38913
48.28615	46.45561	55.2546	38.38624
57.92831	61.16255	74.90554	58.66609
48.04976	89.27262	71.71128	79.50794
16.53562	14.3687	16.2352	17.8469
28.40256	24.02894	37.0233	30.11323
32.64244	51.36455	42.37981	32.89581
147.35516	212.35117	165.34326	177.47426
31.61505	27.84912	35.24519	31.46236
49.87279	53.6511	51.32177	74.22043
407.02292	363.853	532.80614	346.96235
33.27401	43.35737	35.37827	30.85751

32.75266	17.07799	66.99474	62.35883
24.9566	22.23144	25.44955	34.3056
183.44321	179.41686	109.55144	97.67473
24.77998	15.16775	32.55443	37.17464
42.27934	40.02105	39.748	40.86497
70.54598	83.7742	118.77164	90.31952
30.08444	17.71104	41.91195	45.80883
47.23342	50.66761	51.46137	42.00847
163.32521	137.90701	248.97545	160.35192
26.34324	15.26004	58.61881	30.1837
47.0822	38.03389	65.39024	61.02611
19.19627	19.03773	23.12553	31.9744
131.20053	74.10161	135.07898	119.24321
95.10277	146.72173	89.46401	64.52559
1263.2272	700.73326	1255.902	958.69692
30.59911	51.9778	40.25129	42.41514
48.83777	58.6184	41.74296	36.41586
64.35143	46.2375	61.87499	60.38277
174.84	138.98354	130.30398	103.58023
48.80313	27.63237	54.98308	55.71656
29.63927	25.24478	32.60592	43.57052
48.82321	54.46927	76.16532	67.47188
54.99587	89.92982	44.89657	41.24555
52.93307	26.75482	46.3806	34.61415
183.13846	257.38558	168.56979	155.58826
74.19368	50.86752	99.27231	101.34559
431.7466	235.87144	595.81484	768.835
121.44195	67.28467	117.43427	121.40145
32.82396	17.9445	42.06185	55.22911
25.32587	46.37774	72.22174	50.24603
27.57575	10.89472	35.4509	39.68943
31.51825	15.1557	38.17814	38.80164
41.96953	42.6615	53.83193	51.45985
25.64656	16.18061	36.52637	33.21636
70.09137	77.26511	84.78389	58.55599
182.47688	140.26186	84.61136	59.14741
144.10342	90.97337	52.65038	71.9861
26.18628	15.62644	31.0094	38.5397
21.51235	10.6944	26.10945	32.36941
53.54872	47.54841	48.15443	42.283
166.70002	156.90144	210.40553	217.93065
31.92515	15.05361	17.20135	29.28533
199.17054	124.89404	83.4063	91.37428
77.71907	117.6776	93.35583	65.84348
50.67771	40.56165	51.04921	66.85174
67.81842	82.36944	37.74402	26.70151
170.34938	145.81036	122.11372	130.46082
30.88329	58.73196	63.42561	44.28332

109.84847	230.13234	111.71558	122.74803
43.46572	41.79795	26.93733	32.47631
27.55589	20.97717	29.4356	22.53481
42.31746	27.86605	164.66548	159.57694
179.74941	108.70342	266.20736	383.14545
31.72944	44.332	26.44852	24.47777
73.55446	55.58606	85.34268	78.92213
54.54098	73.33429	55.60824	52.04463
22.89366	14.87599	36.52884	40.81556
45.71576	36.18273	48.93613	39.98575
44.01867	26.26635	30.36492	30.15777
67.69106	78.83804	50.05718	56.97231
335.65774	484.72012	483.00505	369.48805
32.38286	30.33499	34.17912	35.13719
97.8756	58.09354	90.9708	75.24126
15.31066	16.25247	22.05792	25.8768
37.80485	32.64463	37.20292	35.8649
34.91428	43.64175	46.87613	34.68666
63.49548	98.47516	80.65416	68.64376
28.14198	27.49986	62.18074	49.80092
92.53693	44.92735	84.04842	104.21978
58.07567	36.93608	43.13161	46.88487
35.87201	22.06479	26.34111	34.48681
31.48771	25.71608	43.37647	37.28389
63.81768	92.80878	65.78984	42.98582
59.32503	74.21532	105.8145	77.92786
26.92997	14.93721	31.27258	36.84457
47.4687	28.90909	43.35986	46.97664
54.49562	49.60669	90.50745	79.51932
17.57828	17.62084	19.54124	21.92418
38.55639	29.75677	34.63096	30.7906
61.58257	87.13606	70.13871	56.1987
110.38903	71.63722	109.64738	146.59748
95.96021	51.60023	95.04896	71.04527
53.82604	77.7385	53.43129	44.70795
40.16949	39.49283	34.79409	43.75286
38.61824	57.66036	46.03376	39.53454
95.6396	92.10657	109.50306	94.45319
1118.0441	1950.5122	612.88053	560.34476
34.33427	22.49062	58.74986	53.58383
455.06567	447.56502	499.60644	315.26316
40.48176	30.37414	43.82796	46.87362
115.19827	118.22808	139.70342	132.2091
27.27573	11.40131	27.87237	27.41228
41.65578	72.98455	48.52452	34.15834
234.90708	277.66001	165.16438	200.15328
32.93217	16.99138	41.05303	51.26346
94.61219	93.78128	112.42472	117.52203

33.76714	25.13965	33.15404	29.71268
26.38855	32.11398	21.04387	18.84997
61.79884	63.63203	50.21687	24.21499
39.12471	29.2138	43.1149	48.43641
90.99106	119.57536	104.87157	128.95308
86.84405	99.02777	102.19084	98.0418
240.18277	198.88919	317.37295	288.95681
58.59353	50.87797	47.71432	68.98907
31.41387	53.36873	32.75074	27.12608
15.80368	10.80115	16.85209	20.13544
33.28001	27.38726	23.31805	22.54898
223.15855	140.90693	226.72878	298.23526
47.47198	29.8237	64.05909	96.62021
394.71634	418.88207	363.32455	318.14993
27.87276	41.05712	28.92653	27.91827
144.92601	129.53182	249.66417	230.49485
125.13079	99.68858	99.19698	102.72209
131.68353	117.22817	68.68661	71.58809
48.36301	29.3992	33.44585	36.51603
46.72903	40.35884	53.25498	46.56427
89.88116	91.77306	67.80609	51.75848
51.45075	35.8869	36.00669	53.04567

Proteomic analysis of cancer cell culture media, related to Figure 3.

Gene	LLC	RM1	MC38
Adamts4	1.0723285	0.4694349	0.1676666
Adamtsl4	0.4375584	0.2724045	1.6488701
Angptl2	0.8458908	0.5844126	2.1768383
Arsa	0.7799815	0.7290523	2.2887714
Asah1	0.4126168	0.2103882	2.6241808
B2m	0.7306988	0.3584152	1.7611518
Bmp1	2.1376488	1.3077777	0.3681674
C1s1	1.504959	0.8846745	1.1178257
C3	3.3907513	0.8740765	0.1343763
Calu	0.5702223	0.4073941	2.9106405
Ccn1	0.4806268	0.2810333	1.1429826
Cdsn	0.1549897	0.0406639	2.7653831
CLS1	1.4780847	0.8334961	1.1884949
Clu	0.7540451	0.3463605	0.0353358
Col1a1	0.0442975	0.0273407	4.1945641
Col3a1	1.8555248	0.9326023	0.8045772
Col4a2	2.1892855	1.1142473	0.5201455
Col6a1	0.1533152	0.157457	3.4123246
Cp	2.6078668	1.034796	0.0216767
Cpe	0.8903768	0.3657106	2.3326862
Creld2	0.83994	0.5780466	2.5211457
Cst3	1.1647564	0.9318822	2.1966391
Ctsb	0.9407509	0.3863443	1.1905148
Ctsd	0.4779743	0.5545769	1.9410178
Ctsl	1.025671	0.6115099	1.7889333
Ctsz	0.6454249	0.3543043	1.9804409
Dcn	0.8764014	0.0127395	1.5801078
Dnajb11	0.2640614	0.1276332	1.9072139
Dpt	3.8715453	1.0010791	0.0200602
Ecm1	0.0667581	0.0457504	2.4920584
Epdr1	1.0008131	0.4093874	2.4064887
Ero1a	3.1443793	0.6959468	0.3381233
Fam3c	2.0153373	1.1025975	0.7397651
Fbln1	0.1041946	0.0578459	2.1499502
Fetub	1.0152787	0.2950485	0.0261195
Flrt2	1.4653719	0.6863654	1.2556429
Fn1	1.4312804	0.6808961	1.2343606
Fstl1	0.3123816	0.2280554	2.5604915
Fstl3	1.7108351	1.0901335	1.2253754
Gla	0.9810329	0.413297	2.3571232
Gnptg	0.6660419	0.4064648	1.2482643
Gpc1	1.5943481	0.486526	1.0570749
Grn	0.9021236	0.804284	0.9926394
Gsn	0.8124709	0.5171277	3.1629448
Gusb	0.657966	0.8195714	0.4324465
Hp	1.128707	0.9269834	2.3370688

Hspg2	1.9898348	0.6697085	1.0339282
Htra1	0.6474929	0.5209636	2.1287988
Igfbp3	0.43952	0.8001761	0.7743147
Igfbp4	2.6159677	1.5328844	0.8498474
Igfbp5	0.0790376	0.2325736	0.2161094
Igfbp6	0.417701	0.243638	2.6421076
Igfbp7	2.6446796	1.4913847	0.8534377
Il34	0.4169283	0.1608533	3.6325003
Lamb1	1.3082698	0.6583299	0.9376958
Lamb2	0.1710119	0.0887979	0.2384242
Lamc1	1.1788596	0.420952	0.9311065
Lgals3bp	0.7949792	0.3546869	0.8402958
Loxl3	1.2256963	2.2730325	0.1879607
Ltbp2	0.4676971	0.33103	3.9034828
Ltbp3	1.1337034	0.5338883	0.9193268
Ltbp4	0.6307594	0.2688548	3.166579
Manba	1.3411907	0.6913058	1.9544296
Matn2	1.1575601	0.385727	0.7698814
Metrn	1.7630124	0.8121918	1.2242324
Mfge8	0.1797395	0.2475601	1.3414425
Mmp2	0.0052839	0.0703946	4.7241379
Mmp3	3.5078615	1.1916235	0.0073086
Mmp9	0.7965306	0.1853649	0.0697177
Nenf	0.2645146	0.1040546	3.6368974
Ntn1	1.3339332	1.6966	1.1111098
Nucb1	0.4665552	0.3363908	1.7809341
Nucb2	0.5198796	0.0875903	2.5637835
Ogn	1.2404165	0.6337051	0.3786662
Pla2g7	0.567292	0.2194547	1.0294285
Pltp	0.7042125	0.6201077	3.006602
Pros1	0.8628726	0.8142014	1.4612344
Psap	0.5460177	0.426363	2.1839678
Pxdn	1.8373026	1.5331705	0.2707291
Scpep1	0.2089609	0.203932	2.166334
Sema3a	3.7326437	1.1687058	0.0284162
Serpine1	0.1893405	0.2385959	2.4955645
Serpinf1	2.0229068	1.1879552	0.0963303
Serpinh1	1.510422	0.9801523	2.1458739
Sparc	0.5163185	0.2286423	2.781823
Spp1	2.0013311	1.3444246	0.0295659
Tcn2	0.3298007	0.1959045	0.1749315
Tfpi	1.4392445	0.7767259	0.5076156
Tgfb1	0.6249683	0.2352783	0.6579437
Tgfb3	0.7963473	0.4705448	0.5701382
Tgfbr3	3.4374532	0.8946801	0.1137547
Thbs2	2.8386772	1.9500749	0.005395
Timp2	0.5596214	0.2580267	1.911358
Vegfc	0.8767159	0.1569755	0.9835224

An unbiased proteomic screen of Cyst-C protein complex, related to Figure 7.

Protein accession	Protein description	Gene name	Coverage [%]	Peptides
A2A432	Cullin-4B OS=Mus musculus OX=10090 GN=Cul4b PE=1 SV=Cul4b		1.03	1
A2A5R2	Brefeldin A-inhibited guanine nucleotide-exchange protein	Arfgef2	4.91	9
A2A6Q5	Cell division cycle protein 27 homolog OS=Mus musculus	Cdc27	12.61	10
A2A8L1	Chromodomain-helicase-DNA-binding protein 5 OS=Mus mu	Chd5	3.7	7
A2AAE1	Bridge-like lipid transfer protein family member 1 OS=Mus	Bltp1	1.12	5
A2AAY5	SH3 and PX domain-containing protein 2B OS=Mus muscul	Sh3pxd2b	1.54	1
A2ABV5	Mediator of RNA polymerase II transcription subunit 14	Med14	1.3	2
A2AGT5	Cytoskeleton-associated protein 5 OS=Mus musculus OX=10	Ckap5	6.25	11
A2AJ77	PR domain zinc finger protein 12 OS=Mus musculus OX=10	Prdm12	3.01	1
A2ALS5	Rap1 GTPase-activating protein 1 OS=Mus musculus OX=10	Rap1gap	8.9	6
A2ALU4	Protein Shroom2 OS=Mus musculus OX=10090 GN=Shroom2	Shroom2	1.42	2
A2AN08	E3 ubiquitin-protein ligase UBR4 OS=Mus musculus OX=10	Ubr4	2.55	12
A2AP18	1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase	Plch2	4.46	6
A2AQ25	Sickle tail protein OS=Mus musculus OX=10090 GN=Skt PE=	Skt	17.11	30
A2ASS6	Titin OS=Mus musculus OX=10090 GN=Ttn PE=1 SV=1	Ttn	0.21	6
A2ASZ8	Mitochondrial adenyl nucleotide antiporter SLC25A25 OS=	Slc25a25	7.25	3
A2AT37	Regulator of nonsense transcripts 2 OS=Mus musculus OX=	Upf2	5.91	7
A2BH40	AT-rich interactive domain-containing protein 1A OS=Mus	Arid1a	0.96	2
A2CG49	Kalirin OS=Mus musculus OX=10090 GN=Kalrn PE=1 SV=1	Kalrn	7.39	23
A2RSY6	TRMT1-like protein OS=Mus musculus OX=10090 GN=Trmt1	Trmt1l	4.81	3
A3KGS3	Ral GTPase-activating protein subunit alpha-2 OS=Mus mus	Ralgapa2	3.15	6
A4Q9F0	Tubulin polyglutamylase TTL7 OS=Mus musculus OX=1009	Ttl7	5.15	4
A6H8H5	Potassium voltage-gated channel subfamily B member 2 OS	Kcnb2	0.99	1
A6X8Z5	Rho GTPase-activating protein 31 OS=Mus musculus OX=10	Arhgap31	1.4	2
B0V2N1	Receptor-type tyrosine-protein phosphatase S OS=Mus musc	Ptprs	1.1	2
B1AVY7	Kinesin-like protein KIF16B OS=Mus musculus OX=10090 G	Kif16b	1.52	2
B1AWN6	Sodium channel protein type 2 subunit alpha OS=Mus musc	Scn2a	4.34	8
B1AY10	Transcriptional repressor NF-X1 OS=Mus musculus OX=100	Nfx1	3.86	4
B1AZ99	OTU domain-containing protein 3 OS=Mus musculus OX=10	Otud3	2.78	1
B1AZI6	THO complex subunit 2 OS=Mus musculus OX=10090 GN=Th	Thoc2	1.88	3
B1AZP2	Disks large-associated protein 4 OS=Mus musculus OX=100	Dlgap4	9.48	7
B2RQC6	CAD protein OS=Mus musculus OX=10090 GN=Cad PE=1 SVCad		7.96	18
B2RR83	3'-5' RNA helicase YTHDC2 OS=Mus musculus OX=10090 G	Ythdc2	3.6	5
B2RRE7	OTU domain-containing protein 4 OS=Mus musculus OX=10	Otud4	3.88	5
B2RSH2	Guanine nucleotide-binding protein G(i) subunit alpha-1	Gnai1	20.9	7
B2RUJ5	Amyloid-beta A4 precursor protein-binding family A memb	Apba1	1.54	1
B2RX14	Terminal uridylyltransferase 4 OS=Mus musculus OX=10090	Tut4	1.7	2
B9EHT4	CAP-Gly domain-containing linker protein 3 OS=Mus muscu	Clip3	26.51	12
B9EJ86	Oxysterol-binding protein-related protein 8 OS=Mus muscu	Osbpl8	2.36	2
B9EJA2	Cortactin-binding protein 2 OS=Mus musculus OX=10090 GN	Ctnbp2	4.98	6
B9EKR1	Receptor-type tyrosine-protein phosphatase zeta OS=Mus m	Ptprz1	2.6	6
D3YVF0	A-kinase anchor protein 5 OS=Mus musculus OX=10090 GN=	Akap5	45.64	25
D3YWQ0	Diacylglycerol kinase iota OS=Mus musculus OX=10090 GN=	Dgki	14.38	11
D3YXJ0	Diacylglycerol kinase eta OS=Mus musculus OX=10090 GN=	Dgkh	10.82	12
D3YXK2	Scaffold attachment factor B1 OS=Mus musculus OX=10090	Safb	25.19	23
D3YZU1	SH3 and multiple ankyrin repeat domains protein 1 OS=Mus	Shank1	5.54	11
D3Z7P3	Glutaminase kidney isoform, mitochondrial OS=Mus muscul	Gls	13.95	9
E0CZ16	Kelch-like protein 3 OS=Mus musculus OX=10090 GN=Klhl3	Klhl3	16.7	10
E9PUL5	Proline-rich transmembrane protein 2 OS=Mus musculus OX=	Prpt2	10.12	3
E9PUN2	Neurexin-2-beta OS=Mus musculus OX=10090 GN=Nrxn2 PE	Nrxn2	1.97	1

E9PUQ8	Diacylglycerol kinase delta OS=Mus musculus OX=10090 G	Dgkd	11.39	13
E9PV24	Fibrinogen alpha chain OS=Mus musculus OX=10090 GN=FgaFga		9.51	6
E9PVA8	Stalled ribosome sensor GCN1 OS=Mus musculus OX=10090	Gcn1	5.17	13
E9PX95	ATP-binding cassette sub-family A member 17 OS=Mus mus	Abca17	0.46	1
E9PXF8	Myotubularin-related protein 13 OS=Mus musculus OX=1009	Sbf2	2.88	5
E9PZJ8	Activating signal cointegrator 1 complex subunit 3 OS=Mu	Ascc3	0.45	1
E9Q3L2	Phosphatidylinositol 4-kinase alpha OS=Mus musculus OX=1	Pi4ka	16.53	32
E9Q401	Ryanodine receptor 2 OS=Mus musculus OX=10090 GN=Ryr2	Ryr2	3.04	14
E9Q4F7	Ankyrin repeat domain-containing protein 11 OS=Mus musc	Ankrd11	0.53	1
E9Q4N7	AT-rich interactive domain-containing protein 1B OS=Mus	Arid1b	1.39	3
E9Q4S1	High affinity cAMP-specific and IBMX-insensitive 3',5'-cy	Pde8b	2.54	2
E9Q557	Desmoplakin OS=Mus musculus OX=10090 GN=Dsp PE=1 SVDsp		4.06	13
E9Q5C9	Nucleolar and coiled-body phosphoprotein 1 OS=Mus muscu	Nolc1	10.97	7
E9Q5K9	YTH domain-containing protein 1 OS=Mus musculus OX=10	Ythdc1	6.39	5
E9Q784	Zinc finger CCH domain-containing protein 13 OS=Mus m	Zc3h13	1.39	2
E9Q7G0	Nuclear mitotic apparatus protein 1 OS=Mus musculus OX=	Numa1	7.45	13
E9Q8I9	Protein furry homolog OS=Mus musculus OX=10090 GN=Fry	Fry	1.62	5
E9Q9I2	Rap1 GTPase-GDP dissociation stimulator 1 OS=Mus muscu	Rap1gds1	14	7
E9QAT4	Protein transport protein Sec16A OS=Mus musculus OX=100	Sec16a	3.44	8
F6SEU4	Ras/Rap GTPase-activating protein SynGAP OS=Mus muscu	Syngap1	21.64	27
F6ZDS4	Nucleoprotein TPR OS=Mus musculus OX=10090 GN=Tpr PE=Tpr		1.15	3
F8VPU2	FERM, ARHGEF and pleckstrin domain-containing protein	Farp1	22.42	23
G3X9J0	Signal-induced proliferation-associated 1-like protein 3 O	Sipa1l3	2.25	3
G3X9K3	Brefeldin A-inhibited guanine nucleotide-exchange protein	Arfgef1	13	24
G3X9X1	Kelch repeat and BTB domain-containing protein 2 OS=Mus	Kbtbd2	1.28	1
G3XA57	Rab11 family-interacting protein 2 OS=Mus musculus OX=1	Rab11fip2	27.54	13
G5E829	Plasma membrane calcium-transporting ATPase 1 OS=Mus m	Atp2b1	19.59	20
G5E870	E3 ubiquitin-protein ligase TRIP12 OS=Mus musculus OX=1	Trip12	1.23	2
G5E8K5	Ankyrin-3 OS=Mus musculus OX=10090 GN=Ank3 PE=1 SV=Ank3		18.46	32
O08529	Calpain-2 catalytic subunit OS=Mus musculus OX=10090 GN	Capn2	5.86	4
O08532	Voltage-dependent calcium channel subunit alpha-2/delta-	Cacna2d1	6.8	7
O08539	Myc box-dependent-interacting protein 1 OS=Mus musculus	Bin1	15.65	10
O08547	Vesicle-trafficking protein SEC22b OS=Mus musculus OX=1	Sec22b	20	4
O08553	Dihydropyrimidinase-related protein 2 OS=Mus musculus O	Dpysl2	33.39	16
O08579	Emerin OS=Mus musculus OX=10090 GN=Emd PE=1 SV=1	Emd	9.65	2
O08583	THO complex subunit 4 OS=Mus musculus OX=10090 GN=AlAlyref		14.9	4
O08585	Clathrin light chain A OS=Mus musculus OX=10090 GN=Clta	Clta	27.23	9
O08586	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and	Pten	8.93	3
O08599	Syntaxin-binding protein 1 OS=Mus musculus OX=10090 GN	Stxbp1	39.06	26
O08648	Mitogen-activated protein kinase kinase kinase 4 OS=Mus	Map3k4	7.58	12
O08663	Methionine aminopeptidase 2 OS=Mus musculus OX=10090	Metap2	4.6	2
O08709	Peroxiredoxin-6 OS=Mus musculus OX=10090 GN=Prdx6 PE=Prdx6		25.89	5
O08739	AMP deaminase 3 OS=Mus musculus OX=10090 GN=Ampd3	Ampd3	7.7	5
O08749	Dihydrolipoyl dehydrogenase, mitochondrial OS=Mus muscu	Dld	21.81	10
O08756	3-hydroxyacyl-CoA dehydrogenase type-2 OS=Mus musculu	Hsd17b10	7.28	2
O08759	Ubiquitin-protein ligase E3A OS=Mus musculus OX=10090	Ube3a	2.3	2
O08784	Treacle protein OS=Mus musculus OX=10090 GN=Tcof1 PE=	Tcof1	16.36	19
O08788	Dynactin subunit 1 OS=Mus musculus OX=10090 GN=Dctn1	Dctn1	25.37	28
O08795	Glucosidase 2 subunit beta OS=Mus musculus OX=10090 GN=Prkcsh		3.65	2
O08807	Peroxiredoxin-4 OS=Mus musculus OX=10090 GN=Prdx4 PE=Prdx4		6.93	2
O08808	Protein diaphanous homolog 1 OS=Mus musculus OX=10090	Diaph1	18.88	25
O08810	116 kDa U5 small nuclear ribonucleoprotein component OS	Eftud2	8.44	7
O08842	GNDF family receptor alpha-2 OS=Mus musculus OX=10090	Gfra2	1.94	1
O08848	RNA-binding protein Ro60 OS=Mus musculus OX=10090 GN	RO60	4.65	2

O08917	Flotillin-1 OS=Mus musculus OX=10090 GN=Flot1 PE=1 SV=Flot1	2.57	1
O08919	Numb-like protein OS=Mus musculus OX=10090 GN=Numbl Numbl	42.22	25
O08967	Cytohesin-3 OS=Mus musculus OX=10090 GN=Cyth3 PE=1 S Cyth3	17.04	7
O09000	Nuclear receptor coactivator 3 OS=Mus musculus OX=10090 Ncoa3	1.07	1
O09012	Peroxisomal targeting signal 1 receptor OS=Mus musculus Pex5	2.97	2
O09106	Histone deacetylase 1 OS=Mus musculus OX=10090 GN=Hda Hdac1	5.81	3
O35099	Mitogen-activated protein kinase kinase kinase 5 OS=Mus Map3k5	1.45	2
O35129	Prohibitin-2 OS=Mus musculus OX=10090 GN=Phb2 PE=1 SVPhb2	23.75	7
O35130	Ribosomal RNA small subunit methyltransferase NEP1 OS= Emg1	4.51	1
O35136	Neural cell adhesion molecule 2 OS=Mus musculus OX=100 Ncam2	3.46	3
O35143	ATPase inhibitor, mitochondrial OS=Mus musculus OX=1009 Atp5if1	34.91	5
O35144	Telomeric repeat-binding factor 2 OS=Mus musculus OX=10 Terf2	1.85	1
O35226	26S proteasome non-ATPase regulatory subunit 4 OS=Mus Psmd4	13.03	5
O35250	Exocyst complex component 7 OS=Mus musculus OX=10090 Exoc7	10.04	6
O35286	ATP-dependent RNA helicase DHX15 OS=Mus musculus OX Dhx15	18.99	15
O35295	Transcriptional activator protein Pur-beta OS=Mus musculu Purb	26.85	9
O35326	Serine/arginine-rich splicing factor 5 OS=Mus musculus OX Srsf5	19.7	5
O35343	Importin subunit alpha-3 OS=Mus musculus OX=10090 GN=KKpna4	4.41	2
O35345	Importin subunit alpha-7 OS=Mus musculus OX=10090 GN=KKpna6	2.05	1
O35381	Acidic leucine-rich nuclear phosphoprotein 32 family me Anp32a	14.17	4
O35382	Exocyst complex component 4 OS=Mus musculus OX=10090 Exoc4	12.31	10
O35385	Serine/threonine-protein phosphatase with EF-hands 2 OS= Ppef2	1.45	1
O35405	5'-3' exonuclease PLD3 OS=Mus musculus OX=10090 GN=Pl Pld3	4.51	2
O35449	Proline-rich transmembrane protein 1 OS=Mus musculus OX= Prrt1	3.59	1
O35465	Peptidyl-prolyl cis-trans isomerase FKBP8 OS=Mus muscul Fkbp8	5.72	2
O35492	Dual specificity protein kinase CLK3 OS=Mus musculus OX Clk3	4.39	3
O35495	Cyclin-dependent kinase 14 OS=Mus musculus OX=10090 G Cdk14	11.3	5
O35526	Syntaxin-1A OS=Mus musculus OX=10090 GN=Stx1a PE=1 SStx1a	26.39	9
O35593	26S proteasome non-ATPase regulatory subunit 14 OS=Mus Psmd14	4.52	2
O35609	Secretory carrier-associated membrane protein 3 OS=Mus Scamp3	8.31	2
O35613	Death domain-associated protein 6 OS=Mus musculus OX=1 Daxx	2.03	1
O35621	Phosphomannomutase 1 OS=Mus musculus OX=10090 GN=P Pmm1	4.96	1
O35625	Axin-1 OS=Mus musculus OX=10090 GN=Axin1 PE=1 SV=3 Axin1	1.74	1
O35633	Vesicular inhibitory amino acid transporter OS=Mus muscul Slc32a1	9.33	4
O35643	AP-1 complex subunit beta-1 OS=Mus musculus OX=10090 Ap1b1	29.59	32
O35658	Complement component 1 Q subcomponent-binding protein, C1qbp	4.68	1
O35668	Huntingtin-associated protein 1 OS=Mus musculus OX=1009 Hap1	9.08	5
O35671	Integrin beta-1-binding protein 1 OS=Mus musculus OX=100 Itgb1bp1	6	1
O35678	Monoglyceride lipase OS=Mus musculus OX=10090 GN=Mgll Mgll	14.85	3
O35681	Synaptotagmin-3 OS=Mus musculus OX=10090 GN=Sy3 PE=Sy3	12.78	8
O35685	Nuclear migration protein nudC OS=Mus musculus OX=1009 Nudc	2.71	1
O35730	E3 ubiquitin-protein ligase RING1 OS=Mus musculus OX=1 Ring1	2.22	1
O35738	Kruppel-like factor 12 OS=Mus musculus OX=10090 GN=Klf12	7.21	3
O35874	Neutral amino acid transporter A OS=Mus musculus OX=100 Slc1a4	3.76	2
O35926	Cyclin-dependent kinase 5 activator 2 OS=Mus musculus O Cdk5r2	11.11	3
O35927	Catenin delta-2 OS=Mus musculus OX=10090 GN=Ctnnd2 PE Ctnnd2	19.41	22
O35929	GTP-binding protein REM 1 OS=Mus musculus OX=10090 G Rem1	3.37	1
O35954	Membrane-associated phosphatidylinositol transfer protein Pitpm1	5.47	6
O35963	Ras-related protein Rab-33B OS=Mus musculus OX=10090 G Rab33b	14.85	3
O54724	Caveolae-associated protein 1 OS=Mus musculus OX=10090 Cavin1	13.78	5
O54774	AP-3 complex subunit delta-1 OS=Mus musculus OX=10090 Ap3d1	23.85	27
O54781	SRSF protein kinase 2 OS=Mus musculus OX=10090 GN=Srp Srpk2	19.24	11
O54784	Death-associated protein kinase 3 OS=Mus musculus OX=10 Dapk3	5.13	2
O54790	Transcription factor MafG OS=Mus musculus OX=10090 GN Mafg	11.11	2

O54828	Regulator of G-protein signaling 9 OS=Mus musculus OX=1	Rgs9	12.89	9
O54829	Regulator of G-protein signaling 7 OS=Mus musculus OX=1	Rgs7	17.27	8
O54833	Casein kinase II subunit alpha' OS=Mus musculus OX=1009	Csnk2a2	24	7
O54865	Guanylate cyclase soluble subunit beta-1 OS=Mus musculus	Gucy1b1	8.06	4
O54879	High mobility group protein B3 OS=Mus musculus OX=100	Hmgb3	30.5	7
O54901	OX-2 membrane glycoprotein OS=Mus musculus OX=10090	Cd200	18.71	5
O54916	RalBP1-associated Eps domain-containing protein 1 OS=Mus	Reps1	5.28	4
O54931	PALM2-AKAP2 fusion protein OS=Mus musculus OX=10090	Pakap	0.92	1
O54941	SWI/SNF-related matrix-associated actin-dependent regulat	Smarce1	4.87	2
O54946	DnaJ homolog subfamily B member 6 OS=Mus musculus OX	Dnajb6	18.63	7
O54950	5'-AMP-activated protein kinase subunit gamma-1 OS=Mus	Prkag1	5.76	2
O54951	Semaphorin-6B OS=Mus musculus OX=10090 GN=Sema6b PE	Sema6b	2.93	2
O54962	Barrier-to-autointegration factor OS=Mus musculus OX=100	Banf1	7.87	1
O54983	Ketimine reductase mu-crystallin OS=Mus musculus OX=10	Crym	22.36	6
O54988	STE20-like serine/threonine-protein kinase OS=Mus muscul	Slk	20.11	27
O54991	Contactin-associated protein 1 OS=Mus musculus OX=10090	Cntnap1	10.54	14
O55013	Trafficking protein particle complex subunit 3 OS=Mus mus	Trappc3	20.56	4
O55017	Voltage-dependent N-type calcium channel subunit alpha-	Cacna1b	4.98	12
O55022	Membrane-associated progesterone receptor component 1	Pgrmc1	4.62	1
O55023	Inositol monophosphatase 1 OS=Mus musculus OX=10090 G	Impa1	22.74	6
O55026	Ectonucleoside triphosphate diphosphohydrolase 2 OS=Mus	Entpd2	2.63	1
O55028	[3-methyl-2-oxobutanoate dehydrogenase [lipoamide]] kina	Bckdk	23.79	7
O55029	Coatomer subunit beta' OS=Mus musculus OX=10090 GN=Co	Copb2	1.33	1
O55033	Cytoplasmic protein NCK2 OS=Mus musculus OX=10090 GN	Nck2	2.89	1
O55042	Alpha-synuclein OS=Mus musculus OX=10090 GN=Snca PE=	Snca	45.71	9
O55074	A-kinase anchor protein 7 isoform alpha OS=Mus musculus	Akap7	24.69	2
O55091	Protein IMPACT OS=Mus musculus OX=10090 GN=Impact P	Impact	13.21	5
O55100	Synaptogyrin-1 OS=Mus musculus OX=10090 GN=Syng1 PE	Syng1	13.25	3
O55106	Striatin OS=Mus musculus OX=10090 GN=Strn PE=1 SV=2	Strn	5.64	5
O55128	Histone deacetylase complex subunit SAP18 OS=Mus muscu	Sap18	20.26	5
O55131	Septin-7 OS=Mus musculus OX=10090 GN=Septin7 PE=1 SV	Septin7	32.34	12
O55142	Large ribosomal subunit protein eL33 OS=Mus musculus OX	Rpl35a	38.18	5
O55143	Sarcoplasmic/endoplasmic reticulum calcium ATPase 2 OS	Atp2a2	18.01	16
O55176	E3 ubiquitin-protein ligase Praja-1 OS=Mus musculus OX=1	Pja1	4.67	2
O55187	E3 SUMO-protein ligase CBX4 OS=Mus musculus OX=10090	Cbx4	2.36	1
O55222	Integrin-linked protein kinase OS=Mus musculus OX=10090	Ilk	5.75	2
O55234	Proteasome subunit beta type-5 OS=Mus musculus OX=1009	Psmb5	4.55	1
O70133	ATP-dependent RNA helicase A OS=Mus musculus OX=1009	Dhx9	15.29	21
O70152	Dolichol-phosphate mannosyltransferase subunit 1 OS=Mus	Dpm1	13.85	3
O70161	Phosphatidylinositol 4-phosphate 5-kinase type-1 gamma O	Pip5k1c	28.14	21
O70166	Stathmin-3 OS=Mus musculus OX=10090 GN=Stmn3 PE=1 S	Stmn3	10	2
O70172	Phosphatidylinositol 5-phosphate 4-kinase type-2 alpha OS	Pip4k2a	19.51	9
O70194	Eukaryotic translation initiation factor 3 subunit D OS=Mus	Eif3d	6.02	3
O70228	Probable phospholipid-transporting ATPase IIA OS=Mus mu	Atp9a	1.81	2
O70293	G protein-coupled receptor kinase 6 OS=Mus musculus OX=	Grk6	19.44	10
O70305	Ataxin-2 OS=Mus musculus OX=10090 GN=Atxn2 PE=1 SV=	Atxn2	8.17	10
O70310	Glycylpeptide N-tetradecanoyltransferase 1 OS=Mus muscu	Nmt1	6.65	3
O70318	Band 4.1-like protein 2 OS=Mus musculus OX=10090 GN=Ep	Epb41l2	25.91	28
O70325	Phospholipid hydroperoxide glutathione peroxidase OS=Mus	Gpx4	38.07	7
O70374	Protein Cbfa2t2 OS=Mus musculus OX=10090 GN=Cbfa2t2	Cbfa2t2	2.19	1
O70405	Serine/threonine-protein kinase ULK1 OS=Mus musculus O	Ulk1	1.43	2
O70433	Four and a half LIM domains protein 2 OS=Mus musculus O	Fhl2	4.3	1
O70435	Proteasome subunit alpha type-3 OS=Mus musculus OX=100	Psma3	4.71	1
O70443	Guanine nucleotide-binding protein G(z) subunit alpha OS	Gnaz	18.31	6

O70492	Sorting nexin-3 OS=Mus musculus OX=10090 GN=Snx3 PE=1Snx3	6.79	1
O70494	Transcription factor Sp3 OS=Mus musculus OX=10090 GN=S Sp3	1.02	1
O70503	Very-long-chain 3-oxoacyl-CoA reductase OS=Mus musculu Hsd17b12	24.04	7
O70551	SRSF protein kinase 1 OS=Mus musculus OX=10090 GN=Srp Srp1	12.65	7
O70566	Protein diaphanous homolog 2 OS=Mus musculus OX=10090 Diaph2	5.65	6
O70589	Peripheral plasma membrane protein CASK OS=Mus muscul Cask	8.32	8
O88196	E3 ubiquitin-protein ligase TTC3 OS=Mus musculus OX=100 Ttc3	1.31	3
O88291	DBIRD complex subunit ZNF326 OS=Mus musculus OX=100 Znf326	28.28	13
O88342	WD repeat-containing protein 1 OS=Mus musculus OX=1009 Wdr1	22.77	11
O88343	Electrogenic sodium bicarbonate cotransporter 1 OS=Mus m Slc4a4	8.25	8
O88351	Inhibitor of nuclear factor kappa-B kinase subunit beta OS Ikbkb	1.32	1
O88447	Kinesin light chain 1 OS=Mus musculus OX=10090 GN=Klc1 Klc1	17.01	9
O88448	Kinesin light chain 2 OS=Mus musculus OX=10090 GN=Klc2 Klc2	28.88	16
O88456	Calpain small subunit 1 OS=Mus musculus OX=10090 GN=Ca Capns1	8.58	2
O88485	Cytoplasmic dynein 1 intermediate chain 1 OS=Mus muscul Dync1i1	8.6	5
O88487	Cytoplasmic dynein 1 intermediate chain 2 OS=Mus muscul Dync1i2	7.35	4
O88533	Aromatic-L-amino-acid decarboxylase OS=Mus musculus O Ddc	4.17	2
O88543	COP9 signalosome complex subunit 3 OS=Mus musculus OX Cops3	4.49	2
O88569	Heterogeneous nuclear ribonucleoproteins A2/B1 OS=Mus m Hnrmpa2b1	24.93	9
O88587	Catechol O-methyltransferase OS=Mus musculus OX=10090 Comt	3.4	1
O88597	Beclin-1 OS=Mus musculus OX=10090 GN=Becn1 PE=1 SV= Becn1	6.92	3
O88643	Serine/threonine-protein kinase PAK 1 OS=Mus musculus O Pak1	12.11	6
O88696	ATP-dependent Clp protease proteolytic subunit, mitochon Clpp	4.04	1
O88703	Potassium/sodium hyperpolarization-activated cyclic nucle Hcn2	4.87	3
O88705	Potassium/sodium hyperpolarization-activated cyclic nucle Hcn3	3.21	2
O88712	C-terminal-binding protein 1 OS=Mus musculus OX=10090 Ctbp1	22.22	11
O88735	Ensconsin OS=Mus musculus OX=10090 GN=Map7 PE=1 SV=Map7	25.48	18
O88737	Protein bassoon OS=Mus musculus OX=10090 GN=Bsn PE=1 Bsn	22.4	75
O88738	Baculoviral IAP repeat-containing protein 6 OS=Mus muscu Birc6	0.35	2
O88741	Ganglioside-induced differentiation-associated protein 1 Gdap1	5.59	2
O88809	Neuronal migration protein doublecortin OS=Mus musculus Dcx	18.85	6
O88844	Isocitrate dehydrogenase [NADP] cytoplasmic OS=Mus musc Idh1	7.73	3
O88845	A-kinase anchor protein 10, mitochondrial OS=Mus muscul Akap10	1.81	1
O88848	ADP-ribosylation factor-like protein 6 OS=Mus musculus O Arl6	14.52	2
O88878	AN1-type zinc finger protein 5 OS=Mus musculus OX=10090 Zfand5	4.23	1
O88910	MAGUK p55 subfamily member 3 OS=Mus musculus OX=10 Mpp3	1.41	1
O88935	Synapsin-1 OS=Mus musculus OX=10090 GN=Syn1 PE=1 SV= Syn1	23.8	15
O88952	Protein lin-7 homolog C OS=Mus musculus OX=10090 GN=LiLin7c	18.78	3
O88967	ATP-dependent zinc metalloprotease YME1L1 OS=Mus musc Yme1l1	11.33	7
O88998	Noelin OS=Mus musculus OX=10090 GN=Olfm1 PE=1 SV=1 Olfm1	1.65	1
O89032	SH3 and PX domain-containing protein 2A OS=Mus muscul Sh3pxd2a	2.14	2
O89053	Coronin-1A OS=Mus musculus OX=10090 GN=Coro1a PE=1 Coro1a	24.73	12
O89084	cAMP-specific 3',5'-cyclic phosphodiesterase 4A OS=Mus m Pde4a	3.91	3
O89090	Transcription factor Sp1 OS=Mus musculus OX=10090 GN=S Sp1	3.7	3
O89112	Glutathione S-transferase LANCL1 OS=Mus musculus OX=1 Lancl1	17.54	8
P00493	Hypoxanthine-guanine phosphoribosyltransferase OS=Mus m Hprt1	17.43	3
P00520	Tyrosine-protein kinase ABL1 OS=Mus musculus OX=10090 Abl1	13.18	12
P00920	Carbonic anhydrase 2 OS=Mus musculus OX=10090 GN=Ca2 Ca2	12.69	4
P01027	Complement C3 OS=Mus musculus OX=10090 GN=C3 PE=1 C3	4.69	8
P01029	Complement C4-B OS=Mus musculus OX=10090 GN=C4b PEC4b	0.52	1
P01831	Thy-1 membrane glycoprotein OS=Mus musculus OX=10090 Thy1	32.1	5
P01872	Immunoglobulin heavy constant mu OS=Mus musculus OX=1 Ighm	2.2	1
P01942	Hemoglobin subunit alpha OS=Mus musculus OX=10090 GN=Hba	93.66	10
P02088	Hemoglobin subunit beta-1 OS=Mus musculus OX=10090 GN Hbb-b1	46.94	8

P02104	Hemoglobin subunit epsilon-Y2 OS=Mus musculus OX=1009 Hbb-y	21.09	3
P02301	Histone H3.3C OS=Mus musculus OX=10090 GN=H3-5 PE=3 H3-5	11.76	2
P02535	Keratin, type I cytoskeletal 10 OS=Mus musculus OX=10090 Krt10	13.33	9
P02798	Metallothionein-2 OS=Mus musculus OX=10090 GN=Mt2 PE=Mt2	19.67	1
P02802	Metallothionein-1 OS=Mus musculus OX=10090 GN=Mt1 PE=Mt1	32.79	2
P03995	Glial fibrillary acidic protein OS=Mus musculus OX=10090 Gfap	20.23	9
P04104	Keratin, type II cytoskeletal 1 OS=Mus musculus OX=10090 Krt1	6.12	6
P04370	Myelin basic protein OS=Mus musculus OX=10090 GN=Mbp Mbp	32.8	12
P04627	Serine/threonine-protein kinase A-Raf OS=Mus musculus O Araf	14.57	9
P04925	Major prion protein OS=Mus musculus OX=10090 GN=Prnp P Prnp	32.68	8
P05063	Fructose-bisphosphate aldolase C OS=Mus musculus OX=10 Aldoc	29.75	12
P05064	Fructose-bisphosphate aldolase A OS=Mus musculus OX=10 Aldoa	37.64	17
P05132	cAMP-dependent protein kinase catalytic subunit alpha OS Prkaca	19.66	8
P05201	Aspartate aminotransferase, cytoplasmic OS=Mus musculus Got1	30.75	14
P05202	Aspartate aminotransferase, mitochondrial OS=Mus muscul Got2	54.65	24
P05480	Proto-oncogene tyrosine-protein kinase Src OS=Mus muscul Src	8.04	4
P06151	L-lactate dehydrogenase A chain OS=Mus musculus OX=100 Ldha	22.59	8
P06745	Glucose-6-phosphate isomerase OS=Mus musculus OX=1009 Gpi	19.18	10
P06801	NADP-dependent malic enzyme OS=Mus musculus OX=1009 Me1	5.42	3
P06802	Ectonucleotide pyrophosphatase/phosphodiesterase family Enpp1	8.94	8
P06837	Neuromodulin OS=Mus musculus OX=10090 GN=Gap43 PE=:Gap43	53.3	9
P07356	Annexin A2 OS=Mus musculus OX=10090 GN=Anxa2 PE=1 Anxa2	12.39	4
P07724	Albumin OS=Mus musculus OX=10090 GN=Alb PE=1 SV=3 Alb	38.32	24
P07759	Serine protease inhibitor A3K OS=Mus musculus OX=10090 Serpina3k	3.35	1
P07901	Heat shock protein HSP 90-alpha OS=Mus musculus OX=100 Hsp90aa1	30.01	24
P08071	Lactotransferrin OS=Mus musculus OX=10090 GN=Ltf PE=1 Ltf	1.13	1
P08103	Tyrosine-protein kinase HCK OS=Mus musculus OX=10090 Hck	1.91	1
P08113	Endoplasmic reticulum chaperone protein OS=Mus musculus OX=10090 GN=Hsp90b1 PE=Hsp90b1	8.85	7
P08226	Apolipoprotein E OS=Mus musculus OX=10090 GN=Apoe PE=Apoe	21.54	8
P08228	Superoxide dismutase [Cu-Zn] OS=Mus musculus OX=10090 Sod1	35.06	6
P08249	Malate dehydrogenase, mitochondrial OS=Mus musculus O Mdh2	44.38	14
P08414	Calcium/calmodulin-dependent protein kinase type IV OS= Camk4	18.76	8
P08551	Neurofilament light polypeptide OS=Mus musculus OX=1009 Nefl	28.73	18
P08553	Neurofilament medium polypeptide OS=Mus musculus OX=1 Nefm	25.35	25
P08752	Guanine nucleotide-binding protein G(i) subunit alpha-2 Gnai2	21.97	7
P09103	Protein disulfide-isomerase OS=Mus musculus OX=10090 GN P4hb	12.57	6
P09240	Cholecystokinin OS=Mus musculus OX=10090 GN=Cck PE=1 Cck	8.7	1
P09405	Nucleolin OS=Mus musculus OX=10090 GN=Ncl PE=1 SV=2 Ncl	19.52	14
P09411	Phosphoglycerate kinase 1 OS=Mus musculus OX=10090 GN Pgk1	34.53	15
P09450	Transcription factor JunB OS=Mus musculus OX=10090 GN= Junb	2.91	1
P09528	Ferritin heavy chain OS=Mus musculus OX=10090 GN=Fth1 Fth1	11.54	2
P09542	Myosin light chain 3 OS=Mus musculus OX=10090 GN=Myl3 Myl3	11.27	2
P09602	Non-histone chromosomal protein HMG-17 OS=Mus muscul Hmgn2	7.78	1
P09671	Superoxide dismutase [Mn], mitochondrial OS=Mus muscul Sod2	17.12	4
P0C0A3	Charged multivesicular body protein 6 OS=Mus musculus Chmp6	7	1
P0C0S6	Histone H2A.Z OS=Mus musculus OX=10090 GN=H2az1 PE=H2az1	23.44	3
P0C192	Leucine-rich repeat-containing protein 4B OS=Mus musculu Lrrc4b	1.41	1
P0DP26	Calmodulin-1 OS=Mus musculus OX=10090 GN=Calm1 PE=1Calm1	31.54	6
P10126	Elongation factor 1-alpha 1 OS=Mus musculus OX=10090 GN Eef1a1	24.89	11
P10605	Cathepsin B OS=Mus musculus OX=10090 GN=Ctsb PE=1 SVCtsb	26.84	7
P10637	Microtubule-associated protein tau OS=Mus musculus OX=1 Mapt	31.92	30
P10639	Thioredoxin OS=Mus musculus OX=10090 GN=Txn PE=1 SV Txn	58.1	6
P10649	Glutathione S-transferase Mu 1 OS=Mus musculus OX=1009 Gstm1	41.28	9
P10711	Transcription elongation factor A protein 1 OS=Mus muscu Tcea1	37.21	12

P10833	Ras-related protein R-Ras OS=Mus musculus OX=10090 GN= Rras	5.05	1
P10852	Amino acid transporter heavy chain SLC3A2 OS=Mus muscu Slc3a2	11.22	5
P10853	Histone H2B type 1-F/J/L OS=Mus musculus OX=10090 GN= H2bc7	31.75	6
P10922	Histone H1.0 OS=Mus musculus OX=10090 GN=H1-0 PE=2 SH1-0	27.84	7
P11031	Activated RNA polymerase II transcriptional coactivator Sub1	59.84	8
P11103	Poly [ADP-ribose] polymerase 1 OS=Mus musculus OX=1009 Parp1	14.51	14
P11276	Fibronectin OS=Mus musculus OX=10090 GN=Fn1 PE=1 SV=Fn1	1.05	2
P11404	Fatty acid-binding protein, heart OS=Mus musculus OX=100 Fabp3	17.29	2
P11499	Heat shock protein HSP 90-beta OS=Mus musculus OX=1009 Hsp90ab1	31.08	25
P11531	Dystrophin OS=Mus musculus OX=10090 GN=Dmd PE=1 SV:Dmd	0.79	3
P11627	Neural cell adhesion molecule L1 OS=Mus musculus OX=10 L1cam	6.11	8
P11798	Calcium/calmodulin-dependent protein kinase type II subu Camk2a	35.15	18
P11881	Inositol 1,4,5-trisphosphate receptor type 1 OS=Mus muscul Itpr1	4.18	11
P11983	T-complex protein 1 subunit alpha OS=Mus musculus OX=1 Tcp1	31.47	16
P12023	Amyloid-beta precursor protein OS=Mus musculus OX=1009 App	5.19	4
P12025	Midkine OS=Mus musculus OX=10090 GN=Mdk PE=1 SV=2 Mdk	14.29	2
P12367	cAMP-dependent protein kinase type II-alpha regulatory su Prkar2a	21.45	8
P12382	ATP-dependent 6-phosphofructokinase, liver type OS=Mus Pfkf	13.97	12
P12657	Muscarinic acetylcholine receptor M1 OS=Mus musculus O Chrm1	2.83	1
P12658	Calbindin OS=Mus musculus OX=10090 GN=Calb1 PE=1 SV=Calb1	22.22	6
P12815	Programmed cell death protein 6 OS=Mus musculus OX=100 Pdc6	28.8	5
P12849	cAMP-dependent protein kinase type I-beta regulatory subu Prkar1b	7.35	4
P12960	Contactin-1 OS=Mus musculus OX=10090 GN=Cntn1 PE=1 S Cntn1	18.53	19
P12970	Large ribosomal subunit protein eL8 OS=Mus musculus OX= Rpl7a	31.58	11
P13020	Gelsolin OS=Mus musculus OX=10090 GN=Gsn PE=1 SV=3 Gsn	16.54	13
P13542	Myosin-8 OS=Mus musculus OX=10090 GN=Myh8 PE=2 SV=Myh8	3.2	6
P13595	Neural cell adhesion molecule 1 OS=Mus musculus OX=100 Ncam1	17.4	17
P13707	Glycerol-3-phosphate dehydrogenase [NAD(+)], cytoplasm Gpd1	11.75	4
P13808	Anion exchange protein 2 OS=Mus musculus OX=10090 GN=Slc4a2	0.89	1
P14069	Protein S100-A6 OS=Mus musculus OX=10090 GN=S100a6 P S100a6	8.99	1
P14094	Sodium/potassium-transporting ATPase subunit beta-1 OS= Atp1b1	28.95	11
P14106	Complement C1q subcomponent subunit B OS=Mus musculu C1qb	33.2	6
P14115	Large ribosomal subunit protein uL15 OS=Mus musculus OX Rpl27a	27.7	4
P14131	Small ribosomal subunit protein uS9 OS=Mus musculus OX= Rps16	65.75	13
P14148	Large ribosomal subunit protein uL30 OS=Mus musculus OX Rpl7	40.37	15
P14152	Malate dehydrogenase, cytoplasmic OS=Mus musculus OX= Mdh1	22.16	8
P14206	Small ribosomal subunit protein uS2 OS=Mus musculus OX= Rpsa	8.14	2
P14211	Calreticulin OS=Mus musculus OX=10090 GN=Calr PE=1 SV:Calr	17.07	8
P14231	Sodium/potassium-transporting ATPase subunit beta-2 OS= Atp1b2	15.86	6
P14733	Lamin-B1 OS=Mus musculus OX=10090 GN=Lmnb1 PE=1 SV:Lmnb1	1.19	1
P14824	Annexin A6 OS=Mus musculus OX=10090 GN=Anxa6 PE=1 Anxa6	10.4	7
P14869	Large ribosomal subunit protein uL10 OS=Mus musculus OX Rplp0	17.67	5
P14873	Microtubule-associated protein 1B OS=Mus musculus OX=1 Map1b	25	65
P15105	Glutamine synthetase OS=Mus musculus OX=10090 GN=Glul Glul	25.2	11
P15116	Cadherin-2 OS=Mus musculus OX=10090 GN=Cdh2 PE=1 SV:Cdh2	3.64	3
P15508	Spectrin beta chain, erythrocytic OS=Mus musculus OX=100 Sptb	5.26	10
P15532	Nucleoside diphosphate kinase A OS=Mus musculus OX=10 Nme1	48.68	8
P15655	Fibroblast growth factor 2 OS=Mus musculus OX=10090 GN= Fgf2	5.19	1
P15864	Histone H1.2 OS=Mus musculus OX=10090 GN=H1-2 PE=1 SH1-2	24.53	7
P16045	Galectin-1 OS=Mus musculus OX=10090 GN=Lgals1 PE=1 SV:Lgals1	7.41	1
P16054	Protein kinase C epsilon type OS=Mus musculus OX=10090 Prkce	20.9	15
P16125	L-lactate dehydrogenase B chain OS=Mus musculus OX=100 Ldhd	29.04	11
P16330	2',3'-cyclic-nucleotide 3'-phosphodiesterase OS=Mus muscu Cnp	49.52	28
P16388	Potassium voltage-gated channel subfamily A member 1 OS Kcna1	2.22	1

P16460	Argininosuccinate synthase OS=Mus musculus OX=10090 GN Ass1	10.44	5
P16546	Spectrin alpha chain, non-erythrocytic 1 OS=Mus musculus Sptan1	42.15	106
P16858	Glyceraldehyde-3-phosphate dehydrogenase OS=Mus muscu Gapdh	41.14	14
P17095	High mobility group protein HMG-I/HMG-Y OS=Mus muscu Hmga1	14.95	1
P17156	Heat shock-related 70 kDa protein 2 OS=Mus musculus OX= Hspa2	20.85	14
P17182	Alpha-enolase OS=Mus musculus OX=10090 GN=Eno1 PE=1 Eno1	29.72	14
P17183	Gamma-enolase OS=Mus musculus OX=10090 GN=Eno2 PE= Eno2	30.41	12
P17225	Polypyrimidine tract-binding protein 1 OS=Mus musculus O Ptbp1	3.42	2
P17426	AP-2 complex subunit alpha-1 OS=Mus musculus OX=10090 Ap2a1	36.75	34
P17427	AP-2 complex subunit alpha-2 OS=Mus musculus OX=10090 Ap2a2	30.17	28
P17563	Methanethiol oxidase OS=Mus musculus OX=10090 GN=Sele Selenbp1	6.57	3
P17710	Hexokinase-1 OS=Mus musculus OX=10090 GN=Hk1 PE=1 S Hk1	27	27
P17742	Peptidyl-prolyl cis-trans isomerase A OS=Mus musculus OX Ppia	33.54	6
P17751	Triosephosphate isomerase OS=Mus musculus OX=10090 GN Tpi1	42.97	10
P17809	Solute carrier family 2, facilitated glucose transporter m Slc2a1	2.03	1
P17879	Heat shock 70 kDa protein 1B OS=Mus musculus OX=10090 Hspa1b	13.71	8
P18242	Cathepsin D OS=Mus musculus OX=10090 GN=Ctsd PE=1 SV Ctsd	6.83	3
P18572	Basigin OS=Mus musculus OX=10090 GN=Bsg PE=1 SV=2 Bsg	8.23	3
P18654	Ribosomal protein S6 kinase alpha-3 OS=Mus musculus OX Rps6ka3	2.3	2
P18760	Cofilin-1 OS=Mus musculus OX=10090 GN=Cfl1 PE=1 SV=3 Cfl1	43.37	10
P18872	Guanine nucleotide-binding protein G(o) subunit alpha OS Gnao1	33.33	11
P19096	Fatty acid synthase OS=Mus musculus OX=10090 GN=Fasn P Fasn	8.31	20
P19157	Glutathione S-transferase P 1 OS=Mus musculus OX=10090 Gstp1	15.24	3
P19221	Prothrombin OS=Mus musculus OX=10090 GN=F2 PE=1 SV=F2	3.88	2
P19246	Neurofilament heavy polypeptide OS=Mus musculus OX=100 Nefh	14.59	15
P19253	Large ribosomal subunit protein uL13 OS=Mus musculus OX Rpl13a	33	7
P19258	Protein Mpv17 OS=Mus musculus OX=10090 GN=Mpv17 PE=Mpv17	5.11	1
P20029	Endoplasmic reticulum chaperone BiP OS=Mus musculus OX Hspa5	27.63	17
P20060	Beta-hexosaminidase subunit beta OS=Mus musculus OX=10 Hexb	3.36	2
P20108	Thioredoxin-dependent peroxide reductase, mitochondrial Prdx3	8.17	2
P20152	Vimentin OS=Mus musculus OX=10090 GN=Vim PE=1 SV=3 Vim	5.36	3
P20357	Microtubule-associated protein 2 OS=Mus musculus OX=10 Map2	41.41	83
P20444	Protein kinase C alpha type OS=Mus musculus OX=10090 GN Prkca	9.97	7
P20917	Myelin-associated glycoprotein OS=Mus musculus OX=1009 Mag	3.35	2
P20918	Plasminogen OS=Mus musculus OX=10090 GN=Plg PE=1 SV Plg	2.09	2
P21107	Tropomyosin alpha-3 chain OS=Mus musculus OX=10090 G Tpm3	26.67	9
P21279	Guanine nucleotide-binding protein G(q) subunit alpha OS Gnaq	5.85	2
P21300	Aldo-keto reductase family 1 member B7 OS=Mus musculus Akr1b7	2.53	1
P21460	Cystatin-C OS=Mus musculus OX=10090 GN=Cst3 PE=1 SV=Cst3	60	9
P21550	Beta-enolase OS=Mus musculus OX=10090 GN=Eno3 PE=1 S Eno3	11.98	4
P21661	Neuroendocrine convertase 2 OS=Mus musculus OX=10090 G Pcsk2	3.61	2
P21981	Protein-glutamine gamma-glutamyltransferase 2 OS=Mus m Tgm2	2.19	1
P22315	Ferrochelataze, mitochondrial OS=Mus musculus OX=10090 Fech	5.45	2
P22723	Gamma-aminobutyric acid receptor subunit gamma-2 OS=Mus Gabrg2	8.02	4
P22892	AP-1 complex subunit gamma-1 OS=Mus musculus OX=1009 Ap1g1	3.53	3
P23116	Eukaryotic translation initiation factor 3 subunit A OS=Mus Eif3a	5.13	9
P23198	Chromobox protein homolog 3 OS=Mus musculus OX=10090 Cbx3	26.23	4
P23242	Gap junction alpha-1 protein OS=Mus musculus OX=10090 G Gja1	17.02	6
P23298	Protein kinase C eta type OS=Mus musculus OX=10090 GN=P Prkch	4.39	3
P23506	Protein-L-isoaspartate(D-aspartate) O-methyltransferase Pcmt1	19.38	4
P23591	GDP-L-fucose synthase OS=Mus musculus OX=10090 GN=GfGfus	3.74	1
P23819	Glutamate receptor 2 OS=Mus musculus OX=10090 GN=Gria2Gria2	8.61	7
P23927	Alpha-crystallin B chain OS=Mus musculus OX=10090 GN=C Cryab	22.29	4
P24288	Branched-chain-amino-acid aminotransferase, cytosolic OS Bcat1	2.59	1

P24369	Peptidyl-prolyl cis-trans isomerase B OS=Mus musculus OX	Ppib	43.52	9
P24472	Glutathione S-transferase A4 OS=Mus musculus OX=10090	Gsta4	5.41	1
P24527	Leukotriene A-4 hydrolase OS=Mus musculus OX=10090 GN=Lta4h		9.33	5
P24529	Tyrosine 3-monooxygenase OS=Mus musculus OX=10090 GN Th		2.21	1
P24547	Inosine-5'-monophosphate dehydrogenase 2 OS=Mus muscul	Impdh2	5.84	2
P24788	Cyclin-dependent kinase 11B OS=Mus musculus OX=10090	Cdk11b	21.3	19
P25444	Small ribosomal subunit protein uS5 OS=Mus musculus OX=	Rps2	25.26	7
P25976	Nucleolar transcription factor 1 OS=Mus musculus OX=1009	Ubtf	12.03	9
P26039	Talin-1 OS=Mus musculus OX=10090 GN=Tln1 PE=1 SV=2	Tln1	1.06	2
P26040	Ezrin OS=Mus musculus OX=10090 GN=Ezr PE=1 SV=3	Ezr	32.42	25
P26041	Moesin OS=Mus musculus OX=10090 GN=Msn PE=1 SV=3	Msn	23.05	16
P26043	Radixin OS=Mus musculus OX=10090 GN=Rdx PE=1 SV=3	Rdx	29.85	22
P26049	Gamma-aminobutyric acid receptor subunit alpha-3 OS=Mus	Gabra3	9.55	4
P26151	High affinity immunoglobulin gamma Fc receptor I OS=Mus	Fcgr1	8.17	3
P26231	Catenin alpha-1 OS=Mus musculus OX=10090 GN=Ctnna1 PE=Ctnna1		7.62	7
P26350	Prothymosin alpha OS=Mus musculus OX=10090 GN=Ptma P	Ptma	20.72	2
P26369	Splicing factor U2AF 65 kDa subunit OS=Mus musculus OX	U2af2	14.53	7
P26443	Glutamate dehydrogenase 1, mitochondrial OS=Mus muscul	Glud1	28.49	15
P26638	Serine--tRNA ligase, cytoplasmic OS=Mus musculus OX=100	Sars1	10.55	5
P26645	Myristoylated alanine-rich C-kinase substrate OS=Mus mus	Marcks	20.71	5
P26883	Peptidyl-prolyl cis-trans isomerase FKBP1A OS=Mus muscu	Fkbp1a	41.67	4
P27048	Small nuclear ribonucleoprotein-associated protein B OS=	Snrbp	18.61	4
P27546	Microtubule-associated protein 4 OS=Mus musculus OX=10	Map4	31.11	31
P27600	Guanine nucleotide-binding protein subunit alpha-12 OS=M	Gna12	23.48	10
P27601	Guanine nucleotide-binding protein subunit alpha-13 OS=M	Gna13	4.77	2
P27612	Phospholipase A-2-activating protein OS=Mus musculus OX	Plaa	3.27	2
P27659	Large ribosomal subunit protein uL3 OS=Mus musculus OX=	Rpl3	26.8	14
P27671	Ras-specific guanine nucleotide-releasing factor 1 OS=Mus	Rasgrf1	10.38	13
P27773	Protein disulfide-isomerase A3 OS=Mus musculus OX=10090	Pdia3	31.09	14
P28028	Serine/threonine-protein kinase B-raf OS=Mus musculus OX	Braf	11.58	9
P28184	Metallothionein-3 OS=Mus musculus OX=10090 GN=Mt3 PE=Mt3		38.24	3
P28352	DNA-(apurinic or apyrimidinic site) endonuclease OS=Mus	Apex1	21.77	7
P28474	Alcohol dehydrogenase class-3 OS=Mus musculus OX=1009	Adh5	4.55	2
P28651	Carbonic anhydrase-related protein OS=Mus musculus OX=1	Ca8	3.09	1
P28652	Calcium/calmodulin-dependent protein kinase type II subu	Camk2b	35.42	19
P28656	Nucleosome assembly protein 1-like 1 OS=Mus musculus O	Nap1l1	7.42	4
P28659	CUGBP Elav-like family member 1 OS=Mus musculus OX=10	Celf1	1.65	1
P28660	Nck-associated protein 1 OS=Mus musculus OX=10090 GN=NNckap1		24.02	28
P28661	Septin-4 OS=Mus musculus OX=10090 GN=Septin4 PE=1 SV=Septin4		14.23	7
P28663	Beta-soluble NSF attachment protein OS=Mus musculus OX	Napb	33.89	9
P28667	MARCKS-related protein OS=Mus musculus OX=10090 GN=Marcksl1		6.5	1
P28738	Kinesin heavy chain isoform 5C OS=Mus musculus OX=1009	Kif5c	37.24	32
P28740	Kinesin-like protein KIF2A OS=Mus musculus OX=10090 GN Kif2a		30.5	25
P28741	Kinesin-like protein KIF3A OS=Mus musculus OX=10090 GN Kif3a		12.55	8
P28798	Progranulin OS=Mus musculus OX=10090 GN=Grn PE=1 SV=Grn		4.75	3
P28828	Receptor-type tyrosine-protein phosphatase mu OS=Mus mu	Ptpm	0.48	1
P28867	Protein kinase C delta type OS=Mus musculus OX=10090 GN Prkcd		9.05	6
P29268	CCN family member 2 OS=Mus musculus OX=10090 GN=CcnCcn2		14.94	5
P29341	Polyadenylate-binding protein 1 OS=Mus musculus OX=1009	Pabpc1	20.75	15
P29595	NEDD8 OS=Mus musculus OX=10090 GN=Nedd8 PE=1 SV=Nedd8		13.58	1
P29699	Alpha-2-HS-glycoprotein OS=Mus musculus OX=10090 GN= Ahsg		4.93	1
P29788	Vitronectin OS=Mus musculus OX=10090 GN=Vtn PE=1 SV=Vtn		2.51	1
P30275	Creatine kinase U-type, mitochondrial OS=Mus musculus O	Ckmt1	14.59	6
P30416	Peptidyl-prolyl cis-trans isomerase FKBP4 OS=Mus muscul	Fkbp4	3.06	1

P30681	High mobility group protein B2 OS=Mus musculus OX=100	Hmgb2	40.95	10
P30999	Catenin delta-1 OS=Mus musculus OX=10090 GN=Ctnnd1 PE	Ctnnd1	16.31	16
P31230	Aminoacyl tRNA synthase complex-interacting multifunctio	Aimp1	15.81	4
P31324	cAMP-dependent protein kinase type II-beta regulatory sub	Prkar2b	25.72	11
P31648	Sodium- and chloride-dependent GABA transporter 1 OS=Mus	Slc6a1	7.01	3
P31650	Sodium- and chloride-dependent GABA transporter 3 OS=Mus	Slc6a11	6.38	4
P31786	Acyl-CoA-binding protein OS=Mus musculus OX=10090 GN=	Dbi	26.44	2
P31938	Dual specificity mitogen-activated protein kinase kinase	Map2k1	25.45	8
P32037	Solute carrier family 2, facilitated glucose transporter m	Slc2a3	7.1	3
P32067	Lupus La protein homolog OS=Mus musculus OX=10090 GN=	Ssb	20	10
P32233	Developmentally-regulated GTP-binding protein 1 OS=Mus	Drg1	40.87	13
P32883	GTPase KRas OS=Mus musculus OX=10090 GN=Kras PE=1	Kras	28.57	6
P32921	Tryptophan--tRNA ligase, cytoplasmic OS=Mus musculus O	Wars1	6.24	3
P33173	Kinesin-like protein KIF1A OS=Mus musculus OX=10090 GN	Kif1a	5.72	9
P34022	Ran-specific GTPase-activating protein OS=Mus musculus	Ranbp1	4.43	1
P34152	Focal adhesion kinase 1 OS=Mus musculus OX=10090 GN=Pt	Ptk2	17.49	21
P34884	Macrophage migration inhibitory factor OS=Mus musculus	Mif	13.91	2
P34914	Bifunctional epoxide hydrolase 2 OS=Mus musculus OX=10	Ephx2	1.62	1
P35235	Tyrosine-protein phosphatase non-receptor type 11 OS=Mus	Ptpn11	5.4	3
P35276	Ras-related protein Rab-3D OS=Mus musculus OX=10090 G	Rab3d	8.68	2
P35278	Ras-related protein Rab-5C OS=Mus musculus OX=10090 GN	Rab5c	26.85	5
P35279	Ras-related protein Rab-6A OS=Mus musculus OX=10090 GN	Rab6a	17.31	4
P35282	Ras-related protein Rab-21 OS=Mus musculus OX=10090 GN	Rab21	13.96	3
P35283	Ras-related protein Rab-12 OS=Mus musculus OX=10090 GN	Rab12	11.52	3
P35293	Ras-related protein Rab-18 OS=Mus musculus OX=10090 GN	Rab18	15.05	3
P35438	Glutamate receptor ionotropic, NMDA 1 OS=Mus musculus	Grin1	6.18	6
P35441	Thrombospondin-1 OS=Mus musculus OX=10090 GN=Thbs1	Thbs1	7.95	8
P35486	Pyruvate dehydrogenase E1 component subunit alpha, somat	Pdha1	50.26	24
P35550	rRNA 2'-O-methyltransferase fibrillarin OS=Mus musculus	Fbl	12.54	3
P35564	Calnexin OS=Mus musculus OX=10090 GN=Canx PE=1 SV=1	Canx	17.77	10
P35569	Insulin receptor substrate 1 OS=Mus musculus OX=10090 GN	Irs1	2.03	3
P35585	AP-1 complex subunit mu-1 OS=Mus musculus OX=10090 G	Ap1m1	8.98	3
P35700	Peroxiredoxin-1 OS=Mus musculus OX=10090 GN=Prdx1 PE=	Prdx1	52.26	9
P35710	Transcription factor SOX-5 OS=Mus musculus OX=10090 GN	Sox5	2.1	1
P35802	Neuronal membrane glycoprotein M6-a OS=Mus musculus	Gpm6a	12.95	4
P35803	Neuronal membrane glycoprotein M6-b OS=Mus musculus	Gpm6b	11.28	4
P35922	Fragile X messenger ribonucleoprotein 1 OS=Mus musculus	Fmr1	19.54	13
P35979	Large ribosomal subunit protein uL11 OS=Mus musculus OX	Rpl12	47.88	6
P35980	Large ribosomal subunit protein eL18 OS=Mus musculus OX	Rpl18	44.68	8
P38060	Hydroxymethylglutaryl-CoA lyase, mitochondrial OS=Mus	Hmgcl	16.31	4
P38647	Stress-70 protein, mitochondrial OS=Mus musculus OX=100	Hspa9	28.57	17
P39038	Cadherin-4 OS=Mus musculus OX=10090 GN=Cdh4 PE=2 SV	Cdh4	1.1	1
P39053	Dynamin-1 OS=Mus musculus OX=10090 GN=Dnm1 PE=1 S	Dnm1	31.72	31
P39447	Tight junction protein ZO-1 OS=Mus musculus OX=10090 G	Tjp1	22.52	39
P39749	Flap endonuclease 1 OS=Mus musculus OX=10090 GN=Fen1	Fen1	11.38	4
P39876	Metalloproteinase inhibitor 3 OS=Mus musculus OX=10090	Timp3	11.85	3
P40124	Adenylyl cyclase-associated protein 1 OS=Mus musculus O	Cap1	17.72	8
P40142	Transketolase OS=Mus musculus OX=10090 GN=Tkt PE=1 SV	Tkt	9.15	6
P40224	Stromal cell-derived factor 1 OS=Mus musculus OX=10090	Cxcl12	23.66	2
P40630	Transcription factor A, mitochondrial OS=Mus musculus O	Tfam	41.98	13
P40749	Synaptotagmin-4 OS=Mus musculus OX=10090 GN=Syt4 PE=	Syt4	2.82	1
P41105	Large ribosomal subunit protein eL28 OS=Mus musculus OX	Rpl28	33.58	6
P41216	Long-chain-fatty-acid--CoA ligase 1 OS=Mus musculus OX=	Acsl1	2.58	1
P41230	Lysine-specific demethylase 5C OS=Mus musculus OX=100	Kdm5c	0.45	1

P41778	Pre-B-cell leukemia transcription factor 1 OS=Mus muscul	Pbx1	4.88	2
P42125	Enoyl-CoA delta isomerase 1, mitochondrial OS=Mus muscu	Eci1	11.76	3
P42128	Forkhead box protein K1 OS=Mus musculus OX=10090 GN=F	Foxk1	3.2	2
P42208	Septin-2 OS=Mus musculus OX=10090 GN=Septin2 PE=1 SV=	Septin2	2.77	1
P42567	Epidermal growth factor receptor substrate 15 OS=Mus mus	Eps15	7.8	7
P42669	Transcriptional activator protein Pur-alpha OS=Mus muscul	Pura	19.94	8
P42859	Huntingtin OS=Mus musculus OX=10090 GN=Htt PE=1 SV=2	Htt	6.67	18
P42932	T-complex protein 1 subunit theta OS=Mus musculus OX=10	Cct8	29.74	15
P43006	Excitatory amino acid transporter 2 OS=Mus musculus OX=1	Slc1a2	14.69	9
P43135	COUP transcription factor 2 OS=Mus musculus OX=10090 G	Nr2f2	2.17	1
P43274	Histone H1.4 OS=Mus musculus OX=10090 GN=H1-4 PE=1 SH1-4		26.94	7
P43275	Histone H1.1 OS=Mus musculus OX=10090 GN=H1-1 PE=1 SH1-1		9.86	4
P43276	Histone H1.5 OS=Mus musculus OX=10090 GN=H1-5 PE=1 SH1-5		26.01	6
P43300	Early growth response protein 3 OS=Mus musculus OX=1009	Egr3	8.53	3
P45376	Aldo-keto reductase family 1 member B1 OS=Mus musculus	Akr1b1	18.99	7
P45952	Medium-chain specific acyl-CoA dehydrogenase, mitochon	Acadm	4.99	2
P46061	Ran GTPase-activating protein 1 OS=Mus musculus OX=100	Rangap1	11.38	6
P46096	Synaptotagmin-1 OS=Mus musculus OX=10090 GN=Syt1 PE=Syt1		49.88	20
P46097	Synaptotagmin-2 OS=Mus musculus OX=10090 GN=Syt2 PE=Syt2		25.12	12
P46460	Vesicle-fusing ATPase OS=Mus musculus OX=10090 GN=Nsf	Nsf	43.28	37
P46471	26S proteasome regulatory subunit 7 OS=Mus musculus OX	Psmc2	14.32	6
P46638	Ras-related protein Rab-11B OS=Mus musculus OX=10090 G	Rab11b	18.81	4
P46660	Alpha-internexin OS=Mus musculus OX=10090 GN=Ina PE=1	Ina	38.52	20
P46662	Merlin OS=Mus musculus OX=10090 GN=Nf2 PE=1 SV=2	Nf2	16.44	10
P46735	Unconventional myosin-Ib OS=Mus musculus OX=10090 GN	Myo1b	9.58	11
P46935	E3 ubiquitin-protein ligase NEDD4 OS=Mus musculus OX=1	Nedd4	8.12	8
P47708	Rabphilin-3A OS=Mus musculus OX=10090 GN=Rph3a PE=1	Rph3a	23.94	19
P47738	Aldehyde dehydrogenase, mitochondrial OS=Mus musculus	Aldh2	9.63	5
P47740	Aldehyde dehydrogenase family 3 member A2 OS=Mus musc	Aldh3a2	4.96	2
P47746	Cannabinoid receptor 1 OS=Mus musculus OX=10090 GN=Cn	Cnr1	2.33	1
P47754	F-actin-capping protein subunit alpha-2 OS=Mus musculus	Capza2	32.52	7
P47757	F-actin-capping protein subunit beta OS=Mus musculus OX	Capzb	42.96	12
P47809	Dual specificity mitogen-activated protein kinase kinase	Map2k4	9.57	3
P47856	Glutamine--fructose-6-phosphate aminotransferase [isomeri	Gfpt1	1.58	1
P47857	ATP-dependent 6-phosphofructokinase, muscle type OS=Mus	Pfkm	22.31	18
P47911	Large ribosomal subunit protein eL6 OS=Mus musculus OX=	Rpl6	22.64	7
P47915	Large ribosomal subunit protein eL29 OS=Mus musculus OX	Rpl29	16.25	3
P47930	Fos-related antigen 2 OS=Mus musculus OX=10090 GN=Fosl2	Fosl2	7.36	2
P47962	Large ribosomal subunit protein uL18 OS=Mus musculus OX	Rpl5	20.88	7
P47963	Large ribosomal subunit protein eL13 OS=Mus musculus OX	Rpl13	38.86	9
P47964	Large ribosomal subunit protein eL36 OS=Mus musculus OX	Rpl36	28.57	3
P48036	Annexin A5 OS=Mus musculus OX=10090 GN=Anxa5 PE=1	Anxa5	15.67	5
P48193	Protein 4.1 OS=Mus musculus OX=10090 GN=Epb41 PE=1 S	Epb41	16.43	16
P48318	Glutamate decarboxylase 1 OS=Mus musculus OX=10090 GN	Gad1	11.13	6
P48320	Glutamate decarboxylase 2 OS=Mus musculus OX=10090 GN	Gad2	9.23	5
P48432	Transcription factor SOX-2 OS=Mus musculus OX=10090 GN	Sox2	5.02	2
P48453	Serine/threonine-protein phosphatase 2B catalytic subunit	Ppp3cb	16.57	8
P48678	Prelamin-A/C OS=Mus musculus OX=10090 GN=Lmna PE=1	Lmna	4.81	3
P48758	Carbonyl reductase [NADPH] 1 OS=Mus musculus OX=1009	Cbr1	25.27	7
P48774	Glutathione S-transferase Mu 5 OS=Mus musculus OX=1009	Gstm5	47.32	9
P48962	ADP/ATP translocase 1 OS=Mus musculus OX=10090 GN=Slc	Slc25a4	33.89	11
P49025	Citron Rho-interacting kinase OS=Mus musculus OX=10090	Cit	12.02	24
P49117	Nuclear receptor subfamily 2 group C member 2 OS=Mus mu	Nr2c2	12.92	7
P49182	Heparin cofactor 2 OS=Mus musculus OX=10090 GN=Serpind	Serpind1	2.72	1

P49312	Heterogeneous nuclear ribonucleoprotein A1 OS=Mus muscu	Hnrnpa1	14.37	5
P49443	Protein phosphatase 1A OS=Mus musculus OX=10090 GN=Pp	Ppm1a	10.99	4
P49615	Cyclin-dependent kinase 5 OS=Mus musculus OX=10090 GN	Cdk5	28.77	9
P49722	Proteasome subunit alpha type-2 OS=Mus musculus OX=100	Psma2	16.67	3
P49813	Tropomodulin-1 OS=Mus musculus OX=10090 GN=Tmod1	PFTmod1	34.82	11
P50171	(3R)-3-hydroxyacyl-CoA dehydrogenase OS=Mus musculus	Hsd17b8	14.67	3
P50247	Adenosylhomocysteinase OS=Mus musculus OX=10090 GN=A	Ahcy	10.88	4
P50396	Rab GDP dissociation inhibitor alpha OS=Mus musculus OX	Gdi1	22.15	10
P50446	Keratin, type II cytoskeletal 6A OS=Mus musculus OX=1009	Krt6a	25.5	18
P50516	V-type proton ATPase catalytic subunit A OS=Mus musculu	Atp6v1a	20.26	12
P50518	V-type proton ATPase subunit E 1 OS=Mus musculus OX=10	Atp6v1e1	38.05	8
P50571	Gamma-aminobutyric acid receptor subunit beta-1 OS=Mus	Gabrb1	13.29	6
P50580	Proliferation-associated protein 2G4 OS=Mus musculus OX=	Pa2g4	2.28	1
P50586	Tubby protein OS=Mus musculus OX=10090 GN=Tub PE=1 S	Tub	13.66	6
P51150	Ras-related protein Rab-7a OS=Mus musculus OX=10090 GN	Rab7a	33.82	6
P51174	Long-chain specific acyl-CoA dehydrogenase, mitochondri	Acadl	8.14	3
P51175	Protoporphyrinogen oxidase OS=Mus musculus OX=10090 G	Ppox	3.56	1
P51410	Large ribosomal subunit protein uL6 OS=Mus musculus OX=	Rpl9	46.88	9
P51660	Peroxisomal multifunctional enzyme type 2 OS=Mus muscu	Hsd17b4	8.71	5
P51827	AF4/FMR2 family member 3 OS=Mus musculus OX=10090 G	Aff3	0.72	1
P51830	Adenylate cyclase type 9 OS=Mus musculus OX=10090 GN=AA	Adcy9	1.4	2
P51859	Hepatoma-derived growth factor OS=Mus musculus OX=100	Hdgf	14.77	4
P51863	V-type proton ATPase subunit d 1 OS=Mus musculus OX=10	Atp6v0d1	20.23	8
P51881	ADP/ATP translocase 2 OS=Mus musculus OX=10090 GN=Slc	Slc25a5	23.49	9
P52196	Thiosulfate sulfurtransferase OS=Mus musculus OX=10090 G	Tst	16.84	4
P52430	Serum paraoxonase/arylesterase 1 OS=Mus musculus OX=10	Pon1	3.94	1
P52480	Pyruvate kinase PKM OS=Mus musculus OX=10090 GN=Pkm	Pkm	55.93	28
P52503	NADH dehydrogenase [ubiquinone] iron-sulfur protein 6, m	Ndufs6	25.86	3
P53026	Large ribosomal subunit protein uL1 OS=Mus musculus OX=	Rpl10a	44.7	12
P53395	Lipoamide acyltransferase component of branched-chain alp	Dbt	35.48	17
P53612	Geranylgeranyl transferase type-2 subunit beta OS=Mus mu	Rabggtb	3.24	1
P53762	Aryl hydrocarbon receptor nuclear translocator OS=Mus mu	Arnt	1.01	1
P53810	Phosphatidylinositol transfer protein alpha isoform OS=M	Pitpna	34.32	10
P53986	Monocarboxylate transporter 1 OS=Mus musculus OX=10090	Slc16a1	1.83	1
P53994	Ras-related protein Rab-2A OS=Mus musculus OX=10090 GN	Rab2a	26.42	5
P53996	CCHC-type zinc finger nucleic acid binding protein OS=M	Cnbp	21.91	4
P54071	Isocitrate dehydrogenase [NADP], mitochondrial OS=Mus m	Idh2	8.85	4
P54099	DNA polymerase subunit gamma-1 OS=Mus musculus OX=10	Polg	1.4	1
P54103	DnaJ homolog subfamily C member 2 OS=Mus musculus OX=	Dnajc2	5.96	3
P54227	Stathmin OS=Mus musculus OX=10090 GN=Stmn1 PE=1 SV=	Stmn1	54.36	8
P54285	Voltage-dependent L-type calcium channel subunit beta-3	Cacnb3	11.16	5
P54728	UV excision repair protein RAD23 homolog B OS=Mus mus	Rad23b	7.45	3
P54775	26S proteasome regulatory subunit 6B OS=Mus musculus O	Psmc4	19.38	7
P54818	Galactocerebrosidase OS=Mus musculus OX=10090 GN=Galc	Galc	2.34	1
P54822	Adenylosuccinate lyase OS=Mus musculus OX=10090 GN=Ad	Adsl	2.27	1
P54823	Probable ATP-dependent RNA helicase DDX6 OS=Mus musc	Ddx6	14.91	6
P54830	Tyrosine-protein phosphatase non-receptor type 5 OS=Mus	Ptpn5	4.44	3
P55066	Neurocan core protein OS=Mus musculus OX=10090 GN=Nca	Ncan	9.7	13
P55088	Aquaporin-4 OS=Mus musculus OX=10090 GN=Aqp4 PE=1 S	Aqp4	3.1	1
P55200	Histone-lysine N-methyltransferase 2A OS=Mus musculus	Kmt2a	0.2	1
P55264	Adenosine kinase OS=Mus musculus OX=10090 GN=Adk PE=	Adk	6.65	2
P56371	Ras-related protein Rab-4A OS=Mus musculus OX=10090 GN	Rab4a	10.55	2
P56395	Cytochrome b5 OS=Mus musculus OX=10090 GN=Cyb5a PE=	Cyb5a	25.37	3
P56399	Ubiquitin carboxyl-terminal hydrolase 5 OS=Mus musculus	Usp5	12.94	10

P56480	ATP synthase subunit beta, mitochondrial OS=Mus musculus	Atp5f1b	30.81	13
P56564	Excitatory amino acid transporter 1 OS=Mus musculus OX=1	Slc1a3	9.39	5
P56581	G/T mismatch-specific thymine DNA glycosylase OS=Mus m	Tdg	2.61	1
P56671	Myc-associated zinc finger protein OS=Mus musculus OX=1	Maz	9.64	6
P56942	Pro-MCH OS=Mus musculus OX=10090 GN=Pmch PE=1 SV=Pmch		21.82	3
P56959	RNA-binding protein FUS OS=Mus musculus OX=10090 GN=Fus		10.04	4
P56960	Exosome complex component 10 OS=Mus musculus OX=1009	Exosc10	2.25	2
P57776	Elongation factor 1-delta OS=Mus musculus OX=10090 GN=E	Eef1d	16.37	4
P57780	Alpha-actinin-4 OS=Mus musculus OX=10090 GN=Actn4 PE=Actn4		25.77	24
P58252	Elongation factor 2 OS=Mus musculus OX=10090 GN=Eef2 P	Eef2	24.94	22
P58281	Dynamin-like 120 kDa protein, mitochondrial OS=Mus musc	Opa1	19.06	16
P58389	Serine/threonine-protein phosphatase 2A activator OS=Mus	Ptpa	9.6	3
P58404	Striatin-4 OS=Mus musculus OX=10090 GN=Strn4 PE=1 SV=:Strn4		13.55	8
P58771	Tropomyosin alpha-1 chain OS=Mus musculus OX=10090 G	Tpm1	20.42	6
P59016	Vacuolar protein sorting-associated protein 33B OS=Mus m	Vps33b	1.94	1
P59108	Copine-2 OS=Mus musculus OX=10090 GN=Cpne2 PE=1 SV=Cpne2		4.01	2
P59279	Ras-related protein Rab-2B OS=Mus musculus OX=10090 GN	Rab2b	21.76	4
P59326	YTH domain-containing family protein 1 OS=Mus musculus	Ythdf1	7.51	4
P59759	Myocardin-related transcription factor B OS=Mus musculus	Mrtfb	8.7	9
P59764	Dedicator of cytokinesis protein 4 OS=Mus musculus OX=1	Dock4	3.44	7
P60122	RuvB-like 1 OS=Mus musculus OX=10090 GN=Ruvbl1 PE=1	Ruvbl1	18.86	8
P60202	Myelin proteolipid protein OS=Mus musculus OX=10090 GN=Plp1		24.55	7
P60229	Eukaryotic translation initiation factor 3 subunit E OS=Mu	Eif3e	10.79	5
P60335	Poly(rC)-binding protein 1 OS=Mus musculus OX=10090 GN	Pcbp1	25.28	8
P60469	Liprin-alpha-3 OS=Mus musculus OX=10090 GN=Ppfia3 PE=	Ppfia3	28.89	32
P60487	Chronophin OS=Mus musculus OX=10090 GN=Pdpx PE=1 SVPdpx		15.07	4
P60521	Gamma-aminobutyric acid receptor-associated protein-like	Gabarapl2	35.04	4
P60710	Actin, cytoplasmic 1 OS=Mus musculus OX=10090 GN=Actb	Actb	38.4	18
P60761	Neurogranin OS=Mus musculus OX=10090 GN=Nrgn PE=1 S	Nrgn	19.23	2
P60762	Mortality factor 4-like protein 1 OS=Mus musculus OX=100	Morf4l1	8.84	3
P60766	Cell division control protein 42 homolog OS=Mus musculus	Cdc42	22.51	4
P60824	Cold-inducible RNA-binding protein OS=Mus musculus OX=	Cirbp	6.4	1
P60840	Alpha-endosulfine OS=Mus musculus OX=10090 GN=Ensa PEEnsa		49.59	6
P60843	Eukaryotic initiation factor 4A-I OS=Mus musculus OX=100	Eif4a1	33.25	12
P60853	Leucine zipper putative tumor suppressor 1 OS=Mus muscul	Lzts1	1.5	1
P60867	Small ribosomal subunit protein uS10 OS=Mus musculus OX	Rps20	36.13	6
P60879	Synaptosomal-associated protein 25 OS=Mus musculus OX=	Snap25	45.15	9
P60904	DnaJ homolog subfamily C member 5 OS=Mus musculus OX=	Dnajc5	11.62	2
P61021	Ras-related protein Rab-5B OS=Mus musculus OX=10090 GN	Rab5b	20.47	4
P61027	Ras-related protein Rab-10 OS=Mus musculus OX=10090 GN	Rab10	28	6
P61028	Ras-related protein Rab-8B OS=Mus musculus OX=10090 GN	Rab8b	11.11	2
P61079	Ubiquitin-conjugating enzyme E2 D3 OS=Mus musculus OX	Ube2d3	7.48	1
P61080	Ubiquitin-conjugating enzyme E2 D1 OS=Mus musculus OX	Ube2d1	7.48	1
P61089	Ubiquitin-conjugating enzyme E2 N OS=Mus musculus OX=	Ube2n	36.18	7
P61148	Fibroblast growth factor 1 OS=Mus musculus OX=10090 GN=	Fgf1	7.1	1
P61161	Actin-related protein 2 OS=Mus musculus OX=10090 GN=Act	Actr2	21.07	7
P61202	COP9 signalosome complex subunit 2 OS=Mus musculus OX	Cops2	7.67	3
P61222	ATP-binding cassette sub-family E member 1 OS=Mus musc	Abce1	14.69	9
P61255	Large ribosomal subunit protein uL24 OS=Mus musculus OX	Rpl26	46.21	9
P61264	Syntaxin-1B OS=Mus musculus OX=10090 GN=Stx1b PE=1 SStx1b		38.54	11
P61329	Fibroblast growth factor 12 OS=Mus musculus OX=10090 GN	Fgf12	18.11	5
P61358	Large ribosomal subunit protein eL27 OS=Mus musculus OX	Rpl27	42.65	5
P61406	Telomerase-binding protein EST1A OS=Mus musculus OX=1	Smg6	0.99	1
P61514	Large ribosomal subunit protein eL43 OS=Mus musculus OX	Rpl37a	32.61	5

P61750	ADP-ribosylation factor 4 OS=Mus musculus OX=10090 GN=	Arf4	29.44	4
P61809	Cyclin-dependent kinase 5 activator 1 OS=Mus musculus O	Cdk5r1	7.17	2
P61922	4-aminobutyrate aminotransferase, mitochondrial OS=Mus	Abat	25	11
P61965	WD repeat-containing protein 5 OS=Mus musculus OX=1009	Wdr5	11.68	3
P61967	AP-1 complex subunit sigma-1A OS=Mus musculus OX=100	Ap1s1	5.06	1
P61979	Heterogeneous nuclear ribonucleoprotein K OS=Mus muscul	Hnrnpk	22.89	10
P61982	14-3-3 protein gamma OS=Mus musculus OX=10090 GN=Ywt	Ywhag	41.3	11
P62069	Ubiquitin carboxyl-terminal hydrolase 46 OS=Mus musculu	Usp46	13.93	5
P62082	Small ribosomal subunit protein eS7 OS=Mus musculus OX=	Rps7	27.32	7
P62137	Serine/threonine-protein phosphatase PP1-alpha catalytic	Ppp1ca	29.09	9
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic s	Ppp1cb	28.13	9
P62192	26S proteasome regulatory subunit 4 OS=Mus musculus OX	Psmc1	10	4
P62196	26S proteasome regulatory subunit 8 OS=Mus musculus OX	Psmc5	20.44	7
P62242	Small ribosomal subunit protein eS8 OS=Mus musculus OX=	Rps8	35.1	7
P62245	Small ribosomal subunit protein uS8 OS=Mus musculus OX=	Rps15a	65.38	9
P62259	14-3-3 protein epsilon OS=Mus musculus OX=10090 GN=Ywt	Ywhae	41.57	11
P62264	Small ribosomal subunit protein uS11 OS=Mus musculus OX	Rps14	25.83	5
P62267	Small ribosomal subunit protein uS12 OS=Mus musculus OX	Rps23	22.38	5
P62270	Small ribosomal subunit protein uS13 OS=Mus musculus OX	Rps18	57.24	15
P62281	Small ribosomal subunit protein uS17 OS=Mus musculus OX	Rps11	61.39	15
P62301	Small ribosomal subunit protein uS15 OS=Mus musculus OX	Rps13	43.71	9
P62315	Small nuclear ribonucleoprotein Sm D1 OS=Mus musculus	Snrpd1	20.17	2
P62317	Small nuclear ribonucleoprotein Sm D2 OS=Mus musculus	Snrpd2	25.42	3
P62320	Small nuclear ribonucleoprotein Sm D3 OS=Mus musculus	Snrpd3	7.94	1
P62331	ADP-ribosylation factor 6 OS=Mus musculus OX=10090 GN=	Arf6	21.14	3
P62482	Voltage-gated potassium channel subunit beta-2 OS=Mus m	Kcnab2	25.61	10
P62484	Abl interactor 2 OS=Mus musculus OX=10090 GN=Abi2 PE=1	Abi2	18.39	9
P62631	Elongation factor 1-alpha 2 OS=Mus musculus OX=10090 GN	Eef1a2	26.35	12
P62702	Small ribosomal subunit protein eS4 OS=Mus musculus OX=	Rps4x	42.59	15
P62715	Serine/threonine-protein phosphatase 2A catalytic subunit	Ppp2cb	21.04	6
P62717	Large ribosomal subunit protein eL20 OS=Mus musculus OX	Rpl18a	43.18	8
P62737	Actin, aortic smooth muscle OS=Mus musculus OX=10090 G	Acta2	24.4	13
P62743	AP-2 complex subunit sigma OS=Mus musculus OX=10090 G	Ap2s1	27.46	5
P62746	Rho-related GTP-binding protein RhoB OS=Mus musculus	Rhob	20.41	4
P62751	Large ribosomal subunit protein uL23 OS=Mus musculus OX	Rpl23a	51.28	10
P62754	Small ribosomal subunit protein eS6 OS=Mus musculus OX=	Rps6	35.34	10
P62774	Myotrophin OS=Mus musculus OX=10090 GN=Mtpn PE=1 SV	Mtpn	16.1	1
P62806	Histone H4 OS=Mus musculus OX=10090 GN=H4c1 PE=1 SV	H4c1	38.83	4
P62812	Gamma-aminobutyric acid receptor subunit alpha-1 OS=Mus	Gabra1	25.27	12
P62814	V-type proton ATPase subunit B, brain isoform OS=Mus mu	Atp6v1b2	18.2	9
P62821	Ras-related protein Rab-1A OS=Mus musculus OX=10090 G	Rab1A	23.41	5
P62823	Ras-related protein Rab-3C OS=Mus musculus OX=10090 GN	Rab3c	25.11	5
P62827	GTP-binding nuclear protein Ran OS=Mus musculus OX=100	Ran	34.72	8
P62830	Large ribosomal subunit protein uL14 OS=Mus musculus OX	Rpl23	30	5
P62835	Ras-related protein Rap-1A OS=Mus musculus OX=10090 GN	Rap1a	22.83	4
P62843	Small ribosomal subunit protein uS19 OS=Mus musculus OX	Rps15	22.07	4
P62849	Small ribosomal subunit protein eS24 OS=Mus musculus OX	Rps24	14.29	3
P62852	Small ribosomal subunit protein eS25 OS=Mus musculus OX	Rps25	52.8	7
P62855	Small ribosomal subunit protein eS26 OS=Mus musculus OX	Rps26	38.26	5
P62858	Small ribosomal subunit protein eS28 OS=Mus musculus OX	Rps28	46.38	3
P62862	Ubiquitin-like FUBI-ribosomal protein eS30 fusion protei	Fau	23.31	4
P62869	Elongin-B OS=Mus musculus OX=10090 GN=Elob PE=1 SV=	Elob	43.22	5
P62874	Guanine nucleotide-binding protein G(I)/G(S)/G(T) subuni	Gnb1	23.82	8
P62878	E3 ubiquitin-protein ligase RBX1 OS=Mus musculus OX=10	Rbx1	7.41	1

P62880	Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit	Gnb2	23.82	8
P62881	Guanine nucleotide-binding protein subunit beta-5 OS=Mus	Gnb5	18.99	9
P62889	Large ribosomal subunit protein eL30 OS=Mus musculus OX	Rpl30	26.09	4
P62897	Cytochrome c, somatic OS=Mus musculus OX=10090 GN=CycCy	Cycc	71.43	8
P62900	Large ribosomal subunit protein eL31 OS=Mus musculus OX	Rpl31	49.6	10
P62908	Small ribosomal subunit protein uS3 OS=Mus musculus OX=	Rps3	75.31	23
P62911	Large ribosomal subunit protein eL32 OS=Mus musculus OX	Rpl32	51.11	8
P62915	Transcription initiation factor IIB OS=Mus musculus OX=10	Gtf2b	16.77	5
P62918	Large ribosomal subunit protein uL2 OS=Mus musculus OX=	Rpl8	22.57	6
P62960	Y-box-binding protein 1 OS=Mus musculus OX=10090 GN=Y	Ybx1	9.32	2
P62962	Profilin-1 OS=Mus musculus OX=10090 GN=Pfn1 PE=1 SV=2	Pfn1	32.14	4
P62983	Ubiquitin-ribosomal protein eS31 fusion protein OS=Mus m	Rps27a	38.46	5
P62984	Ubiquitin-ribosomal protein eL40 fusion protein OS=Mus m	Uba52	21.88	3
P62996	Transformer-2 protein homolog beta OS=Mus musculus OX=	Tra2b	14.58	4
P63001	Ras-related C3 botulinum toxin substrate 1 OS=Mus muscul	Rac1	39.06	8
P63005	Platelet-activating factor acetylhydrolase IB subunit beta	Pafah1b1	28.78	9
P63011	Ras-related protein Rab-3A OS=Mus musculus OX=10090 GN	Rab3a	26.82	5
P63017	Heat shock cognate 71 kDa protein OS=Mus musculus OX=1	Hspa8	50.15	35
P63024	Vesicle-associated membrane protein 3 OS=Mus musculus	Vamp3	25.24	2
P63028	Translationally-controlled tumor protein OS=Mus musculus	Tpt1	12.21	2
P63032	GTP-binding protein Rhes OS=Mus musculus OX=10090 GN=	Rasd2	5.26	1
P63034	Cytohesin-2 OS=Mus musculus OX=10090 GN=Cyth2 PE=1 S	Cyth2	12.5	5
P63037	DnaJ homolog subfamily A member 1 OS=Mus musculus OX	Dnaja1	18.64	7
P63038	60 kDa heat shock protein, mitochondrial OS=Mus musculu	Hspd1	32.11	17
P63040	Complexin-1 OS=Mus musculus OX=10090 GN=Cplx1 PE=1	Cplx1	10.45	1
P63058	Thyroid hormone receptor alpha OS=Mus musculus OX=1009	Thra	1.42	1
P63073	Eukaryotic translation initiation factor 4E OS=Mus musculu	Eif4e	20.28	4
P63080	Gamma-aminobutyric acid receptor subunit beta-3 OS=Mus	Gabrb3	15.43	7
P63085	Mitogen-activated protein kinase 1 OS=Mus musculus OX=1	Mapk1	24.58	10
P63087	Serine/threonine-protein phosphatase PP1-gamma catalytic	Ppp1cc	22.91	7
P63089	Pleiotrophin OS=Mus musculus OX=10090 GN=Ptn PE=1 SV=	Ptn	20.24	4
P63094	Guanine nucleotide-binding protein G(s) subunit alpha iso	Gnas	10.91	4
P63101	14-3-3 protein zeta/delta OS=Mus musculus OX=10090 GN=	Ywhaz	48.57	13
P63137	Gamma-aminobutyric acid receptor subunit beta-2 OS=Mus	Gabrb2	19.14	8
P63143	Voltage-gated potassium channel subunit beta-1 OS=Mus m	Kcnab1	6.98	3
P63158	High mobility group protein B1 OS=Mus musculus OX=100	Hmgb1	37.21	9
P63166	Small ubiquitin-related modifier 1 OS=Mus musculus OX=1	Sumo1	23.76	3
P63168	Dynein light chain 1, cytoplasmic OS=Mus musculus OX=10	Dynll1	25.84	3
P63242	Eukaryotic translation initiation factor 5A-1 OS=Mus muscu	Eif5a	12.99	2
P63248	cAMP-dependent protein kinase inhibitor alpha OS=Mus mu	Pkia	19.74	1
P63276	Small ribosomal subunit protein eS17 OS=Mus musculus OX	Rps17	47.41	9
P63280	SUMO-conjugating enzyme UBC9 OS=Mus musculus OX=100	Ube2i	20.25	3
P63318	Protein kinase C gamma type OS=Mus musculus OX=10090 G	Prkcg	28.26	17
P63321	Ras-related protein Ral-A OS=Mus musculus OX=10090 GN=	Rala	13.11	3
P63323	Small ribosomal subunit protein eS12 OS=Mus musculus OX	Rps12	22.73	4
P63325	Small ribosomal subunit protein eS10 OS=Mus musculus OX	Rps10	48.48	10
P63328	Protein phosphatase 3 catalytic subunit alpha OS=Mus mus	Ppp3ca	23.03	11
P67778	Prohibitin 1 OS=Mus musculus OX=10090 GN=Phb1 PE=1 SV=	Phb1	27.94	8
P67871	Casein kinase II subunit beta OS=Mus musculus OX=10090	Csnk2b	15.35	3
P67984	Large ribosomal subunit protein eL22 OS=Mus musculus OX	Rpl22	18.75	2
P68040	Small ribosomal subunit protein RACK1 OS=Mus musculus	Rack1	27.44	8
P68181	cAMP-dependent protein kinase catalytic subunit beta OS=	Prkacb	28.77	10
P68254	14-3-3 protein theta OS=Mus musculus OX=10090 GN=Ywha	Ywhaq	32.65	10
P68368	Tubulin alpha-4A chain OS=Mus musculus OX=10090 GN=Tu	Tuba4a	34.82	17

P68369	Tubulin alpha-1A chain OS=Mus musculus OX=10090 GN=TuTuba1a	39.25	20
P68372	Tubulin beta-4B chain OS=Mus musculus OX=10090 GN=TubTubb4b	42.02	18
P68404	Protein kinase C beta type OS=Mus musculus OX=10090 GN=Prkcb	16.84	11
P68510	14-3-3 protein eta OS=Mus musculus OX=10090 GN=Ywhah Ywhah	39.02	11
P69566	Ran-binding protein 9 OS=Mus musculus OX=10090 GN=RanRanbp9	3.37	2
P70122	Ribosome maturation protein SBDS OS=Mus musculus OX=1 Sbds	22	6
P70168	Importin subunit beta-1 OS=Mus musculus OX=10090 GN=KpKpnb1	10.62	9
P70169	Double C2-like domain-containing protein beta OS=Mus mu Doc2b	16.02	7
P70175	Disks large homolog 3 OS=Mus musculus OX=10090 GN=DlgDlg3	13.07	10
P70181	Phosphatidylinositol 4-phosphate 5-kinase type-1 beta OS Pip5k1b	5.19	3
P70182	Phosphatidylinositol 4-phosphate 5-kinase type-1 alpha OS Pip5k1a	33.7	19
P70188	Kinesin-associated protein 3 OS=Mus musculus OX=10090 G Kifap3	9.46	7
P70205	Pituitary adenylate cyclase-activating polypeptide type I Adcyap1r1	1.61	1
P70227	Inositol 1,4,5-trisphosphate receptor type 3 OS=Mus muscul Itpr3	1.42	4
P70232	Neural cell adhesion molecule L1-like protein OS=Mus mus Chl1	1.82	2
P70236	Dual specificity mitogen-activated protein kinase kinase Map2k6	8.08	2
P70248	Unconventional myosin-If OS=Mus musculus OX=10090 GN=Myo1f	0.73	1
P70255	Nuclear factor 1 C-type OS=Mus musculus OX=10090 GN=NfNfic	7.52	3
P70257	Nuclear factor 1 X-type OS=Mus musculus OX=10090 GN=NfNfix	6.76	3
P70265	6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 2 O Pfkfb2	1.54	1
P70279	Surfeit locus protein 6 OS=Mus musculus OX=10090 GN=SurSurf6	5.63	2
P70288	Histone deacetylase 2 OS=Mus musculus OX=10090 GN=HdaHdac2	11.07	5
P70290	55 kDa erythrocyte membrane protein OS=Mus musculus O Mpp1	2.58	1
P70296	Phosphatidylethanolamine-binding protein 1 OS=Mus muscu Pebp1	40.64	7
P70297	Signal transducing adapter molecule 1 OS=Mus musculus O Stam	4.01	2
P70302	Stromal interaction molecule 1 OS=Mus musculus OX=10090 Stim1	6.42	4
P70336	Rho-associated protein kinase 2 OS=Mus musculus OX=1009 Rock2	7.42	10
P70340	Mothers against decapentaplegic homolog 1 OS=Mus muscu Smad1	9.25	4
P70349	Adenosine 5'-monophosphoramidase HINT1 OS=Mus muscul Hint1	34.13	4
P70362	Ubiquitin recognition factor in ER-associated degradation Ufd1	12.05	3
P70372	ELAV-like protein 1 OS=Mus musculus OX=10090 GN=ElavlElavl1	15.03	5
P70377	Fibroblast growth factor 13 OS=Mus musculus OX=10090 GN Fgf13	4.08	1
P70392	Ras-specific guanine nucleotide-releasing factor 2 OS=Mus Rasgrf2	26.49	31
P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X OS Usp9x	6.06	15
P70408	Cadherin-10 OS=Mus musculus OX=10090 GN=Cdh10 PE=1 Cdh10	1.9	1
P70414	Sodium/calcium exchanger 1 OS=Mus musculus OX=10090 G Slc8a1	2.47	2
P70441	Na(+)/H(+) exchange regulatory cofactor NHE-RF1 OS=Mus Nherf1	21.97	7
P70663	SPARC-like protein 1 OS=Mus musculus OX=10090 GN=SparSparcl1	1.69	1
P70670	Nascent polypeptide-associated complex subunit alpha, mus Naca	1.92	3
P70704	Phospholipid-transporting ATPase IA OS=Mus musculus OX Atp8a1	8.59	9
P80313	T-complex protein 1 subunit eta OS=Mus musculus OX=1009 Cct7	15.62	8
P80314	T-complex protein 1 subunit beta OS=Mus musculus OX=100 Cct2	18.69	9
P80315	T-complex protein 1 subunit delta OS=Mus musculus OX=10 Cct4	23.01	12
P80316	T-complex protein 1 subunit epsilon OS=Mus musculus OX= Cct5	14.97	9
P80317	T-complex protein 1 subunit zeta OS=Mus musculus OX=100 Cct6a	11.11	7
P80318	T-complex protein 1 subunit gamma OS=Mus musculus OX=1 Cct3	18.17	9
P80560	Receptor-type tyrosine-protein phosphatase N2 OS=Mus mus Ptpn2	3.1	3
P81122	Insulin receptor substrate 2 OS=Mus musculus OX=10090 GN Irs2	5.3	6
P83093	Stromal interaction molecule 2 OS=Mus musculus OX=10090 Stim2	4.96	3
P83510	Traf2 and NCK-interacting protein kinase OS=Mus musculu Tnik	18.75	24
P83741	Serine/threonine-protein kinase WNK1 OS=Mus musculus Wnk1	1.94	4
P83870	PHD finger-like domain-containing protein 5A OS=Mus mus Phf5a	33.64	4
P83882	Large ribosomal subunit protein eL42 OS=Mus musculus OX Rpl36a	40.57	7
P83887	Tubulin gamma-1 chain OS=Mus musculus OX=10090 GN=TuTubg1	3.99	2

P83940	Elongin-C OS=Mus musculus OX=10090 GN=Eloc PE=1 SV= Eloc	29.46	3
P84075	Neuron-specific calcium-binding protein hippocalcin OS=M Hpc	35.23	7
P84084	ADP-ribosylation factor 5 OS=Mus musculus OX=10090 GN= Arf5	51.67	8
P84086	Complexin-2 OS=Mus musculus OX=10090 GN=Cplx2 PE=1 Cplx2	21.64	2
P84091	AP-2 complex subunit mu OS=Mus musculus OX=10090 GN Ap2m1	38.62	21
P84096	Rho-related GTP-binding protein RhoG OS=Mus musculus Rhog	17.28	3
P84099	Large ribosomal subunit protein eL19 OS=Mus musculus OX Rpl19	18.37	5
P84104	Serine/arginine-rich splicing factor 3 OS=Mus musculus OX Srsf3	18.9	3
P84309	Adenylate cyclase type 5 OS=Mus musculus OX=10090 GN=AAdcy5	2.06	3
P84444	C-C motif chemokine 21a OS=Mus musculus OX=10090 GN=(Ccl21a	7.52	1
P97300	Neuroplastin OS=Mus musculus OX=10090 GN=Nptn PE=1 S Nptn	21.16	8
P97310	DNA replication licensing factor MCM2 OS=Mus musculus Mcm2	1.11	1
P97318	Disabled homolog 1 OS=Mus musculus OX=10090 GN=Dab1 Dab1	8.84	6
P97351	Small ribosomal subunit protein eS1 OS=Mus musculus OX= Rps3a	77.65	26
P97352	Protein S100-A13 OS=Mus musculus OX=10090 GN=S100a13S100a13	33.67	4
P97370	Sodium/potassium-transporting ATPase subunit beta-3 OS= Atp1b3	4.32	1
P97386	DNA ligase 3 OS=Mus musculus OX=10090 GN=Lig3 PE=1 SLig3	1.38	1
P97393	Rho GTPase-activating protein 5 OS=Mus musculus OX=100 Arhgap5	2.79	5
P97401	Secreted frizzled-related protein 3 OS=Mus musculus OX=10 Frzb	2.48	1
P97411	Islet cell autoantigen 1 OS=Mus musculus OX=10090 GN=Ica Ica1	4.18	2
P97412	Lysosomal-trafficking regulator OS=Mus musculus OX=1009 Lyst	1.08	3
P97427	Dihydropyrimidinase-related protein 1 OS=Mus musculus O Crmp1	21.85	12
P97433	Rho guanine nucleotide exchange factor 28 OS=Mus muscul Arhgef28	0.41	1
P97434	Myosin phosphatase Rho-interacting protein OS=Mus muscu Mprp	12.89	12
P97441	Probable proton-coupled zinc antiporter SLC30A3 OS=Mus Slc30a3	2.06	1
P97445	Voltage-dependent P/Q-type calcium channel subunit alph Cacna1a	6.21	13
P97447	Four and a half LIM domains protein 1 OS=Mus musculus O Fhl1	27.14	8
P97452	Ribosome biogenesis protein BOP1 OS=Mus musculus OX=1 Bop1	2.19	2
P97461	Small ribosomal subunit protein uS7 OS=Mus musculus OX= Rps5	29.9	10
P97466	Noggin OS=Mus musculus OX=10090 GN=Nog PE=2 SV=1 Nog	5.17	1
P97492	Regulator of G-protein signaling 14 OS=Mus musculus OX= Rgs14	8.59	4
P97493	Thioredoxin, mitochondrial OS=Mus musculus OX=10090 GN Txn2	4.82	1
P97742	Carnitine O-palmitoyltransferase 1, liver isoform OS=Mus Cpt1a	2.59	2
P97765	WW domain-binding protein 2 OS=Mus musculus OX=10090 Wbp2	3.83	1
P97772	Metabotropic glutamate receptor 1 OS=Mus musculus OX=1 Grm1	2.75	2
P97789	5'-3' exoribonuclease 1 OS=Mus musculus OX=10090 GN=Xr Xrn1	3.96	6
P97797	Tyrosine-protein phosphatase non-receptor type substrate Sirpa	9.94	5
P97801	Survival motor neuron protein OS=Mus musculus OX=10090 Smn1	8.68	2
P97807	Fumarate hydratase, mitochondrial OS=Mus musculus OX=1 Fh	13.81	6
P97813	Phospholipase D2 OS=Mus musculus OX=10090 GN=Pld2 PE Pld2	4.5	4
P97820	Mitogen-activated protein kinase kinase kinase 4 Map4k4	9	13
P97823	Acyl-protein thioesterase 1 OS=Mus musculus OX=10090 GN Lypla1	5.65	1
P97855	Ras GTPase-activating protein-binding protein 1 OS=Mus G3bp1	10.97	5
P97863	Nuclear factor 1 B-type OS=Mus musculus OX=10090 GN=Nf Nfib	4.04	2
P97868	E3 ubiquitin-protein ligase RBBP6 OS=Mus musculus OX=1 Rbbp6	7.93	13
P98064	Mannan-binding lectin serine protease 1 OS=Mus musculus Masp1	12.93	8
P98084	Amyloid-beta A4 precursor protein-binding family A memb Apba2	2	1
P98086	Complement C1q subcomponent subunit A OS=Mus musculu C1qa	20	6
P98203	Splicing regulator ARVCF OS=Mus musculus OX=10090 GN=Arvcf	4.57	4
P99024	Tubulin beta-5 chain OS=Mus musculus OX=10090 GN=Tubb Tubb5	42.34	18
P99026	Proteasome subunit beta type-4 OS=Mus musculus OX=1009 Psmb4	3.41	1
P99029	Peroxiredoxin-5, mitochondrial OS=Mus musculus OX=1009 Prdx5	23.81	5
Q00417	Transcription factor 7 OS=Mus musculus OX=10090 GN=Tcf7 Tcf7	2.63	1
Q00493	Carboxypeptidase E OS=Mus musculus OX=10090 GN=Cpe P Cpe	7.56	3

Q00612	Glucose-6-phosphate 1-dehydrogenase X OS=Mus musculus	G6pdx	3.5	2
Q00623	Apolipoprotein A-I OS=Mus musculus OX=10090 GN=Apoa1	Apoa1	15.15	4
Q00899	Transcriptional repressor protein YY1 OS=Mus musculus O	Yy1	6.04	3
Q00915	Retinol-binding protein 1 OS=Mus musculus OX=10090 GN=	Rbp1	15.56	2
Q01063	cAMP-specific 3',5'-cyclic phosphodiesterase 4D OS=Mus	Pde4d	9.1	7
Q01065	Dual specificity calcium/calmodulin-dependent 3',5'-cyclic	Pde1b	11.21	6
Q01097	Glutamate receptor ionotropic, NMDA 2B OS=Mus musculus	Grin2b	10.39	13
Q01147	Cyclic AMP-responsive element-binding protein 1 OS=Mus	Creb1	7.03	2
Q01405	Protein transport protein Sec23A OS=Mus musculus OX=100	Sec23a	12.94	9
Q01768	Nucleoside diphosphate kinase B OS=Mus musculus OX=10	Nme2	50.66	8
Q01853	Transitional endoplasmic reticulum ATPase OS=Mus muscu	Vcp	24.94	16
Q02053	Ubiquitin-like modifier-activating enzyme 1 OS=Mus musc	Uba1	12.57	11
Q02105	Complement C1q subcomponent subunit C OS=Mus musculu	C1qc	23.58	6
Q02248	Catenin beta-1 OS=Mus musculus OX=10090 GN=Ctnnb1 PE=Ctnnb1		20.49	13
Q02257	Junction plakoglobin OS=Mus musculus OX=10090 GN=Jup P Jup		12.89	9
Q02357	Ankyrin-1 OS=Mus musculus OX=10090 GN=Ank1 PE=1 SV=Ank1		10.96	17
Q02566	Myosin-6 OS=Mus musculus OX=10090 GN=Myh6 PE=1 SV=Myh6		2.27	5
Q02780	Nuclear factor 1 A-type OS=Mus musculus OX=10090 GN=Nf Nfia		7.14	4
Q03137	Ephrin type-A receptor 4 OS=Mus musculus OX=10090 GN=E Epha4		3.35	3
Q03141	MAP/microtubule affinity-regulating kinase 3 OS=Mus mus	Mark3	30.41	23
Q03157	Amyloid beta precursor like protein 1 OS=Mus musculus O	Aplp1	1.83	1
Q03173	Protein enabled homolog OS=Mus musculus OX=10090 GN=EEnah		1.37	1
Q03265	ATP synthase subunit alpha, mitochondrial OS=Mus muscul	Atp5f1a	39.78	28
Q03517	Secretogranin-2 OS=Mus musculus OX=10090 GN=Scg2 PE=1Scg2		3.4	2
Q04447	Creatine kinase B-type OS=Mus musculus OX=10090 GN=Ck Ckb		41.73	15
Q04690	Neurofibromin OS=Mus musculus OX=10090 GN=Nf1 PE=1 Nf1		6.72	18
Q04742	Homeobox protein EMX1 OS=Mus musculus OX=10090 GN=Emx1		3.5	1
Q04750	DNA topoisomerase 1 OS=Mus musculus OX=10090 GN=Top Top1		31.42	27
Q05512	Serine/threonine-protein kinase MARK2 OS=Mus musculus	Mark2	33.63	25
Q05816	Fatty acid-binding protein 5 OS=Mus musculus OX=10090 G	Fabp5	30.37	4
Q05920	Pyruvate carboxylase, mitochondrial OS=Mus musculus OX=	Pc	14.86	17
Q05CL8	La-related protein 7 OS=Mus musculus OX=10090 GN=Larp7	Larp7	16.32	8
Q05D44	Eukaryotic translation initiation factor 5B OS=Mus muscul	Eif5b	18.75	22
Q06180	Tyrosine-protein phosphatase non-receptor type 2 OS=Mus	Ptpn2	2.46	1
Q06186	Proheparin-binding EGF-like growth factor OS=Mus muscul	Hbegf	4.33	1
Q06890	Clusterin OS=Mus musculus OX=10090 GN=Clu PE=1 SV=1 Clu		16.07	6
Q07076	Annexin A7 OS=Mus musculus OX=10090 GN=Anxa7 PE=1 Anxa7		17.71	8
Q07079	Insulin-like growth factor-binding protein 5 OS=Mus muscu	Igfbp5	17.34	5
Q07235	Glia-derived nexin OS=Mus musculus OX=10090 GN=Serpine	Serpine2	13.35	6
Q08288	Cell growth-regulating nucleolar protein OS=Mus musculus	Lyar	30.15	11
Q08460	Calcium-activated potassium channel subunit alpha-1 OS=	Kcnma1	1.9	2
Q08943	FACT complex subunit SSRP1 OS=Mus musculus OX=10090	Ssrp1	4.8	3
Q09200	Beta-1,4 N-acetylgalactosaminyltransferase 1 OS=Mus musc	B4galnt1	2.06	1
Q09LZ8	Cytosolic carboxypeptidase 6 OS=Mus musculus OX=10090	Agbl4	10.19	5
Q09XV5	Chromodomain-helicase-DNA-binding protein 8 OS=Mus mu	Chd8	0.39	1
Q0GNC1	Inverted formin-2 OS=Mus musculus OX=10090 GN=Inf2 PE=Inf2		1.81	2
Q0KK55	Kinase non-catalytic C-lobe domain-containing protein 1	Kndc1	1.66	3
Q0KL02	Triple functional domain protein OS=Mus musculus OX=100	Trio	20.83	68
Q0PHV7	Dapper homolog 3 OS=Mus musculus OX=10090 GN=Dact3 PDact3		3.93	2
Q0VBL3	RNA-binding protein 15 OS=Mus musculus OX=10090 GN=R Rbm15		20.79	18
Q0VGU4	Neurosecretory protein VGF OS=Mus musculus OX=10090 G	Vgf	12.32	7
Q11011	Puromycin-sensitive aminopeptidase OS=Mus musculus OX=	Npepps	15.33	14
Q149C2	TRAF3-interacting protein 1 OS=Mus musculus OX=10090 G	Traf3ip1	1.28	1
Q14BB9	MAP6 domain-containing protein 1 OS=Mus musculus OX=1	Map6d1	9.95	2

Q14BI2	Metabotropic glutamate receptor 2 OS=Mus musculus OX=1 Grm2	2.87	2
Q18PI6	SLAM family member 5 OS=Mus musculus OX=10090 GN=C.Cd84	6.08	2
Q2KN98	Cytospin-A OS=Mus musculus OX=10090 GN=Specc1l PE=1 Specc1l	9.93	12
Q2M3X8	Phosphatase and actin regulator 1 OS=Mus musculus OX=100 Phactr1	25.34	17
Q2MV57	Tectonic-2 OS=Mus musculus OX=10090 GN=Tctn2 PE=1 SVTctn2	2.29	1
Q2NL51	Glycogen synthase kinase-3 alpha OS=Mus musculus OX=10 Gsk3a	10	6
Q2PFD7	PH and SEC7 domain-containing protein 3 OS=Mus musculus Psd3	20.25	31
Q31125	Zinc transporter SLC39A7 OS=Mus musculus OX=10090 GN=Slc39a7	4.62	2
Q33DR2	All trans-polyphosphoryl-diphosphate synthase PDSS1 OS=Mus Pdss1	2.2	1
Q3TDK6	Protein rogdi homolog OS=Mus musculus OX=10090 GN=RogRogdi	26.48	7
Q3TDQ1	Dolichyl-diphosphooligosaccharide--protein glycosyltransf Stt3b	9.48	8
Q3TEA8	Heterochromatin protein 1-binding protein 3 OS=Mus musculus Hp1bp3	23.29	17
Q3TES0	IQ motif and SEC7 domain-containing protein 3 OS=Mus musculus Iqsec3	5.27	6
Q3THE2	Myosin regulatory light chain 12B OS=Mus musculus OX=1 Myl12b	29.65	5
Q3THK3	General transcription factor IIF subunit 1 OS=Mus musculus Gtf2f1	11.81	5
Q3THK7	GMP synthase [glutamine-hydrolyzing] OS=Mus musculus Gmps	9.09	6
Q3THS6	S-adenosylmethionine synthase isoform type-2 OS=Mus musculus Mat2a	6.08	2
Q3TIV5	Zinc finger CCH domain-containing protein 15 OS=Mus musculus Zc3h15	18.78	9
Q3TIX9	Ubiquitin carboxyl-terminal hydrolase 39 OS=Mus musculus Usp39	9.57	5
Q3TKT4	Transcription activator BRG1 OS=Mus musculus OX=10090 Smarca4	6.63	10
Q3TL44	NLR family member X1 OS=Mus musculus OX=10090 GN=N.Nlr1	2.26	2
Q3TMP8	Trimeric intracellular cation channel type A OS=Mus musculus Tmem38a	3.36	1
Q3TPX4	Exocyst complex component 5 OS=Mus musculus OX=10090 Exoc5	8.9	6
Q3TRM4	Patatin-like phospholipase domain-containing protein 6 OS Pnpla6	1.48	2
Q3TRR0	Microtubule-associated protein 9 OS=Mus musculus OX=10 Map9	25.39	15
Q3TSG4	RNA demethylase ALKBH5 OS=Mus musculus OX=10090 GN=Alkbh5	7.34	3
Q3TTA7	E3 ubiquitin-protein ligase CBL-B OS=Mus musculus OX=10 Cblb	1.22	1
Q3TTY5	Keratin, type II cytoskeletal 2 epidermal OS=Mus musculus Krt2	6.65	7
Q3TVA9	Coiled-coil domain-containing protein 136 OS=Mus musculus Ccdc136	1.94	2
Q3TWW8	Serine/arginine-rich splicing factor 6 OS=Mus musculus OX Srsf6	16.22	6
Q3TXX4	Vesicular glutamate transporter 1 OS=Mus musculus OX=100 Slc17a7	17.86	9
Q3TYD6	Serine/threonine-protein kinase LMTK2 OS=Mus musculus Lmtk2	0.75	1
Q3TYX3	Histone-lysine N-trimethyltransferase SMYD5 OS=Mus musculus Smyd5	2.64	1
Q3TZX3	Solute carrier family 25 member 33 OS=Mus musculus OX=1 Slc25a33	9.06	2
Q3TZZ7	Extended synaptotagmin-2 OS=Mus musculus OX=10090 GN=Esyt2	6.75	5
Q3U0M1	Trafficking protein particle complex subunit 9 OS=Mus musculus Trappc9	4.18	5
Q3U0V1	Far upstream element-binding protein 2 OS=Mus musculus Kharp	10.43	7
Q3U1J4	DNA damage-binding protein 1 OS=Mus musculus OX=10090 Ddb1	8.25	9
Q3U1N2	Sterol regulatory element-binding protein 2 OS=Mus musculus Srebf2	0.8	1
Q3U3Q1	Serine/threonine-protein kinase ULK3 OS=Mus musculus O Ulk3	1.48	1
Q3U5Q7	UMP-CMP kinase 2, mitochondrial OS=Mus musculus OX=1 Cmpk2	2.24	1
Q3U9G9	Delta(14)-sterol reductase LBR OS=Mus musculus OX=10090 Lbr	7.83	6
Q3UEI1	cAMP-specific 3',5'-cyclic phosphodiesterase 4C OS=Mus musculus Pde4c	1.31	1
Q3UFY8	tRNA methyltransferase 10 homolog C OS=Mus musculus O Trmt10c	15.94	6
Q3UH60	Disco-interacting protein 2 homolog B OS=Mus musculus O Dip2b	21.47	31
Q3UH66	Serine/threonine-protein kinase WNK2 OS=Mus musculus Wnk2	6.42	13
Q3UHC0	Trinucleotide repeat-containing gene 6C protein OS=Mus musculus Tnrc6c	0.71	1
Q3UHC7	Disabled homolog 2-interacting protein OS=Mus musculus Dab2ip	18.33	21
Q3UHD6	Sorting nexin-27 OS=Mus musculus OX=10090 GN=Snx27 PESnx27	10.58	5
Q3UHD9	Arf-GAP with GTPase, ANK repeat and PH domain-containing Agap2	20.4	25
Q3UHF7	Transcription factor HIVEP2 OS=Mus musculus OX=10090 G Hivep2	2.06	4
Q3UHH1	Zinc finger SWIM domain-containing protein 8 OS=Mus musculus Zswim8	0.55	1
Q3UHH0	AP2-associated protein kinase 1 OS=Mus musculus OX=100 Aak1	15.12	12
Q3UHK6	Teneurin-4 OS=Mus musculus OX=10090 GN=Tenm4 PE=1 S Tenm4	1.59	4

Q3UHU5	Microtubule cross-linking factor 1 OS=Mus musculus OX=10	Mtcl1	6.17	12
Q3UIL6	Pleckstrin homology domain-containing family A member 7	Plekha7	1.07	1
Q3UJD6	Ubiquitin carboxyl-terminal hydrolase 19 OS=Mus musculus	Usp19	0.88	1
Q3UJU9	Regulator of microtubule dynamics protein 3 OS=Mus musculus	Rmdn3	2.13	1
Q3ULB5	Serine/threonine-protein kinase PAK 6 OS=Mus musculus O	Pak6	1.91	1
Q3ULJ0	Glycerol-3-phosphate dehydrogenase 1-like protein OS=Mus	Gpd1l	23.93	8
Q3UMR5	Calcium uniporter protein, mitochondrial OS=Mus musculus	Mcu	9.43	3
Q3UMU9	Hepatoma-derived growth factor-related protein 2 OS=Mus	Hdgfl2	22.87	15
Q3UND0	Src kinase-associated phosphoprotein 2 OS=Mus musculus	Skap2	3.07	1
Q3UNH4	G protein-regulated inducer of neurite outgrowth 1 OS=Mus	Gprin1	16.31	12
Q3UPL0	Protein transport protein Sec31A OS=Mus musculus OX=100	Sec31a	2.93	4
Q3URD3	Sarcolemmal membrane-associated protein OS=Mus musculus	Slmap	3.2	2
Q3UTH8	Rho guanine nucleotide exchange factor 9 OS=Mus musculus	Arhgef9	3.68	2
Q3UTJ2	Sorbin and SH3 domain-containing protein 2 OS=Mus musculus	Sorbs2	9.24	10
Q3UTQ8	Cyclin-dependent kinase-like 5 OS=Mus musculus OX=1009	Cdkl5	27.08	25
Q3UU96	Serine/threonine-protein kinase MRCK alpha OS=Mus musculus	Cdc42bpa	9.6	16
Q3UUG6	TBC1 domain family member 24 OS=Mus musculus OX=1009	Tbc1d24	12.3	6
Q3UUQ7	GPI inositol-deacylase OS=Mus musculus OX=10090 GN=Pga	Pgap1	1.3	1
Q3UVC0	Kinase suppressor of Ras 2 OS=Mus musculus OX=10090 GN	Ksr2	9.67	8
Q3UVD5	Leucine-rich repeat-containing G-protein coupled receptor	Lgr6	1.24	1
Q3UVL4	Vacuolar protein sorting-associated protein 51 homolog O	Vps51	2.3	2
Q3UVR3	Tau-tubulin kinase 2 OS=Mus musculus OX=10090 GN=Ttbk2	Ttbk2	2.98	3
Q3UVX5	Metabotropic glutamate receptor 5 OS=Mus musculus OX=1	Grm5	5.15	6
Q3UYG8	ADP-ribose glycohydrolase MACROD2 OS=Mus musculus O	MacroD2	2.32	1
Q3UYH7	Beta-adrenergic receptor kinase 2 OS=Mus musculus OX=10	Adrbk2	10.47	7
Q3UYV9	Nuclear cap-binding protein subunit 1 OS=Mus musculus O	Ncbp1	2.78	2
Q3V1L4	Cytosolic purine 5'-nucleotidase OS=Mus musculus OX=100	Nt5c2	3.93	2
Q3V3R1	Monofunctional C1-tetrahydrofolate synthase, mitochondri	Mthfd1l	4.5	4
Q3V3R4	Integrin alpha-1 OS=Mus musculus OX=10090 GN=Itga1 PE=	Itga1	0.85	1
Q3V3V9	Capping protein, Arp2/3 and myosin-I linker protein 2 OS	Carmil2	3.16	3
Q45VK7	Cytoplasmic dynein 2 heavy chain 1 OS=Mus musculus OX=	Dync2h1	0.79	3
Q4ACU6	SH3 and multiple ankyrin repeat domains protein 3 OS=Mus	Shank3	11.16	18
Q4JIM5	Tyrosine-protein kinase ABL2 OS=Mus musculus OX=10090	Abl2	6.94	7
Q4KMM3	Oxidation resistance protein 1 OS=Mus musculus OX=10090	Oxr1	12.24	9
Q4KUS2	Protein unc-13 homolog A OS=Mus musculus OX=10090 GN=Unc13a		7.01	12
Q4QY64	ATPase family AAA domain-containing protein 5 OS=Mus m	Atad5	0.66	1
Q4U2R1	E3 ubiquitin-protein ligase HERC2 OS=Mus musculus OX=1	Herc2	1.2	5
Q4VA53	Sister chromatid cohesion protein PDS5 homolog B OS=Mus	Pds5b	3.04	5
Q4VBD2	Transmembrane anterior posterior transformation protein	Tapt1	1.42	1
Q4VC33	E3 ubiquitin-protein transferase MAEA OS=Mus musculus	Maea	8.84	3
Q501J6	Probable ATP-dependent RNA helicase DDX17 OS=Mus mus	Ddx17	37.38	23
Q52KE7	Cyclin-L1 OS=Mus musculus OX=10090 GN=Ccnl1 PE=1 SV	Ccnl1	1.88	1
Q52KF3	Protein spire homolog 1 OS=Mus musculus OX=10090 GN=Sp	Spire1	7.69	4
Q52KI8	Serine/arginine repetitive matrix protein 1 OS=Mus muscul	Srrm1	6.66	6
Q569Z5	Probable ATP-dependent RNA helicase DDX46 OS=Mus mus	Ddx46	24.13	27
Q569Z6	Thyroid hormone receptor-associated protein 3 OS=Mus mu	Thrap3	17.35	19
Q56A07	Sodium channel subunit beta-2 OS=Mus musculus OX=10090	Scn2b	5.58	1
Q570Y9	DEP domain-containing mTOR-interacting protein OS=Mus	Deptor	5.38	2
Q5BL07	Peroxisomal ATPase PEX1 OS=Mus musculus OX=10090 GN	Pex1	1.79	2
Q5BLK4	Terminal uridylyltransferase 7 OS=Mus musculus OX=10090	Tut7	2.28	3
Q5DQR4	Syntaxin-binding protein 5-like OS=Mus musculus OX=1009	Stxbp5l	4.14	4
Q5DTL9	Sodium-driven chloride bicarbonate exchanger OS=Mus mus	Slc4a10	5.19	6
Q5DTT2	PH and SEC7 domain-containing protein 1 OS=Mus musculus	Psd	15.33	17
Q5EBJ4	Ermin OS=Mus musculus OX=10090 GN=Ernm PE=1 SV=1	Ernm	3.2	1

Q5EG47	5'-AMP-activated protein kinase catalytic subunit alpha-1	Prkaa1	2.86	1
Q5F2E8	Serine/threonine-protein kinase TAO1 OS=Mus musculus O	Taok1	22.98	23
Q5KU39	Vacuolar protein sorting-associated protein 41 homolog O	Vps41	4.69	4
Q5NBX1	Protein cordon-bleu OS=Mus musculus OX=10090 GN=Cobl	Cobl	8.15	10
Q5RJI5	Serine/threonine-protein kinase BRSK1 OS=Mus musculus	Brsk1	27.38	23
Q5RKZ7	Molybdenum cofactor biosynthesis protein 1 OS=Mus musc	Mocs1	11.95	5
Q5SNZ0	Girdin OS=Mus musculus OX=10090 GN=Ccdc88a PE=1 SV=Ccdc88a		10.36	19
Q5SQX6	Cytoplasmic FMR1-interacting protein 2 OS=Mus musculus	Cyfip2	22.19	28
Q5SSE9	ATP-binding cassette sub-family A member 13 OS=Mus mus	Abca13	0.2	1
Q5SSL4	Active breakpoint cluster region-related protein OS=Mus m	Abr	8.27	7
Q5SSM3	Rho GTPase-activating protein 44 OS=Mus musculus OX=10	Arhgap44	4.05	3
Q5SUQ9	CST complex subunit CTC1 OS=Mus musculus OX=10090 GN=Ctc1		1.32	1
Q5SWU9	Acetyl-CoA carboxylase 1 OS=Mus musculus OX=10090 GN=Acaca		0.94	2
Q5SX39	Myosin-4 OS=Mus musculus OX=10090 GN=Myh4 PE=1 SV=Myh4		2.89	6
Q5SXY1	Cytospin-B OS=Mus musculus OX=10090 GN=Specc1 PE=1	Specc1	15.93	15
Q5SYD0	Unconventional myosin-Id OS=Mus musculus OX=10090 GN	Myo1d	18.09	18
Q5U405	Transmembrane protease serine 13 OS=Mus musculus OX=10	Tmprss13	1.47	1
Q5U4C9	Dual specificity tyrosine-phosphorylation-regulated kinas	Dyrk2	7.01	4
Q5XJY4	Presenilin-associated rhomboid-like protein, mitochondria	Parl	5.31	2
Q5XJY5	Coatomer subunit delta OS=Mus musculus OX=10090 GN=Ar	Arcn1	10.76	5
Q60597	2-oxoglutarate dehydrogenase complex component E1 OS=M	Ogdh	12.22	13
Q60598	Src substrate cortactin OS=Mus musculus OX=10090 GN=Ctt	Cttn	24.73	15
Q60605	Myosin light polypeptide 6 OS=Mus musculus OX=10090 GN	Myl6	35.76	5
Q60610	Rho guanine nucleotide exchange factor TIAM1 OS=Mus mu	Tiam1	16.53	24
Q60625	Intercellular adhesion molecule 5 OS=Mus musculus OX=10	Icam5	13.2	11
Q60631	Growth factor receptor-bound protein 2 OS=Mus musculus	Grb2	30.88	7
Q60649	Mitochondrial disaggregase OS=Mus musculus OX=10090 GN	Clpb	1.33	1
Q60668	Heterogeneous nuclear ribonucleoprotein D0 OS=Mus musc	Hnrnpd	17.18	6
Q60676	Serine/threonine-protein phosphatase 5 OS=Mus musculus	Ppp5c	13.23	6
Q60692	Proteasome subunit beta type-6 OS=Mus musculus OX=1009	Psmb6	8.82	2
Q60700	Mitogen-activated protein kinase kinase kinase 12 OS=Mus	Map3k12	2.14	2
Q60737	Casein kinase II subunit alpha OS=Mus musculus OX=10090	Csnk2a1	8.7	3
Q60749	KH domain-containing, RNA-binding, signal transduction-as	Khdrbs1	9.26	5
Q60760	Growth factor receptor-bound protein 10 OS=Mus musculus	Grb10	12.24	6
Q60770	Syntaxin-binding protein 3 OS=Mus musculus OX=10090 GN	Stxbp3	14.7	9
Q60771	Claudin-11 OS=Mus musculus OX=10090 GN=Cldn11 PE=1	SCldn11	14.98	3
Q60780	Growth arrest-specific protein 7 OS=Mus musculus OX=100	Gas7	2.61	1
Q60803	TNF receptor-associated factor 3 OS=Mus musculus OX=100	Traf3	9.88	4
Q60809	CCR4-NOT transcription complex subunit 7 OS=Mus muscul	Cnot7	8.07	2
Q60829	Protein phosphatase 1 regulatory subunit 1B OS=Mus muscu	Ppp1r1b	34.54	5
Q60864	Stress-induced-phosphoprotein 1 OS=Mus musculus OX=1009	Stip1	19.71	13
Q60865	Caprin-1 OS=Mus musculus OX=10090 GN=Caprin1 PE=1	SVCaprin1	11.46	8
Q60870	Receptor expression-enhancing protein 5 OS=Mus musculus	Reep5	5.41	1
Q60875	Rho guanine nucleotide exchange factor 2 OS=Mus musculu	Arhgef2	29.54	30
Q60902	Epidermal growth factor receptor substrate 15-like 1 OS=M	Eps15l1	26.35	23
Q60930	Voltage-dependent anion-selective channel protein 2 OS=M	Vdac2	14.58	4
Q60931	Voltage-dependent anion-selective channel protein 3 OS=M	Vdac3	15.9	4
Q60932	Voltage-dependent anion-selective channel protein 1 OS=M	Vdac1	25.34	6
Q60949	TBC1 domain family member 1 OS=Mus musculus OX=10090	Tbc1d1	0.8	1
Q60960	Importin subunit alpha-5 OS=Mus musculus OX=10090 GN=K	Kpna1	2.04	1
Q60963	Platelet-activating factor acetylhydrolase OS=Mus musculu	Pla2g7	2.05	1
Q60972	Histone-binding protein RBBP4 OS=Mus musculus OX=1009	Rbbp4	8.71	4
Q60973	Histone-binding protein RBBP7 OS=Mus musculus OX=1009	Rbbp7	11.29	5
Q60987	Forkhead box protein G1 OS=Mus musculus OX=10090 GN=F	Foxg1	5.2	2

Q60996	Serine/threonine-protein phosphatase 2A 56 kDa regulator	Ppp2r5c	9.16	5
Q61016	Guanine nucleotide-binding protein G(I)/G(S)/G(O) subun	Gng7	30.88	2
Q61029	Lamina-associated polypeptide 2, isoforms beta/delta/eps	Tmpo	5.31	2
Q61036	Serine/threonine-protein kinase PAK 3 OS=Mus musculus O	Pak3	7.51	4
Q61037	Tuberin OS=Mus musculus OX=10090 GN=Tsc2 PE=1 SV=1	Tsc2	5.79	9
Q61081	Hsp90 co-chaperone Cdc37 OS=Mus musculus OX=10090 GN	Cdc37	8.71	3
Q61097	Kinase suppressor of Ras 1 OS=Mus musculus OX=10090 GN	Ksr1	19.13	16
Q61136	Serine/threonine-protein kinase PRP4 homolog OS=Mus mus	Prpf4b	7.05	6
Q61137	Astrotactin-1 OS=Mus musculus OX=10090 GN=Astn1 PE=1	Astn1	4.53	5
Q61142	Spindlin-1 OS=Mus musculus OX=10090 GN=Spin1 PE=1 SV	Spin1	16.03	4
Q61147	Ceruloplasmin OS=Mus musculus OX=10090 GN=Cp PE=1 S	Cp	1.04	1
Q61164	Transcriptional repressor CTCF OS=Mus musculus OX=1009	Ctcf	1.09	1
Q61166	Microtubule-associated protein RP/EB family member 1 OS	Mapre1	7.46	3
Q61171	Peroxiredoxin-2 OS=Mus musculus OX=10090 GN=Prdx2 PE=	Prdx2	22.73	4
Q61176	Arginase-1 OS=Mus musculus OX=10090 GN=Arg1 PE=1 SV	Arg1	3.41	1
Q61187	Tumor susceptibility gene 101 protein OS=Mus musculus O	Tsg101	5.63	2
Q61191	Host cell factor 1 OS=Mus musculus OX=10090 GN=Hcfc1 P	Hcfc1	1.52	3
Q61194	Phosphatidylinositol 4-phosphate 3-kinase C2 domain-conta	Pik3c2a	3.97	6
Q61206	Platelet-activating factor acetylhydrolase IB subunit alph	Pafah1b2	7.86	2
Q61207	Prosaposin OS=Mus musculus OX=10090 GN=Psap PE=1 SV=	Psap	1.44	1
Q61214	Dual specificity tyrosine-phosphorylation-regulated kinas	Dyrk1a	1.7	1
Q61234	Alpha-1-syntrophin OS=Mus musculus OX=10090 GN=Snta1	Snta1	1.59	1
Q61249	Immunoglobulin-binding protein 1 OS=Mus musculus OX=10	Igbbp1	8.24	3
Q61282	Aggrecan core protein OS=Mus musculus OX=10090 GN=Acan	Acan	2.02	5
Q61285	ATP-binding cassette sub-family D member 2 OS=Mus musc	Abcd2	2.97	2
Q61290	Voltage-dependent R-type calcium channel subunit alpha-	Cacna1e	4.53	10
Q61301	Catenin alpha-2 OS=Mus musculus OX=10090 GN=Ctnna2 PE	Ctnna2	21.51	21
Q61315	Adenomatous polyposis coli protein OS=Mus musculus OX=	Apc	6.19	16
Q61327	Sodium-dependent dopamine transporter OS=Mus musculus	Slc6a3	3.07	2
Q61335	B-cell receptor-associated protein 31 OS=Mus musculus OX	Bcap31	4.08	1
Q61361	Brevican core protein OS=Mus musculus OX=10090 GN=Bcan	Bcan	13.36	11
Q61411	GTPase HRas OS=Mus musculus OX=10090 GN=Hras PE=1	Hras	31.22	5
Q61464	Zinc finger protein 638 OS=Mus musculus OX=10090 GN=Zn	Znf638	5.26	9
Q61466	SWI/SNF-related matrix-associated actin-dependent regulat	Smarcd1	9.32	4
Q61481	Dual specificity calcium/calmodulin-dependent 3',5'-cyclic	Pde1a	8.81	4
Q61490	CD166 antigen OS=Mus musculus OX=10090 GN=Alcam PE=	Alcam	8.75	5
Q61495	Desmoglein-1-alpha OS=Mus musculus OX=10090 GN=Dsg1a	Dsg1a	0.95	1
Q61543	Golgi apparatus protein 1 OS=Mus musculus OX=10090 GN=	Glg1	1.11	1
Q61545	RNA-binding protein EWS OS=Mus musculus OX=10090 GN	Ewsr1	3.51	2
Q61548	Clathrin coat assembly protein AP180 OS=Mus musculus O	Snap91	16.43	14
Q61553	Fascin OS=Mus musculus OX=10090 GN=Fscn1 PE=1 SV=4	Fscn1	24.54	13
Q61584	RNA-binding protein FXR1 OS=Mus musculus OX=10090 GN	FXR1	13.15	8
Q61595	Kinectin OS=Mus musculus OX=10090 GN=Ktn1 PE=1 SV=1	Ktn1	8.89	11
Q61598	Rab GDP dissociation inhibitor beta OS=Mus musculus OX=	Gdi2	19.1	10
Q61624	Zinc finger protein 148 OS=Mus musculus OX=10090 GN=Zn	Znf148	3.65	3
Q61644	Protein kinase C and casein kinase substrate in neurons pr	Pacsin1	27.66	14
Q61646	Haptoglobin OS=Mus musculus OX=10090 GN=Hp PE=1 SV=	Hp	8.36	3
Q61656	Probable ATP-dependent RNA helicase DDX5 OS=Mus musc	Ddx5	43.16	27
Q61686	Chromobox protein homolog 5 OS=Mus musculus OX=10090	Cbx5	19.9	3
Q61687	Transcriptional regulator ATRX OS=Mus musculus OX=1009	Atrx	1.74	4
Q61699	Heat shock protein 105 kDa OS=Mus musculus OX=10090 G	Hsp1	28.9	23
Q61701	ELAV-like protein 4 OS=Mus musculus OX=10090 GN=Elavl	Elavl4	15.06	5
Q61735	Leukocyte surface antigen CD47 OS=Mus musculus OX=100	Cd47	4.29	1
Q61749	Translation initiation factor eIF-2B subunit delta OS=Mus	Eif2b4	11.07	4

Q61753	D-3-phosphoglycerate dehydrogenase OS=Mus musculus OX	Phgdh	14.63	7
Q61768	Kinesin-1 heavy chain OS=Mus musculus OX=10090 GN=Kif	Kif5b	25.34	22
Q61771	Kinesin-like protein KIF3B OS=Mus musculus OX=10090 GN	Kif3b	9.5	7
Q61781	Keratin, type I cytoskeletal 14 OS=Mus musculus OX=10090	Krt14	15.08	9
Q61818	Retinoic acid-induced protein 1 OS=Mus musculus OX=1009	Rai1	0.58	1
Q61831	Mitogen-activated protein kinase 10 OS=Mus musculus OX	Mapk10	8.41	4
Q61838	Pregnancy zone protein OS=Mus musculus OX=10090 GN=Pz	Pzp	1.2	2
Q61839	C-type natriuretic peptide OS=Mus musculus OX=10090 GN=	Nppc	7.14	1
Q61879	Myosin-10 OS=Mus musculus OX=10090 GN=Myh10 PE=1 S	Myh10	39.12	75
Q61885	Myelin-oligodendrocyte glycoprotein OS=Mus musculus OX	Mog	28.46	7
Q61937	Nucleophosmin OS=Mus musculus OX=10090 GN=Npm1 PE=Npm1		29.45	9
Q61990	Poly(rC)-binding protein 2 OS=Mus musculus OX=10090 GN	Pcbp2	18.23	6
Q62048	Astrocytic phosphoprotein PEA-15 OS=Mus musculus OX=1	Pea15	27.69	3
Q62059	Versican core protein OS=Mus musculus OX=10090 GN=Vcan	Vcan	2.14	7
Q62074	Protein kinase C iota type OS=Mus musculus OX=10090 GN=	Prkci	1.51	1
Q62083	PRKCA-binding protein OS=Mus musculus OX=10090 GN=Pi	Pick1	7.45	3
Q62092	Neuronal vesicle trafficking-associated protein 1 OS=Mus	Nsg1	8.11	1
Q62093	Serine/arginine-rich splicing factor 2 OS=Mus musculus OX	Srsf2	10.86	3
Q62108	Disks large homolog 4 OS=Mus musculus OX=10090 GN=Dlg	Dlg4	16.57	11
Q62151	Advanced glycosylation end product-specific receptor OS=	Ager	2.24	1
Q62159	Rho-related GTP-binding protein RhoC OS=Mus musculus	Rhoc	21.24	5
Q62167	ATP-dependent RNA helicase DDX3X OS=Mus musculus OX	Ddx3x	27.34	17
Q62172	RalA-binding protein 1 OS=Mus musculus OX=10090 GN=Ral	Ralbp1	13.58	9
Q62188	Dihydropyrimidinase-related protein 3 OS=Mus musculus O	Dpysl3	9.3	6
Q62261	Spectrin beta chain, non-erythrocytic 1 OS=Mus musculus	Sptbn1	35.04	78
Q62277	Synaptophysin OS=Mus musculus OX=10090 GN=Syp PE=1	Syp	10.51	3
Q62311	Transcription initiation factor TFIID subunit 6 OS=Mus mu	Taf6	1.18	1
Q62318	Transcription intermediary factor 1-beta OS=Mus musculus	Trim28	11.15	9
Q62348	Translin OS=Mus musculus OX=10090 GN=Tsn PE=1 SV=1	Tsn	5.26	1
Q62351	Transferrin receptor protein 1 OS=Mus musculus OX=10090	Tfrc	2.75	2
Q62376	U1 small nuclear ribonucleoprotein 70 kDa OS=Mus muscul	Snrnp70	12.05	8
Q62392	Pleckstrin homology-like domain family A member 1 OS=Mus	Phlda1	1.98	1
Q62393	Tumor protein D52 OS=Mus musculus OX=10090 GN=Tpd52	Tpd52	16.52	3
Q62407	Striated muscle-specific serine/threonine-protein kinase	Speg	5.46	16
Q62417	Sorbin and SH3 domain-containing protein 1 OS=Mus muscu	Sorbs1	7.83	9
Q62418	Drebrin-like protein OS=Mus musculus OX=10090 GN=Dbnl	Dbnl	18.12	7
Q62419	Endophilin-A2 OS=Mus musculus OX=10090 GN=Sh3gl1 PE=Sh3gl1		10.33	4
Q62420	Endophilin-A1 OS=Mus musculus OX=10090 GN=Sh3gl2 PE=Sh3gl2		19.89	8
Q62421	Endophilin-A3 OS=Mus musculus OX=10090 GN=Sh3gl3 PE=Sh3gl3		3.46	1
Q62432	Mothers against decapentaplegic homolog 2 OS=Mus muscu	Smad2	11.35	5
Q62440	Transducin-like enhancer protein 1 OS=Mus musculus OX=1	Tle1	1.43	1
Q62442	Vesicle-associated membrane protein 1 OS=Mus musculus	Vamp1	22.03	2
Q62448	Eukaryotic translation initiation factor 4 gamma 2 OS=Mus	Eif4g2	2.54	2
Q62504	Msx2-interacting protein OS=Mus musculus OX=10090 GN=S	Spen	0.41	1
Q63739	Protein tyrosine phosphatase type IVA 1 OS=Mus musculus	Ptp4a1	40.46	7
Q63810	Calcineurin subunit B type 1 OS=Mus musculus OX=10090 G	Ppp3r1	24.71	4
Q63844	Mitogen-activated protein kinase 3 OS=Mus musculus OX=1	Mapk3	15	6
Q63912	Oligodendrocyte-myelin glycoprotein OS=Mus musculus O	Omg	4.55	2
Q63918	Caveolae-associated protein 2 OS=Mus musculus OX=10090	Cavin2	5.02	2
Q63943	Myocyte-specific enhancer factor 2D OS=Mus musculus OX	Mef2d	1.95	1
Q64010	Adapter molecule crk OS=Mus musculus OX=10090 GN=Crk	Crk	5.92	2
Q64012	RNA-binding protein Raly OS=Mus musculus OX=10090 GN=Raly		21.47	7
Q64092	Transcription factor E3 OS=Mus musculus OX=10090 GN=Tf	Tfe3	1.4	1
Q64096	Guanine nucleotide exchange factor DBS OS=Mus musculus	Mcf2l	2.61	3

Q64105	Sepiapterin reductase OS=Mus musculus OX=10090 GN=Spr	Spr	9.2	2
Q64133	Amine oxidase [flavin-containing] A OS=Mus musculus OX	Maoa	4.75	2
Q641K1	Cytosolic carboxypeptidase 1 OS=Mus musculus OX=10090	Agtpbp1	13.14	15
Q641K5	NUAK family SNF1-like kinase 1 OS=Mus musculus OX=10	Nuak1	10.49	7
Q64213	Splicing factor 1 OS=Mus musculus OX=10090 GN=Sf1 PE=1	Sf1	3.37	2
Q64331	Unconventional myosin-VI OS=Mus musculus OX=10090 GN	Myo6	21.32	29
Q64332	Synapsin-2 OS=Mus musculus OX=10090 GN=Syn2 PE=1 SV	Syn2	18.09	10
Q64336	T-box brain protein 1 OS=Mus musculus OX=10090 GN=Tbr1	Tbr1	2.79	2
Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specifi	Gapdhs	5.68	2
Q64487	Receptor-type tyrosine-protein phosphatase delta OS=Mus m	Ptprd	1.73	3
Q64511	DNA topoisomerase 2-beta OS=Mus musculus OX=10090 GN	Top2b	4.78	7
Q64514	Tripeptidyl-peptidase 2 OS=Mus musculus OX=10090 GN=Tp	Tpp2	2.46	3
Q64520	Guanylate kinase OS=Mus musculus OX=10090 GN=Guk1 PE	Guk1	6.06	1
Q64521	Glycerol-3-phosphate dehydrogenase, mitochondrial OS=Mus	Gpd2	16.78	12
Q64522	Histone H2A type 2-B OS=Mus musculus OX=10090 GN=H2a	H2ac21	12.31	2
Q64524	Histone H2B type 2-E OS=Mus musculus OX=10090 GN=H2b	H2bc21	26.19	5
Q64705	Upstream stimulatory factor 2 OS=Mus musculus OX=10090	Usf2	3.18	1
Q64707	U2 small nuclear ribonucleoprotein auxiliary factor 35 kDa	Zrsr1	8.64	4
Q64727	Vinculin OS=Mus musculus OX=10090 GN=Vcl PE=1 SV=4	Vcl	6.57	6
Q64737	Trifunctional purine biosynthetic protein adenosine-3 OS=	Gart	1.39	1
Q66GT5	Phosphatidylglycerophosphatase and protein-tyrosine phos	Ptpmt1	39.38	8
Q66JW3	Thymocyte selection-associated high mobility group box p	Tox	5.13	2
Q66L44	Voltage-dependent calcium channel beta subunit-associated	Cbarp	4.87	3
Q68ED7	CREB-regulated transcription coactivator 1 OS=Mus muscul	Crtc1	6.98	5
Q68FD5	Clathrin heavy chain 1 OS=Mus musculus OX=10090 GN=Clt	Cltc	23.94	40
Q68FF6	ARF GTPase-activating protein GIT1 OS=Mus musculus OX=	Git1	20.13	17
Q68FH0	Plakophilin-4 OS=Mus musculus OX=10090 GN=Pkp4 PE=1	Pkp4	12.86	15
Q68FL4	Putative adenosylhomocysteinase 3 OS=Mus musculus OX=1	Ahcyl2	17.46	12
Q68FL6	Methionine--tRNA ligase, cytoplasmic OS=Mus musculus O	Mars1	8.87	8
Q69Z38	Inactive tyrosine-protein kinase PEAK1 OS=Mus musculus	Peak1	1.38	2
Q69Z98	Serine/threonine-protein kinase BRSK2 OS=Mus musculus	Brsk2	20.95	17
Q69ZK0	Phosphatidylinositol 3,4,5-trisphosphate-dependent Rac ex	Prex1	2.79	5
Q69ZP3	Probable hydrolase PNKD OS=Mus musculus OX=10090 GN=Pnkd	Pnkd	15.84	6
Q69ZS0	E3 ubiquitin-protein ligase PDZRN3 OS=Mus musculus OX=	Pdzrn3	0.94	1
Q69ZS7	HBS1-like protein OS=Mus musculus OX=10090 GN=Hbs1l P	Hbs1l	23.02	15
Q69ZS8	Kazrin OS=Mus musculus OX=10090 GN=Kazn PE=1 SV=2	Kazn	2.31	2
Q69ZW3	EH domain-binding protein 1 OS=Mus musculus OX=10090	Ehbp1	11.13	11
Q6A026	Sister chromatid cohesion protein PDS5 homolog A OS=Mus	Pds5a	1.65	2
Q6A065	Centrosomal protein of 170 kDa OS=Mus musculus OX=1009	Cep170	14.67	20
Q6A068	Cell division cycle 5-like protein OS=Mus musculus OX=10	Cdc5l	12.22	12
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 OS=Mus musculus	Usp7	4.81	6
Q6DFV3	Rho GTPase-activating protein 21 OS=Mus musculus OX=10	Arhgap21	6.99	12
Q6DFV7	Nuclear receptor coactivator 7 OS=Mus musculus OX=10090	Ncoa7	2.33	2
Q6DFW4	Nucleolar protein 58 OS=Mus musculus OX=10090 GN=Nop5	Nop58	9.33	4
Q6DIC0	Probable global transcription activator SNF2L2 OS=Mus mu	Smarca2	7.86	12
Q6DID3	SR-related and CTD-associated factor 8 OS=Mus musculus	Scaf8	0.79	1
Q6GQS1	Mitochondrial adenyl nucleotide antiporter SLC25A23 OS=	Slc25a23	12.21	5
Q6GYP7	Ral GTPase-activating protein subunit alpha-1 OS=Mus mus	Ralgapa1	6.58	11
Q6IR34	G-protein-signaling modulator 1 OS=Mus musculus OX=100	Gpsm1	5.65	4
Q6IRU5	Clathrin light chain B OS=Mus musculus OX=10090 GN=Cltb	Cltb	20.96	7
Q6NS45	Coiled-coil domain-containing protein 66 OS=Mus musculu	Ccdc66	1.18	1
Q6NS52	Diacylglycerol kinase beta OS=Mus musculus OX=10090 GN	Dgkb	18.83	13
Q6NTA4	Ras-related GTP-binding protein B OS=Mus musculus OX=1	Rragb	7.49	3
Q6NVF0	Inositol polyphosphate 5-phosphatase OCRL OS=Mus muscu	Ocrl	1.67	1

Q6NVF9	Cleavage and polyadenylation specificity factor subunit 6	Cpsf6	18.15	10
Q6NXX7	Inactive dipeptidyl peptidase 10 OS=Mus musculus OX=100	Dpp10	5.27	4
Q6NXX8	Acid-sensing ion channel 1 OS=Mus musculus OX=10090 GN	Asic1	2.28	1
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 OS=Mus	Eif4g1	12.06	18
Q6NZM9	Histone deacetylase 4 OS=Mus musculus OX=10090 GN=Hda	Hdac4	3.25	4
Q6P069	Sorcine OS=Mus musculus OX=10090 GN=Sri PE=1 SV=1	Sri	10.61	2
Q6P1I6	PH and SEC7 domain-containing protein 2 OS=Mus musculus	Psd2	6.88	6
Q6P2L6	Histone-lysine N-methyltransferase NSD3 OS=Mus musculus	Nsd3	0.63	1
Q6P4S6	Serine/threonine-protein kinase SIK3 OS=Mus musculus OX	Sik3	4.09	6
Q6P4T2	U5 small nuclear ribonucleoprotein 200 kDa helicase OS=M	Snrnp200	12.97	27
Q6P5F9	Exportin-1 OS=Mus musculus OX=10090 GN=Xpo1 PE=1 SV	Xpo1	2.43	2
Q6P8X1	Sorting nexin-6 OS=Mus musculus OX=10090 GN=Snx6 PE=1	Snx6	9.61	4
Q6P9Q6	FK506-binding protein 15 OS=Mus musculus OX=10090 GN=	Fkbp15	1.64	2
Q6P9S0	Protein MTSS 2 OS=Mus musculus OX=10090 GN=Mtss2 PE=	Mtss2	4.2	3
Q6P9S1	ATM interactor OS=Mus musculus OX=10090 GN=Atmin PE=	Atmin	1.34	1
Q6PAJ1	Breakpoint cluster region protein OS=Mus musculus OX=100	Bcr	8.82	10
Q6PAK3	Protein arginine N-methyltransferase 8 OS=Mus musculus	Prmt8	5.58	2
Q6PAQ4	RNA exonuclease 4 OS=Mus musculus OX=10090 GN=Rexo4	Rexo4	9.72	3
Q6PB44	Tyrosine-protein phosphatase non-receptor type 23 OS=Mus	Ptpn23	0.65	1
Q6PB66	Leucine-rich PPR motif-containing protein, mitochondrial	Lrpprc	6.54	8
Q6PCN3	Tau-tubulin kinase 1 OS=Mus musculus OX=10090 GN=Ttbk1	Ttbk1	26.91	30
Q6PCP5	Mitochondrial fission factor OS=Mus musculus OX=10090 G	Mff	29.21	6
Q6PD03	Serine/threonine-protein phosphatase 2A 56 kDa regulatory	Ppp2r5a	1.44	1
Q6PD10	Inositol hexakisphosphate kinase 1 OS=Mus musculus OX=1	Ip6k1	4.39	2
Q6PD21	SH2 domain-containing adapter protein B OS=Mus musculus	Shb	5.77	3
Q6PDG5	SWI/SNF complex subunit SMARCC2 OS=Mus musculus OX	Smarcc2	11.71	15
Q6PDM2	Serine/arginine-rich splicing factor 1 OS=Mus musculus OX	Srsf1	37.5	10
Q6PDQ2	Chromodomain-helicase-DNA-binding protein 4 OS=Mus mu	Chd4	3.29	6
Q6PDY2	2-aminoethanethiol dioxygenase OS=Mus musculus OX=100	Ado	7.03	2
Q6PER3	Microtubule-associated protein RP/EB family member 3 OS	Mapre3	16.73	7
Q6PF93	Phosphatidylinositol 3-kinase catalytic subunit type 3 OS=	Pik3c3	3.49	3
Q6PFD5	Disks large-associated protein 3 OS=Mus musculus OX=100	Dlgap3	10.64	9
Q6PFD9	Nuclear pore complex protein Nup98-Nup96 OS=Mus muscu	Nup98	1.32	2
Q6PFR5	Transformer-2 protein homolog alpha OS=Mus musculus OX	Tra2a	18.86	5
Q6PFX7	Neuronal tyrosine-phosphorylated phosphoinositide-3-kina	Nyap1	6.36	4
Q6PGC1	ATP-dependent RNA helicase DHX29 OS=Mus musculus OX	Dhx29	4.84	6
Q6PGG6	Guanine nucleotide-binding protein-like 3-like protein OS	Gnl3l	12.48	6
Q6PGN3	Serine/threonine-protein kinase DCLK2 OS=Mus musculus	Dclk2	22.09	18
Q6PH08	ERC protein 2 OS=Mus musculus OX=10090 GN=Erc2 PE=1	Erc2	19.64	19
Q6PHN9	Ras-related protein Rab-35 OS=Mus musculus OX=10090 GN	Rab35	12.44	2
Q6PHU5	Sortilin OS=Mus musculus OX=10090 GN=Sort1 PE=1 SV=1	Sort1	4.12	2
Q6PHZ2	Calcium/calmodulin-dependent protein kinase type II subu	Camk2d	35.47	18
Q6PHZ5	Putative RNA-binding protein 15B OS=Mus musculus OX=1	Rbm15b	2.37	2
Q6PIC6	Sodium/potassium-transporting ATPase subunit alpha-3 OS	Atp1a3	28.33	31
Q6PIE5	Sodium/potassium-transporting ATPase subunit alpha-2 OS	Atp1a2	30	33
Q6Q477	Plasma membrane calcium-transporting ATPase 4 OS=Mus m	Atp2b4	10.12	11
Q6QI06	Rapamycin-insensitive companion of mTOR OS=Mus muscul	Rictor	2.46	4
Q6QWF9	Calcium/calmodulin-dependent protein kinase II inhibitor	Camk2n1	16.67	1
Q6R891	Neurabin-2 OS=Mus musculus OX=10090 GN=Ppp1r9b PE=1	Ppp1r9b	14.69	12
Q6RHR9	Membrane-associated guanylate kinase, WW and PDZ domain	Magi1	4.49	6
Q6RI63	Constitutive coactivator of peroxisome proliferator-activ	Fam120b	5.6	4
Q6URW6	Myosin-14 OS=Mus musculus OX=10090 GN=Myh14 PE=1 S	Myh14	17.25	33
Q6VNB8	WD repeat and FYVE domain-containing protein 3 OS=Mus	Wdfy3	2.79	9
Q6VNS1	NT-3 growth factor receptor OS=Mus musculus OX=10090 G	Ntrk3	1.21	1

Q6WQJ1	Diacylglycerol lipase-alpha OS=Mus musculus OX=10090 GN Dagla	0.67	1
Q6X893	Choline transporter-like protein 1 OS=Mus musculus OX=10 Slc44a1	1.53	1
Q6ZPE2	Myotubularin-related protein 5 OS=Mus musculus OX=10090 Sbf1	21.1	38
Q6ZPJ3	(E3-independent) E2 ubiquitin-conjugating enzyme UBE2O Ube2o	8.15	9
Q6ZPQ6	Membrane-associated phosphatidylinositol transfer protein Pitpm2	17.9	19
Q6ZPZ3	Zinc finger CCH domain-containing protein 4 OS=Mus mu Zc3h4	1.76	2
Q6ZQ08	CCR4-NOT transcription complex subunit 1 OS=Mus muscul Cnot1	0.84	2
Q6ZQ29	Serine/threonine-protein kinase TAO2 OS=Mus musculus O Taok2	10.89	13
Q6ZQ58	La-related protein 1 OS=Mus musculus OX=10090 GN=Larp1 Larp1	14.18	14
Q6ZQK5	Arf-GAP with coiled-coil, ANK repeat and PH domain-conta Acap2	3.77	3
Q6ZWN5	Small ribosomal subunit protein uS4 OS=Mus musculus OX= Rps9	63.92	17
Q6ZWR4	Serine/threonine-protein phosphatase 2A 55 kDa regulatory Ppp2r2b	2.48	1
Q6ZWR6	Nesprin-1 OS=Mus musculus OX=10090 GN=Syne1 PE=1 SV Syne1	1.05	8
Q6ZWU9	Small ribosomal subunit protein eS27 OS=Mus musculus OX Rps27	40.48	5
Q6Z WV3	Large ribosomal subunit protein uL16 OS=Mus musculus OX Rpl10	32.71	7
Q6Z WV7	Large ribosomal subunit protein uL29 OS=Mus musculus OX Rpl35	29.27	6
Q6Z WX6	Eukaryotic translation initiation factor 2 subunit 1 OS=Mus Eif2s1	13.02	4
Q70FJ1	A-kinase anchor protein 9 OS=Mus musculus OX=10090 GN= Akap9	2.05	6
Q70KY4	Forkhead box protein O6 OS=Mus musculus OX=10090 GN=F Foxo6	2.15	1
Q71M36	Chondroitin sulfate proteoglycan 5 OS=Mus musculus OX=1 Cspg5	3.71	2
Q76MZ3	Serine/threonine-protein phosphatase 2A 65 kDa regulatory Ppp2r1a	23.77	13
Q78J03	Methionine-R-sulfoxide reductase B2, mitochondrial OS=M Msrb2	17.71	4
Q78PY7	Staphylococcal nuclease domain-containing protein 1 OS=M Snd1	4.51	4
Q78T81	Early estrogen-induced gene 1 protein OS=Mus musculus O Eeig1	22.7	7
Q78TU8	Actin-associated protein FAM107A OS=Mus musculus OX=1 Fam107a	38.19	6
Q78YY6	DnaJ homolog subfamily C member 15 OS=Mus musculus OX Dnajc15	7.38	1
Q791V5	Mitochondrial carrier homolog 2 OS=Mus musculus OX=100 Mtch2	7.92	2
Q7M6Y3	Phosphatidylinositol-binding clathrin assembly protein OS Picalm	12.73	8
Q7M750	Opalin OS=Mus musculus OX=10090 GN=Opalin PE=1 SV=1 Opalin	6.99	1
Q7TMB8	Cytoplasmic FMR1-interacting protein 1 OS=Mus musculus Cyfip1	12.37	16
Q7TMF2	3'-5' exoribonuclease 1 OS=Mus musculus OX=10090 GN=Eri Eri1	4.64	2
Q7TMK9	Heterogeneous nuclear ribonucleoprotein Q OS=Mus muscul Syncrip	19.42	12
Q7TMM9	Tubulin beta-2A chain OS=Mus musculus OX=10090 GN=Tub Tubb2a	43.6	18
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 OS=Mus musculus OX= Huwe1	0.69	3
Q7TN29	Stromal membrane-associated protein 2 OS=Mus musculus Smap2	4.91	2
Q7TN83	Synaptotagmin-16 OS=Mus musculus OX=10090 GN=Syt16 P Syt16	4.23	2
Q7TN99	Cytoplasmic polyadenylation element-binding protein 3 O Cpeb3	7.12	5
Q7TNC4	Putative RNA-binding protein Luc7-like 2 OS=Mus musculu Luc7l2	32.4	14
Q7TNM2	Tripartite motif-containing protein 46 OS=Mus musculus O Trim46	13.44	9
Q7TNV0	Protein DEK OS=Mus musculus OX=10090 GN=Dek PE=1 SV Dek	30.53	11
Q7TPD3	Roundabout homolog 2 OS=Mus musculus OX=10090 GN=Ro Robo2	0.68	1
Q7TPH6	E3 ubiquitin-protein ligase MYCBP2 OS=Mus musculus OX Mycbp2	12.66	57
Q7TPR4	Alpha-actinin-1 OS=Mus musculus OX=10090 GN=Actn1 PE=Actn1	35.09	31
Q7TPS5	C2 domain-containing protein 5 OS=Mus musculus OX=1009 C2cd5	18.21	16
Q7TPV4	Myb-binding protein 1A OS=Mus musculus OX=10090 GN=MMybbp1a	11.38	13
Q7TQ95	Endoplasmic reticulum junction formation protein lunapar Lnpk	3.06	1
Q7TQC5	Aprataxin OS=Mus musculus OX=10090 GN=Aptx PE=1 SV= Aptx	6.14	2
Q7TQD2	Tubulin polymerization-promoting protein OS=Mus musculu Tppp	42.66	10
Q7TQF7	Amphiphysin OS=Mus musculus OX=10090 GN=Amph PE=1 Amph	17.93	13
Q7TQI3	Ubiquitin thioesterase OTUB1 OS=Mus musculus OX=10090 Otub1	17.71	5
Q7TQK0	Cyclin-T2 OS=Mus musculus OX=10090 GN=Ccnt2 PE=1 SV Ccnt2	9.13	5
Q7TQN3	WAP, Kazal, immunoglobulin, Kunitz and NTR domain-conta Wfikn2	1.58	1
Q7TSH4	Centriolar coiled-coil protein of 110 kDa OS=Mus musculu Ccp110	13.25	12
Q7TSJ2	Microtubule-associated protein 6 OS=Mus musculus OX=10 Map6	60.04	53

Q7TSS2	Ubiquitin-conjugating enzyme E2 Q1 OS=Mus musculus OX	Ube2q1	1.9	1
Q7TSY6	CUGBP Elav-like family member 4 OS=Mus musculus OX=10	Celf4	5.56	3
Q7TT37	Elongator complex protein 1 OS=Mus musculus OX=10090 G	Elp1	7.58	10
Q7TT45	Ras-related GTP-binding protein D OS=Mus musculus OX=1	Rragd	2.67	1
Q7TT50	Serine/threonine-protein kinase MRCK beta OS=Mus muscu	Cdc42bpb	16.58	26
Q80SW1	S-adenosylhomocysteine hydrolase-like protein 1 OS=Mus	Ahcyl1	24.15	14
Q80SY4	E3 ubiquitin-protein ligase MIB1 OS=Mus musculus OX=10	Mib1	2.29	2
Q80T41	Gamma-aminobutyric acid type B receptor subunit 2 OS=M	Gabbr2	8.09	7
Q80TE7	Leucine-rich repeat-containing protein 7 OS=Mus musculus	Lrrc7	9.73	12
Q80TI0	Protein Aster-B OS=Mus musculus OX=10090 GN=Gramd1b	Gramd1b	10.84	7
Q80TJ1	Calcium-dependent secretion activator 1 OS=Mus musculus	Cadps	13.28	17
Q80TJ7	Histone lysine demethylase PHF8 OS=Mus musculus OX=100	Phf8	3.52	3
Q80TL0	Protein phosphatase 1E OS=Mus musculus OX=10090 GN=Pp	Ppm1e	3.34	2
Q80TM9	Nischarin OS=Mus musculus OX=10090 GN=Nisch PE=1 SV=Nisch		2.45	3
Q80TN7	Neuron navigator 3 OS=Mus musculus OX=10090 GN=Nav3	Nav3	5.85	12
Q80TP3	E3 ubiquitin-protein ligase UBR5 OS=Mus musculus OX=10	Ubr5	0.36	1
Q80TQ2	Ubiquitin carboxyl-terminal hydrolase CYLD OS=Mus musc	Cyld	4.52	4
Q80TR1	Adhesion G protein-coupled receptor L1 OS=Mus musculus	Adgrl1	2.18	3
Q80TS3	Adhesion G protein-coupled receptor L3 OS=Mus musculus	Adgrl3	2.8	4
Q80TT8	Cullin-9 OS=Mus musculus OX=10090 GN=Cul9 PE=1 SV=2	Cul9	1.82	3
Q80TV8	CLIP-associating protein 1 OS=Mus musculus OX=10090 GN	Clasp1	23.97	36
Q80TY0	Formin-binding protein 1 OS=Mus musculus OX=10090 GN=	Fnbp1	8.6	5
Q80TZ3	Putative tyrosine-protein phosphatase auxilin OS=Mus mus	Dnajc6	7.89	7
Q80U04	E3 ubiquitin-protein ligase Praja-2 OS=Mus musculus OX=1	Pja2	3.68	2
Q80U19	Disheveled-associated activator of morphogenesis 2 OS=M	Daam2	0.99	1
Q80U28	MAP kinase-activating death domain protein OS=Mus musc	Madd	11.6	17
Q80U40	RIMS-binding protein 2 OS=Mus musculus OX=10090 GN=R	Rimbp2	3.17	4
Q80U63	Mitofusin-2 OS=Mus musculus OX=10090 GN=Mfn2 PE=1 S	Mfn2	6.74	5
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 OS=Mus musculus	Usp8	2.78	3
Q80UG2	Plexin-A4 OS=Mus musculus OX=10090 GN=Plxna4 PE=1 SV=	Plxna4	0.53	1
Q80UG5	Septin-9 OS=Mus musculus OX=10090 GN=Septin9 PE=1 SV=	Septin9	14.92	8
Q80UJ7	Rab3 GTPase-activating protein catalytic subunit OS=Mus	Rab3gap1	3.16	3
Q80UM3	N-alpha-acetyltransferase 15, NatA auxiliary subunit OS=	Naa15	2.66	2
Q80UP3	Diacylglycerol kinase zeta OS=Mus musculus OX=10090 GN	Dgkz	20.34	16
Q80VC9	Calmodulin-regulated spectrin-associated protein 3 OS=M	Camsap3	11.34	13
Q80VP1	Epsin-1 OS=Mus musculus OX=10090 GN=Epn1 PE=1 SV=3	Epn1	2.96	2
Q80W47	WD repeat domain phosphoinositide-interacting protein 2	Wipi2	2.92	1
Q80WJ7	Protein LYRIC OS=Mus musculus OX=10090 GN=Mtdh PE=1	Mtdh	20.55	11
Q80WM4	Hyaluronan and proteoglycan link protein 4 OS=Mus muscu	Hapln4	16.5	6
Q80WT0	Junctophilin-4 OS=Mus musculus OX=10090 GN=Jph4 PE=2	Jph4	13.85	7
Q80X41	Serine/threonine-protein kinase VRK1 OS=Mus musculus O	Vrk1	13.64	6
Q80X50	Ubiquitin-associated protein 2-like OS=Mus musculus OX=1	Ubp2l	3.43	3
Q80X73	Protein pelota homolog OS=Mus musculus OX=10090 GN=Pel	Pelo	2.86	1
Q80X80	Phospholipid transfer protein C2CD2L OS=Mus musculus O	C2cd2l	12.04	9
Q80X90	Filamin-B OS=Mus musculus OX=10090 GN=Flnb PE=1 SV=	Flnb	0.61	1
Q80XG9	Leucine-rich repeat transmembrane neuronal protein 4 OS=	Lrrtm4	5.08	3
Q80XI3	Eukaryotic translation initiation factor 4 gamma 3 OS=Mus	Eif4g3	13.81	21
Q80XI4	Phosphatidylinositol 5-phosphate 4-kinase type-2 beta OS	Pip4k2b	17.07	8
Q80XK6	Autophagy-related protein 2 homolog B OS=Mus musculus	Atg2b	1.4	3
Q80XP9	Serine/threonine-protein kinase WNK3 OS=Mus musculus	Wnk3	2.5	4
Q80XU3	Nuclear ubiquitous casein and cyclin-dependent kinase sub	Nucks1	17.95	5
Q80Y17	Lethal(2) giant larvae protein homolog 1 OS=Mus musculus	Llg1	7.43	7
Q80Y20	Alkylated DNA repair protein alkB homolog 8 OS=Mus mus	Alkbh8	2.41	1
Q80Y24	Prickle-like protein 2 OS=Mus musculus OX=10090 GN=Prick	Prickle2	4.85	4

Q80Y50	Calmodulin-binding transcription activator 2 OS=Mus musc	Camta2	3.56	4
Q80Y86	Mitogen-activated protein kinase 15 OS=Mus musculus OX	Mapk15	1.46	1
Q80YA3	Phospholipase DDHD1 OS=Mus musculus OX=10090 GN=Dd	Ddhd1	3.47	2
Q80YA9	Connector enhancer of kinase suppressor of ras 2 OS=Mus	Cnksr2	16.09	14
Q80YE7	Death-associated protein kinase 1 OS=Mus musculus OX=10	Dapk1	1.8	2
Q80YF9	Rho GTPase-activating protein 33 OS=Mus musculus OX=10	Arhgap33	2.61	3
Q80YR4	E3 ubiquitin-protein ligase ZNF598 OS=Mus musculus OX=	Znf598	2.42	2
Q80Z10	Astrotactin-2 OS=Mus musculus OX=10090 GN=Astn2 PE=1	Astn2	0.96	1
Q80Z24	Neuronal growth regulator 1 OS=Mus musculus OX=10090 G	Negr1	2.3	1
Q80Z37	E3 ubiquitin-protein ligase Topors OS=Mus musculus OX=1	Topors	0.87	1
Q80Z38	SH3 and multiple ankyrin repeat domains protein 2 OS=Mus	Shank2	10.37	15
Q80ZJ1	Ras-related protein Rap-2a OS=Mus musculus OX=10090 GN	Rap2a	16.39	3
Q810B7	SLIT and NTRK-like protein 5 OS=Mus musculus OX=10090	Slitrk5	0.94	1
Q810U3	Neurofascin OS=Mus musculus OX=10090 GN=Nfasc PE=1 S	Nfasc	6.21	7
Q810U4	Neuronal cell adhesion molecule OS=Mus musculus OX=100	Nrcam	8.04	9
Q811D0	Disks large homolog 1 OS=Mus musculus OX=10090 GN=Dlg	Dlg1	7.51	8
Q811P8	Rho GTPase-activating protein 32 OS=Mus musculus OX=10	Arhgap32	10.96	21
Q811S7	Upstream-binding protein 1 OS=Mus musculus OX=10090 G	Ubp1	7.59	3
Q8BFQ4	WD repeat-containing protein 82 OS=Mus musculus OX=100	Wdr82	7.03	2
Q8BFY6	Peflin OS=Mus musculus OX=10090 GN=Pef1 PE=1 SV=1	Pef1	4	1
Q8BG15	CTD small phosphatase-like protein 2 OS=Mus musculus OX	Ctdspl2	9.89	4
Q8BG32	26S proteasome non-ATPase regulatory subunit 11 OS=Mus	Psmd11	8.77	3
Q8BG39	Synaptic vesicle glycoprotein 2B OS=Mus musculus OX=100	Sv2b	9.96	7
Q8BG51	Mitochondrial Rho GTPase 1 OS=Mus musculus OX=10090 G	Rhot1	4.6	3
Q8BGG7	Ubiquitin-associated and SH3 domain-containing protein	Ubash3b	6.58	4
Q8BGJ9	Splicing factor U2AF 26 kDa subunit OS=Mus musculus OX	U2af1l4	13.18	4
Q8BGN3	Glycerophosphocholine cholinephosphodiesterase ENPP6 O	Enpp6	4.09	2
Q8BGQ1	Spermatogenesis-defective protein 39 homolog OS=Mus mus	Vipas39	2.04	1
Q8BGQ7	Alanine--tRNA ligase, cytoplasmic OS=Mus musculus OX=1	Aars1	10.74	8
Q8BGS1	Band 4.1-like protein 5 OS=Mus musculus OX=10090 GN=Ep	Epb41l5	8.21	5
Q8BGV7	BTB/POZ domain-containing adapter for CUL3-mediated Rho	Kctd13	4.56	1
Q8BH04	Phosphoenolpyruvate carboxykinase [GTP], mitochondrial	Pck2	5.16	3
Q8BH50	Protein ARK2N OS=Mus musculus OX=10090 GN=ARK2N P	ARK2N	8.16	2
Q8BH57	WD repeat-containing protein 48 OS=Mus musculus OX=100	Wdr48	15.38	10
Q8BH59	Electrogenic aspartate/glutamate antiporter SLC25A12, mit	Slc25a12	32.94	23
Q8BH60	Golgi-associated PDZ and coiled-coil motif-containing pro	Gopc	1.94	1
Q8BH66	Atlastin-1 OS=Mus musculus OX=10090 GN=Atl1 PE=1 SV=1	Atl1	7.89	4
Q8BH95	Enoyl-CoA hydratase, mitochondrial OS=Mus musculus OX=	Echs1	14.48	4
Q8BHC1	Ras-related protein Rab-39B OS=Mus musculus OX=10090 G	Rab39b	12.68	2
Q8BHE3	Caytaxin OS=Mus musculus OX=10090 GN=Atcay PE=1 SV=	Atcay	4.84	2
Q8BHJ7	Gamma-aminobutyric acid receptor subunit alpha-5 OS=Mus	Gabra5	6.48	3
Q8BHN3	Neutral alpha-glucosidase AB OS=Mus musculus OX=10090	Ganab	7.1	6
Q8BHY3	Anoctamin-1 OS=Mus musculus OX=10090 GN=Ano1 PE=1 S	Ano1	0.73	1
Q8BIE6	FERM domain-containing protein 4A OS=Mus musculus OX=	Frmd4a	5.2	5
Q8BIF2	RNA binding protein fox-1 homolog 3 OS=Mus musculus O	Rbfox3	13.1	5
Q8BIK4	Dedicator of cytokinesis protein 9 OS=Mus musculus OX=1	Dock9	5.64	11
Q8BIZ1	Ankyrin repeat and sterile alpha motif domain-containing	Anks1b	3.26	4
Q8BJ42	Disks large-associated protein 2 OS=Mus musculus OX=100	Dlgap2	9.44	8
Q8BJ71	Nuclear pore complex protein Nup93 OS=Mus musculus OX	Nup93	1.34	1
Q8BJF9	Charged multivesicular body protein 2b OS=Mus musculus	Chmp2b	12.21	3
Q8BJI1	Sodium-dependent neutral amino acid transporter SLC6A17	Slc6a17	3.44	2
Q8BJU0	Small glutamine-rich tetratricopeptide repeat-containing p	Sgta	11.11	3
Q8BJW6	Eukaryotic translation initiation factor 2A OS=Mus muscul	Eif2a	9.29	5
Q8BK63	Casein kinase I isoform alpha OS=Mus musculus OX=10090	Csnk1a1	40.36	13

Q8BK67	Protein RCC2 OS=Mus musculus OX=10090 GN=Rcc2 PE=1	Rcc2	24.42	12
Q8BKC5	Importin-5 OS=Mus musculus OX=10090 GN=Ipo5 PE=1 SV=Ipo5		5.74	6
Q8BKH7	Target of rapamycin complex 2 subunit MAPKAP1 OS=Mus	Mapkap1	2.11	1
Q8BKT7	THO complex subunit 5 homolog OS=Mus musculus OX=100	Thoc5	2.34	2
Q8BKX1	Brain-specific angiogenesis inhibitor 1-associated protein	Baiap2	33.64	17
Q8BL65	Actin-binding LIM protein 2 OS=Mus musculus OX=10090 G	Ablim2	8.99	5
Q8BL97	Serine/arginine-rich splicing factor 7 OS=Mus musculus OX	Srsf7	28.09	8
Q8BLE7	Vesicular glutamate transporter 2 OS=Mus musculus OX=100	Slc17a6	6.01	4
Q8BLF1	Neutral cholesterol ester hydrolase 1 OS=Mus musculus OX	Nceh1	5.88	2
Q8BLK9	Ribosomal protein S6 kinase delta-1 OS=Mus musculus OX=	Rps6kc1	1.61	2
Q8BLN6	Protein unc-80 homolog OS=Mus musculus OX=10090 GN=U	Unc80	0.39	1
Q8BLQ9	Cell adhesion molecule 2 OS=Mus musculus OX=10090 GN=	Cadm2	14.48	7
Q8BLY1	SPARC-related modular calcium-binding protein 1 OS=Mus	Smoc1	2.16	1
Q8BLY2	Threonine--tRNA ligase 2, cytoplasmic OS=Mus musculus O	Tars3	8.61	6
Q8BM65	Neuronal tyrosine-phosphorylated phosphoinositide-3-kina	Nyap2	8.06	4
Q8BMF4	Dihydrolipoyllysine-residue acetyltransferase component of	Dlat	16.51	12
Q8BMJ2	Leucine--tRNA ligase, cytoplasmic OS=Mus musculus OX=1	Lars1	1.87	2
Q8BMK4	Cytoskeleton-associated protein 4 OS=Mus musculus OX=10	Ckap4	11.65	6
Q8BML9	Glutamine--tRNA ligase OS=Mus musculus OX=10090 GN=Q	Qars1	4.13	4
Q8BMS1	Trifunctional enzyme subunit alpha, mitochondrial OS=Mus	Hadha	11.27	9
Q8BNY6	Neuronal calcium sensor 1 OS=Mus musculus OX=10090 GN	Ncs1	11.58	2
Q8BP00	IQ calmodulin-binding motif-containing protein 1 OS=Mus	Iqcb1	7.69	4
Q8BP48	Methionine aminopeptidase 1 OS=Mus musculus OX=10090	Metap1	12.95	4
Q8BP67	Large ribosomal subunit protein eL24 OS=Mus musculus OX	Rpl24	42.04	9
Q8BP71	RNA binding protein fox-1 homolog 2 OS=Mus musculus O	Rbfox2	10.91	5
Q8BPM0	Disheveled-associated activator of morphogenesis 1 OS=M	Daam1	1.02	1
Q8BPN8	DmX-like protein 2 OS=Mus musculus OX=10090 GN=Dmxl2	Dmxl2	18.96	55
Q8BPQ7	Small G protein signaling modulator 1 OS=Mus musculus O	Sgsm1	3.2	3
Q8BPU7	Engulfment and cell motility protein 1 OS=Mus musculus	Elmo1	4.13	1
Q8BR65	Sin3 histone deacetylase corepressor complex component	Suds3	2.44	1
Q8BRH0	Protein O-mannosyl-transferase TMTC3 OS=Mus musculus	Tmtc3	0.76	1
Q8BRT1	CLIP-associating protein 2 OS=Mus musculus OX=10090 GN	Clasp2	31.18	40
Q8BSF4	Phosphatidylserine decarboxylase proenzyme, mitochondria	Pisd	11.33	5
Q8BSK8	Ribosomal protein S6 kinase beta-1 OS=Mus musculus OX=	Rps6kb1	3.24	2
Q8BSS9	Liprin-alpha-2 OS=Mus musculus OX=10090 GN=Ppfia2 PE=	Ppfia2	21.56	27
Q8BSZ2	AP-3 complex subunit sigma-2 OS=Mus musculus OX=10090	Ap3s2	10.36	2
Q8BTG7	Protein NDRG4 OS=Mus musculus OX=10090 GN=Ndr4 PE=Ndr4		7.1	2
Q8BTH8	Casein kinase I isoform gamma-1 OS=Mus musculus OX=10	Csnk1g1	14.38	7
Q8BTM8	Filamin-A OS=Mus musculus OX=10090 GN=Flna PE=1 SV=Flna		2.08	4
Q8BTY2	Sodium bicarbonate cotransporter 3 OS=Mus musculus OX=1	Slc4a7	1.06	1
Q8BU30	Isoleucine--tRNA ligase, cytoplasmic OS=Mus musculus OX	Iars1	5.86	7
Q8BUK6	Protein Hook homolog 3 OS=Mus musculus OX=10090 GN=H	Hook3	7.66	5
Q8BUL6	Pleckstrin homology domain-containing family A member 1	Plekha1	16.71	6
Q8BUN5	Mothers against decapentaplegic homolog 3 OS=Mus muscu	Smad3	12	5
Q8BUN9	Sodium/potassium/calcium exchanger 2 OS=Mus musculus O	Slc24a2	2.7	2
Q8BUR3	Forkhead box protein J3 OS=Mus musculus OX=10090 GN=Fc	Foxj3	8.19	4
Q8BUV3	Gephyrin OS=Mus musculus OX=10090 GN=Gphn PE=1 SV=Gphn		16.91	11
Q8BVG5	Polypeptide N-acetylgalactosaminyltransferase 14 OS=Mus	Galnt14	1.82	1
Q8BVL9	Janus kinase and microtubule-interacting protein 1 OS=Mus	Jakmip1	6.39	4
Q8BVP5	Casein kinase I isoform gamma-2 OS=Mus musculus OX=10	Csnk1g2	17.59	9
Q8BW22	Calcium-responsive transactivator OS=Mus musculus OX=10	Ss18l1	2.99	1
Q8BW41	Protein O-linked-mannose beta-1,4-N-acetylglucosaminyltr	Pomgnt2	2.07	1
Q8BW96	Calcium/calmodulin-dependent protein kinase type 1D OS	Camk1d	2.6	1
Q8BWF0	Succinate-semialdehyde dehydrogenase, mitochondrial OS=	Aldh5a1	14.34	7

Q8BWG8	Beta-arrestin-1 OS=Mus musculus OX=10090 GN=Arrb1 PE=	Arrb1	4.55	2
Q8BWQ5	Serine/threonine-protein kinase DCLK3 OS=Mus musculus	Dclk3	1.39	1
Q8BWT1	3-ketoacyl-CoA thiolase, mitochondrial OS=Mus musculus	Acaa2	16.12	6
Q8BWT5	Disco-interacting protein 2 homolog A OS=Mus musculus O	Dip2a	16.81	25
Q8BX09	Retinoblastoma-binding protein 5 OS=Mus musculus OX=10	Rbbp5	2.04	1
Q8BX10	Serine/threonine-protein phosphatase PGAM5, mitochondri	Pgam5	31.25	9
Q8BX17	Gem-associated protein 5 OS=Mus musculus OX=10090 GN=	Gemin5	6.32	9
Q8BX57	PX domain-containing protein kinase-like protein OS=Mus	Pxk	9.45	6
Q8BX70	Intermembrane lipid transfer protein VPS13C OS=Mus musc	Vps13c	15.96	58
Q8BXK8	Arf-GAP with GTPase, ANK repeat and PH domain-containi	Agap1	13.19	11
Q8BXR9	Oxysterol-binding protein-related protein 6 OS=Mus muscu	Osbp16	29.61	26
Q8BY89	Choline transporter-like protein 2 OS=Mus musculus OX=10	Slc44a2	1.56	1
Q8BYB9	Protein O-glucosyltransferase 1 OS=Mus musculus OX=1009	Poglut1	7.14	3
Q8BYC6	Serine/threonine-protein kinase TAO3 OS=Mus musculus O	Taok3	13.81	12
Q8BYI9	Tenascin-R OS=Mus musculus OX=10090 GN=Tnr PE=1 SV=Tnr		20.4	25
Q8BYR5	Calcium-dependent secretion activator 2 OS=Mus musculus	Cadps2	4.78	6
Q8BZ97	PR domain zinc finger protein 8 OS=Mus musculus OX=100	Prdm8	1.16	1
Q8BZ98	Dynamin-3 OS=Mus musculus OX=10090 GN=Dnm3 PE=1 S	Dnm3	14.83	13
Q8BZQ7	Anaphase-promoting complex subunit 2 OS=Mus musculus	Anapc2	15.29	13
Q8BZZ3	NEDD4-like E3 ubiquitin-protein ligase WWP1 OS=Mus mu	Wwp1	2.94	3
Q8C015	Serine/threonine-protein kinase PAK 5 OS=Mus musculus O	Pak5	3.62	2
Q8C050	Ribosomal protein S6 kinase alpha-5 OS=Mus musculus OX	Rps6ka5	5.56	4
Q8C052	Microtubule-associated protein 1S OS=Mus musculus OX=1	Map1s	19.42	17
Q8C078	Calcium/calmodulin-dependent protein kinase kinase 2 OS	Camkk2	8.5	4
Q8C0C0	Zinc fingers and homeoboxes protein 2 OS=Mus musculus	Zhx2	1.44	1
Q8C0E2	Vacuolar protein sorting-associated protein 26B OS=Mus m	Vps26b	8.63	3
Q8C0L9	Glycerophosphocholine phosphodiesterase GPCPD1 OS=Mus	Gpcpd1	4.3	3
Q8C0M0	GATOR2 complex protein WDR59 OS=Mus musculus OX=10	Wdr59	6.55	6
Q8C0T5	Signal-induced proliferation-associated 1-like protein 1 O	Sipa1l1	9.82	16
Q8C145	Zinc transporter ZIP6 OS=Mus musculus OX=10090 GN=Slc3	Slc39a6	1.7	1
Q8C167	Prolyl endopeptidase-like OS=Mus musculus OX=10090 GN=PPrepl		1.93	1
Q8C170	Unconventional myosin-IXa OS=Mus musculus OX=10090 G	Myo9a	5.74	14
Q8C1B1	Calmodulin-regulated spectrin-associated protein 2 OS=Mus	Camsap2	13.14	19
Q8C1B7	Septin-11 OS=Mus musculus OX=10090 GN=Septin11 PE=1 S	Septin11	18.79	8
Q8C1Q6	Ubiquinol-cytochrome c reductase complex assembly facto	Uqc5	28.75	3
Q8C2Q3	RNA-binding protein 14 OS=Mus musculus OX=10090 GN=R	Rbm14	22.42	14
Q8C3Q5	Protein shisa-7 OS=Mus musculus OX=10090 GN=Shisa7 PE=	Shisa7	12.72	6
Q8C419	Metabotropic glycine receptor OS=Mus musculus OX=10090	Gpr158	11.83	15
Q8C437	PEX5-related protein OS=Mus musculus OX=10090 GN=Pex5	Pex5l	7.58	4
Q8C4U3	Secreted frizzled-related protein 1 OS=Mus musculus OX=10	Sfrp1	3.18	1
Q8C4X2	Casein kinase I isoform gamma-3 OS=Mus musculus OX=10	Csnk1g3	21.23	10
Q8C6G1	Cilia- and flagella-associated protein 410 OS=Mus musculu	Cfap410	3.21	1
Q8C754	Vacuolar protein sorting-associated protein 52 homolog O	Vps52	2.77	2
Q8C7M3	E3 ubiquitin-protein ligase TRIM9 OS=Mus musculus OX=1	Trim9	12.36	9
Q8C854	Myelin expression factor 2 OS=Mus musculus OX=10090 GN	Myef2	18.78	11
Q8C8N2	Protein SCAI OS=Mus musculus OX=10090 GN=Scai PE=1 S	Scai	11.88	7
Q8C8R3	Ankyrin-2 OS=Mus musculus OX=10090 GN=Ank2 PE=1 SV=	Ank2	24.7	82
Q8C9B9	Death-inducer obliterator 1 OS=Mus musculus OX=10090 GN	Dido1	3.41	6
Q8CAQ8	MICOS complex subunit Mic60 OS=Mus musculus OX=1009	Immt	24.57	19
Q8CBW3	Abl interactor 1 OS=Mus musculus OX=10090 GN=Abi1 PE=1	Abi1	21.83	11
Q8CC27	Voltage-dependent L-type calcium channel subunit beta-2	Cacnb2	10.53	7
Q8CC35	Synaptopodin OS=Mus musculus OX=10090 GN=Synpo PE=1	Synpo	18.51	18
Q8CC88	von Willebrand factor A domain-containing protein 8 OS=	Vwa8	7.61	13
Q8CCF0	U4/U6 small nuclear ribonucleoprotein Prp31 OS=Mus musc	Prpf31	11.82	6

Q8CCI5	RING1 and YY1-binding protein OS=Mus musculus OX=100	Rybp	4.39	1
Q8CCJ9	PHD finger protein 20-like protein 1 OS=Mus musculus OX=	Phf20l1	0.89	1
Q8CCN5	BCAS3 microtubule associated cell migration factor OS=Mus	Bcas3	11.31	9
Q8CCP0	Ribosome quality control complex subunit NEMF OS=Mus	Nemf	3.38	3
Q8CCS6	Polyadenylate-binding protein 2 OS=Mus musculus OX=100	Pabpn1	14.57	5
Q8CDA1	Phosphatidylinositide phosphatase SAC2 OS=Mus musculus	Inpp5f	1.59	2
Q8CDG3	Deubiquitinating protein VCIPI1 OS=Mus musculus OX=100	Vcpip1	5.82	6
Q8CE90	Dual specificity mitogen-activated protein kinase kinase	Map2k7	11.03	6
Q8CFE4	SCY1-like protein 2 OS=Mus musculus OX=10090 GN=Scyl2	Scyl2	3.33	2
Q8CFI0	E3 ubiquitin-protein ligase NEDD4-like OS=Mus musculus	Nedd4l	7.57	7
Q8CFJ9	GATOR2 complex protein WDR24 OS=Mus musculus OX=10	Wdr24	7.22	5
Q8CFN5	Myocyte-specific enhancer factor 2C OS=Mus musculus OX	Mef2c	5.06	2
Q8CFV4	Neuritin OS=Mus musculus OX=10090 GN=Nrn1 PE=1 SV=1	Nrn1	10.56	1
Q8CG14	Complement C1s-1 subcomponent OS=Mus musculus OX=100	C1s1	1.45	1
Q8CG16	Complement C1r-A subcomponent OS=Mus musculus OX=10	C1ra	2.55	2
Q8CG76	Aflatoxin B1 aldehyde reductase member 2 OS=Mus muscul	Akr7a2	3.27	1
Q8CGA0	Protein phosphatase 1F OS=Mus musculus OX=10090 GN=Pp	Ppm1f	2.21	1
Q8CGC7	Bifunctional glutamate/proline--tRNA ligase OS=Mus muscu	Eprs1	15.67	22
Q8CGE9	Regulator of G-protein signaling 12 OS=Mus musculus OX=	Rgs12	4.71	6
Q8CGF6	WD repeat-containing protein 47 OS=Mus musculus OX=100	Wdr47	9.46	8
Q8CGF7	Transcription elongation regulator 1 OS=Mus musculus OX=	Tcerg1	12.27	14
Q8CGK3	Lon protease homolog, mitochondrial OS=Mus musculus OX	Lonp1	10.85	9
Q8CGU1	Calcium-binding and coiled-coil domain-containing protei	Calcoco1	3.33	2
Q8CGY8	UDP-N-acetylglucosamine--peptide N-acetylglucosaminyltra	Ogt	8.41	9
Q8CH18	Cell division cycle and apoptosis regulator protein 1 OS=M	Ccar1	19.46	22
Q8CH72	E3 ubiquitin-protein ligase TRIM32 OS=Mus musculus OX=	Trim32	12.67	7
Q8CH77	Neuron navigator 1 OS=Mus musculus OX=10090 GN=Nav1	Nav1	11.47	20
Q8CHC4	Synaptojanin-1 OS=Mus musculus OX=10090 GN=Synj1 PE=	Synj1	16.77	26
Q8CHG7	Rap guanine nucleotide exchange factor 2 OS=Mus musculu	Rapgef2	16.04	21
Q8CHH9	Septin-8 OS=Mus musculus OX=10090 GN=Septin8 PE=1 SV=	Septin8	24.94	9
Q8CHP8	Glycerol-3-phosphate phosphatase OS=Mus musculus OX=10	Pgp	4.36	1
Q8CHT1	Ephexin-1 OS=Mus musculus OX=10090 GN=Ngef PE=1 SV=Ngef		8.87	7
Q8CI11	Guanine nucleotide-binding protein-like 3 OS=Mus musculu	Gnl3	2.23	1
Q8CI32	BAG family molecular chaperone regulator 5 OS=Mus musc	Bag5	9.4	4
Q8CI51	PDZ and LIM domain protein 5 OS=Mus musculus OX=10090	Pdlim5	1.35	1
Q8CI75	DIS3-like exonuclease 2 OS=Mus musculus OX=10090 GN=Di	Dis3l2	0.92	1
Q8CIE6	Coatomer subunit alpha OS=Mus musculus OX=10090 GN=Co	Copa	7.52	10
Q8CIG8	Protein arginine N-methyltransferase 5 OS=Mus musculus	Prmt5	2.83	2
Q8CIP4	MAP/microtubule affinity-regulating kinase 4 OS=Mus mus	Mark4	21.41	17
Q8CIQ7	Dedicator of cytokinesis protein 3 OS=Mus musculus OX=1	Dock3	5.13	11
Q8CJ19	[F-actin]-monooxygenase MICAL3 OS=Mus musculus OX=10	Mical3	13.65	27
Q8CJ40	Rootletin OS=Mus musculus OX=10090 GN=Crocc PE=1 SV=Crocc		0.4	1
Q8CJ67	Double-stranded RNA-binding protein Staufen homolog 2 O	Stau2	5.61	3
Q8CJF9	Protein argonaute-3 OS=Mus musculus OX=10090 GN=Ago3	Ago3	10	7
Q8CJG0	Protein argonaute-2 OS=Mus musculus OX=10090 GN=Ago2	Ago2	19.77	14
Q8CJG1	Protein argonaute-1 OS=Mus musculus OX=10090 GN=Ago1	Ago1	10.85	7
Q8JZM7	Parafibromin OS=Mus musculus OX=10090 GN=Cdc73 PE=1	Cdc73	6.4	3
Q8JZN5	Complex I assembly factor ACAD9, mitochondrial OS=Mus	Acad9	6.4	4
Q8JZN7	Mitochondrial Rho GTPase 2 OS=Mus musculus OX=10090 G	Rhot2	1.45	1
Q8JZP9	GAS2-like protein 1 OS=Mus musculus OX=10090 GN=Gas2l	Gas2l1	4.57	3
Q8JZQ2	AFG3-like protein 2 OS=Mus musculus OX=10090 GN=Afg3l	Afg3l2	3.87	3
Q8JZQ9	Eukaryotic translation initiation factor 3 subunit B OS=Mus	Eif3b	3.74	3
Q8JZR0	Long-chain-fatty-acid--CoA ligase 5 OS=Mus musculus OX=	Acsl5	3.07	2
Q8JZS0	Protein lin-7 homolog A OS=Mus musculus OX=10090 GN=Li	Lin7a	33.48	7

Q8JZU2	Tricarboxylate transport protein, mitochondrial OS=Mus mu	Slc25a1	17.68	6
Q8K004	Spermatogenesis-associated protein 2 OS=Mus musculus OX	Spata2	10.87	5
Q8K012	Formin-binding protein 1-like OS=Mus musculus OX=10090	Fnbp1l	4.79	3
Q8K019	Bcl-2-associated transcription factor 1 OS=Mus musculus O	Bclaf1	5.88	5
Q8K021	Secretory carrier-associated membrane protein 1 OS=Mus	Scamp1	6.8	2
Q8K0D0	Cyclin-dependent kinase 17 OS=Mus musculus OX=10090 G	Cdk17	13.58	7
Q8K0E8	Fibrinogen beta chain OS=Mus musculus OX=10090 GN=Fgb	Fgb	10.19	4
Q8K0F1	TBC1 domain family member 23 OS=Mus musculus OX=1009	Tbc1d23	1.61	1
Q8K0L9	Zinc finger and BTB domain-containing protein 20 OS=Mus	Zbtb20	6.48	4
Q8K183	Pyridoxal kinase OS=Mus musculus OX=10090 GN=Pdxk PE=Pdxk		17.31	5
Q8K1A6	Coiled-coil and C2 domain-containing protein 1A OS=Mus	Cc2d1a	19.3	18
Q8K1E0	Syntaxin-5 OS=Mus musculus OX=10090 GN=Stx5 PE=1 SV=Stx5		5.35	2
Q8K1H1	Tudor domain-containing protein 7 OS=Mus musculus OX=1	Tdrd7	0.92	1
Q8K1I7	WAS/WASL-interacting protein family member 1 OS=Mus m	Wipf1	2.03	1
Q8K1M6	Dynamin-1-like protein OS=Mus musculus OX=10090 GN=Dnm1l		16.85	12
Q8K1N1	Calcium-independent phospholipase A2-gamma OS=Mus mus	Pnpla8	3.99	3
Q8K1N2	Pleckstrin homology-like domain family B member 2 OS=M	Phldb2	1.04	1
Q8K1X1	WD repeat-containing protein 11 OS=Mus musculus OX=100	Wdr11	8.83	10
Q8K212	Phosphofurin acidic cluster sorting protein 1 OS=Mus musc	Pacs1	16.86	16
Q8K224	RNA cytidine acetyltransferase OS=Mus musculus OX=1009	Nat10	13.09	13
Q8K245	UV radiation resistance-associated protein OS=Mus muscul	Uvrug	4.3	3
Q8K2B3	Succinate dehydrogenase [ubiquinone] flavoprotein subunit	Sdha	18.22	11
Q8K2C9	Very-long-chain (3R)-3-hydroxyacyl-CoA dehydratase 3 O	Hacd3	4.7	2
Q8K2F8	Protein LSM14 homolog A OS=Mus musculus OX=10090 GN	Lsm14a	12.12	7
Q8K2K6	Arf-GAP domain and FG repeat-containing protein 1 OS=M	Agfg1	6.06	3
Q8K2Y9	Cerebral cavernous malformations protein 2 homolog OS=M	Ccm2	9.49	4
Q8K310	Matrin-3 OS=Mus musculus OX=10090 GN=Matr3 PE=1 SV=Matr3		23.17	19
Q8K339	DNA/RNA-binding protein KIN17 OS=Mus musculus OX=10	Kin	6.39	2
Q8K341	Alpha-tubulin N-acetyltransferase 1 OS=Mus musculus OX=	Atat1	31.35	12
Q8K394	Inactive phospholipase C-like protein 2 OS=Mus musculus	Plcl2	6.21	6
Q8K3A9	7SK snRNA methylphosphate capping enzyme OS=Mus musc	Mepce	7.06	4
Q8K3B1	F-box/SPRY domain-containing protein 1 OS=Mus musculus	Fbxo45	9.09	3
Q8K3E5	Joubertin OS=Mus musculus OX=10090 GN=Ahi1 PE=1 SV=2	Ahi1	4.78	5
Q8K3G9	DCC-interacting protein 13-beta OS=Mus musculus OX=100	Appl2	7.25	5
Q8K3H0	DCC-interacting protein 13-alpha OS=Mus musculus OX=10	Appl1	6.51	4
Q8K3J5	Zinc finger protein 131 OS=Mus musculus OX=10090 GN=Zn	Znf131	2.26	1
Q8K3W0	BRISC and BRCA1-A complex member 2 OS=Mus musculus	Babam2	2.87	1
Q8K3W3	Protein CASC3 OS=Mus musculus OX=10090 GN=Casc3 PE=Casc3		1.15	1
Q8K400	Syntaxin-binding protein 5 OS=Mus musculus OX=10090 GN	Stxbp5	1.74	2
Q8K406	Leucine-rich repeat LGI family member 3 OS=Mus muscul	Lgi3	9.31	5
Q8K409	DNA polymerase beta OS=Mus musculus OX=10090 GN=Polb	Polb	20.6	8
Q8K4B0	Metastasis-associated protein MTA1 OS=Mus musculus OX=	Mta1	6.57	4
Q8K4G5	Actin-binding LIM protein 1 OS=Mus musculus OX=10090 G	Ablim1	4.41	4
Q8K4P8	E3 ubiquitin-protein ligase HECW1 OS=Mus musculus OX=	Hecw1	3.74	6
Q8K4Q0	Regulatory-associated protein of mTOR OS=Mus musculus	Rptor	2.02	2
Q8K4Q7	Ceramide kinase OS=Mus musculus OX=10090 GN=Cerk PE=Cerk		2.64	1
Q8K4R4	Cytoplasmic phosphatidylinositol transfer protein 1 OS=M	Pitpnc1	2.41	1
Q8K596	Sodium/calcium exchanger 2 OS=Mus musculus OX=10090 G	Slc8a2	6.95	6
Q8QZT1	Acetyl-CoA acetyltransferase, mitochondrial OS=Mus musc	Acat1	19.34	8
Q8QZY1	Eukaryotic translation initiation factor 3 subunit L OS=Mus	Eif3l	3.19	2
Q8R001	Microtubule-associated protein RP/EB family member 2 OS	Mapre2	15.03	4
Q8R010	Aminoacyl tRNA synthase complex-interacting multifunctio	Aimp2	3.75	1
Q8R035	Large ribosomal subunit protein mL62 OS=Mus musculus O	Mrpl58	9.71	2
Q8R050	Eukaryotic peptide chain release factor GTP-binding subu	Gspt1	13.52	8

Q8R071	Inositol-trisphosphate 3-kinase A OS=Mus musculus OX=100	Itpka	22.22	8
Q8R081	Heterogeneous nuclear ribonucleoprotein L OS=Mus muscul	Hnrnpl	20.14	12
Q8R0G9	Nuclear pore complex protein Nup133 OS=Mus musculus O	Nup133	0.95	1
Q8R0S2	IQ motif and SEC7 domain-containing protein 1 OS=Mus mu	Iqsec1	35.07	35
Q8R0S4	Voltage-dependent L-type calcium channel subunit beta-4	Cacnb4	31.98	15
Q8R0X7	Sphingosine-1-phosphate lyase 1 OS=Mus musculus OX=100	Sgpl1	9.68	5
Q8R0Y6	Cytosolic 10-formyltetrahydrofolate dehydrogenase OS=M	Aldh1l1	12.97	10
Q8R151	NFX1-type zinc finger-containing protein 1 OS=Mus muscu	Znfx1	2.62	5
Q8R191	Synaptogyrin-3 OS=Mus musculus OX=10090 GN=Syngr3 PE	Syngr3	23.14	5
Q8R1A4	Dedicator of cytokinesis protein 7 OS=Mus musculus OX=1	Dock7	3.66	7
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C OS=M	Eif3c	4.17	5
Q8R1Q8	Cytoplasmic dynein 1 light intermediate chain 1 OS=Mus m	Dync1li1	16.06	8
Q8R2R9	AP-3 complex subunit mu-2 OS=Mus musculus OX=10090 G	Ap3m2	8.61	3
Q8R2U0	Nucleoporin SEH1 OS=Mus musculus OX=10090 GN=Seh1l P	Seh1l	13.89	5
Q8R2U6	Diphosphoinositol polyphosphate phosphohydrolase 2 OS=M	Nudt4	11.73	2
Q8R2Y0	Monoacylglycerol lipase ABHD6 OS=Mus musculus OX=100	Abhd6	8.93	3
Q8R307	Vacuolar protein sorting-associated protein 18 homolog O	Vps18	8.12	7
Q8R317	Ubiquilin-1 OS=Mus musculus OX=10090 GN=Ubqln1 PE=1	Ubqln1	1.72	1
Q8R326	Paraspeckle component 1 OS=Mus musculus OX=10090 GN=PP	Pspc1	19.69	10
Q8R361	Rab11 family-interacting protein 5 OS=Mus musculus OX=1	Rab11fip5	28.84	18
Q8R366	Immunoglobulin superfamily member 8 OS=Mus musculus O	Igsf8	18.99	9
Q8R3K3	Pentatricopeptide repeat-containing protein 2, mitochondri	Ptcd2	8.14	3
Q8R3L2	Ribosome quality control complex subunit TCF25 OS=Mus	Tcf25	2.96	2
Q8R3N6	THO complex subunit 1 OS=Mus musculus OX=10090 GN=Th	Thoc1	1.83	1
Q8R3P0	Aspartoacylase OS=Mus musculus OX=10090 GN=Aspa PE=1	Aspa	7.69	2
Q8R3R8	Gamma-aminobutyric acid receptor-associated protein-like	Gabarapl1	6.84	1
Q8R3S6	Exocyst complex component 1 OS=Mus musculus OX=10090	Exoc1	4.36	4
Q8R409	Protein HEXIM1 OS=Mus musculus OX=10090 GN=Hexim1	Hexim1	7.02	2
Q8R464	Cell adhesion molecule 4 OS=Mus musculus OX=10090 GN=	Cadm4	8.76	3
Q8R480	Nuclear pore complex protein Nup85 OS=Mus musculus OX	Nup85	1.22	1
Q8R516	E3 ubiquitin-protein ligase MIB2 OS=Mus musculus OX=10	Mib2	1.03	1
Q8R550	SH3 domain-containing kinase-binding protein 1 OS=Mus m	Sh3kbp1	1.55	1
Q8R570	Synaptosomal-associated protein 47 OS=Mus musculus OX=	Snap47	5.81	2
Q8R5A3	Amyloid beta A4 precursor protein-binding family B member	Apbb1ip	1.19	1
Q8R5H6	Actin-binding protein WASF1 OS=Mus musculus OX=10090	Wasf1	9.66	5
Q8R5M8	Cell adhesion molecule 1 OS=Mus musculus OX=10090 GN=	Cadm1	10.75	3
Q8VBW6	NEDD8-activating enzyme E1 regulatory subunit OS=Mus m	Nae1	2.81	1
Q8VBY2	Calcium/calmodulin-dependent protein kinase kinase 1 OS	Camkk1	4.95	2
Q8VC19	5-aminolevulinatase synthase, non-specific, mitochondrial O	Alas1	1.71	1
Q8VCC8	Rap guanine nucleotide exchange factor 3 OS=Mus musculu	Rapgef3	1.63	1
Q8VCD5	Mediator of RNA polymerase II transcription subunit 17	Med17	2.47	2
Q8VCL2	Protein SCO2 homolog, mitochondrial OS=Mus musculus OX	Sco2	3.14	1
Q8VCM7	Fibrinogen gamma chain OS=Mus musculus OX=10090 GN=F	Fgg	7.34	3
Q8VCR2	17-beta-hydroxysteroid dehydrogenase 13 OS=Mus musculu	Hsd17b13	5.26	2
Q8VCX5	Calcium uptake protein 1, mitochondrial OS=Mus musculus	Micu1	6.08	3
Q8VD04	GRIP1-associated protein 1 OS=Mus musculus OX=10090 GN	Gripap1	8.31	6
Q8VD37	SH3-containing GRB2-like protein 3-interacting protein 1	Sgip1	12.03	8
Q8VD65	Phosphoinositide 3-kinase regulatory subunit 4 OS=Mus mu	Pik3r4	3.61	4
Q8VDD5	Myosin-9 OS=Mus musculus OX=10090 GN=Myh9 PE=1 SV=	Myh9	28.47	58
Q8VDM4	26S proteasome non-ATPase regulatory subunit 2 OS=Mus	Psm2	6.39	4
Q8VDN2	Sodium/potassium-transporting ATPase subunit alpha-1 OS	Atp1a1	31.28	36
Q8VDP4	Cell cycle and apoptosis regulator protein 2 OS=Mus muscu	Ccar2	13.12	11
Q8VDQ8	NAD-dependent protein deacetylase sirtuin-2 OS=Mus muscu	Sirt2	16.45	6
Q8VE19	GATOR2 complex protein MIOX OS=Mus musculus OX=1009	Mios	13.37	11

Q8VE37	Regulator of chromosome condensation OS=Mus musculus	Rcc1	4.99	2
Q8VE70	Programmed cell death protein 10 OS=Mus musculus OX=10	Pdcd10	15.57	3
Q8VE73	Cullin-7 OS=Mus musculus OX=10090 GN=Cul7 PE=1 SV=2	Cul7	0.65	1
Q8VEE4	Replication protein A 70 kDa DNA-binding subunit OS=Mus	Rpa1	1.44	1
Q8VEG4	Exonuclease 3'-5' domain-containing protein 2 OS=Mus mus	Exd2	3.85	2
Q8VEJ9	Vacuolar protein sorting-associated protein 4A OS=Mus mu	Vps4a	21.74	8
Q8VEK3	Heterogeneous nuclear ribonucleoprotein U OS=Mus muscul	Hnrmpu	19.62	17
Q8VH51	RNA-binding protein 39 OS=Mus musculus OX=10090 GN=R	Rbm39	20.57	10
Q8VHH5	Arf-GAP with GTPase, ANK repeat and PH domain-containi	Agap3	12.75	11
Q8VHI6	Actin-binding protein WASF3 OS=Mus musculus OX=10090	Wasf3	2.4	1
Q8VHJ5	Serine/threonine-protein kinase MARK1 OS=Mus musculus	Mark1	32.2	24
Q8VHK5	Membrane protein MLC1 OS=Mus musculus OX=10090 GN=Mlc1		3.4	1
Q8VHK9	ATP-dependent DNA/RNA helicase DHX36 OS=Mus musculu	Dhx36	5.09	5
Q8VHL1	Histone-lysine N-methyltransferase SETD7 OS=Mus muscul	Setd7	5.19	2
Q8VHQ9	Acyl-coenzyme A thioesterase 11 OS=Mus musculus OX=100	Acot11	7.07	4
Q8VHR5	Transcriptional repressor p66-beta OS=Mus musculus OX=1	Gatad2b	6.57	4
Q8VHW2	Voltage-dependent calcium channel gamma-8 subunit OS=M	Cacng8	9.22	3
Q8VI24	DNA-binding protein SATB2 OS=Mus musculus OX=10090 G	Satb2	6.96	4
Q8VIJ6	Splicing factor, proline- and glutamine-rich OS=Mus muscu	Sfpq	29.9	20
Q8WTY4	Anamorsin OS=Mus musculus OX=10090 GN=Ciapi1 PE=1	Ciapi1	3.88	1
Q91V12	Cytosolic acyl coenzyme A thioester hydrolase OS=Mus mu	Acot7	11.02	4
Q91V14	Solute carrier family 12 member 5 OS=Mus musculus OX=10	Slc12a5	13.44	14
Q91V41	Ras-related protein Rab-14 OS=Mus musculus OX=10090 GN	Rab14	27.44	5
Q91V92	ATP-citrate synthase OS=Mus musculus OX=10090 GN=Acly	Acly	6.32	8
Q91VC3	Eukaryotic initiation factor 4A-III OS=Mus musculus OX=10	Eif4a3	24.82	10
Q91VD9	NADH-ubiquinone oxidoreductase 75 kDa subunit, mitochon	Ndufs1	12.38	9
Q91VE0	Long-chain fatty acid transport protein 4 OS=Mus musculus	Slc27a4	10.11	7
Q91VJ5	Polyglutamine-binding protein 1 OS=Mus musculus OX=100	Pqbp1	3.42	1
Q91VL8	Telomeric repeat-binding factor 2-interacting protein 1 OS	Terf2ip	2.54	1
Q91VM5	RNA binding motif protein, X-linked-like-1 OS=Mus muscu	Rbmxl1	26.29	10
Q91VN1	Zinc finger protein 24 OS=Mus musculus OX=10090 GN=Znf	Znf24	14.67	5
Q91VN6	Probable ATP-dependent RNA helicase DDX41 OS=Mus mus	Ddx41	1.77	1
Q91VR5	ATP-dependent RNA helicase DDX1 OS=Mus musculus OX=	Ddx1	21.08	15
Q91VR7	Microtubule-associated proteins 1A/1B light chain 3A OS=	Map1lc3a	37.19	6
Q91VR8	Protein BRICK1 OS=Mus musculus OX=10090 GN=Brk1 PE=Brk1		54.67	4
Q91VS8	FERM, ARHGEF and pleckstrin domain-containing protein	Farp2	6.76	7
Q91VT1	E3 SUMO-protein ligase NSE2 OS=Mus musculus OX=10090	Nsmce2	4.05	1
Q91VT4	3-oxoacyl-[acyl-carrier-protein] reductase OS=Mus muscul	Cbr4	27.54	6
Q91VZ6	Stromal membrane-associated protein 1 OS=Mus musculus	Smap1	10.91	5
Q91W86	Vacuolar protein sorting-associated protein 11 homolog O	Vps11	4.36	4
Q91W97	Hexokinase HKDC1 OS=Mus musculus OX=10090 GN=Hkdc1	Hkdc1	4.04	5
Q91WC3	Long-chain-fatty-acid--CoA ligase 6 OS=Mus musculus OX=	Acsl6	19.66	13
Q91WD5	NADH dehydrogenase [ubiquinone] iron-sulfur protein 2, m	Ndufs2	10.8	5
Q91WG4	Elongator complex protein 2 OS=Mus musculus OX=10090 G	Elp2	2.77	2
Q91WG5	5'-AMP-activated protein kinase subunit gamma-2 OS=Mus	Prkag2	9.19	4
Q91WG7	Diacylglycerol kinase gamma OS=Mus musculus OX=10090	Dgkg	14.72	12
Q91WJ8	Far upstream element-binding protein 1 OS=Mus musculus	Fubp1	4.76	3
Q91WK2	Eukaryotic translation initiation factor 3 subunit H OS=M	Eif3h	9.09	2
Q91WL8	WW domain-containing oxidoreductase OS=Mus musculus	Wwox	2.42	1
Q91WM1	Spermatid perinuclear RNA-binding protein OS=Mus muscul	Strbp	6.85	5
Q91WQ3	Tyrosine--tRNA ligase, cytoplasmic OS=Mus musculus OX=	Yars1	17.42	9
Q91WS0	CDGSH iron-sulfur domain-containing protein 1 OS=Mus mu	Cisd1	35.19	4
Q91XD6	Vacuolar protein-sorting-associated protein 36 OS=Mus mu	Vps36	3.37	1
Q91XL9	Oxysterol-binding protein-related protein 1 OS=Mus muscu	Osbpl1a	1.05	1

Q91XM9	Disks large homolog 2 OS=Mus musculus OX=10090 GN=Dlg Dlg2	17.14	14
Q91XU0	ATPase WRNIP1 OS=Mus musculus OX=10090 GN=Wrnip1 Wrnip1	3.33	2
Q91XU3	Phosphatidylinositol 5-phosphate 4-kinase type-2 gamma O Pip4k2c	14.73	6
Q91XV3	Brain acid soluble protein 1 OS=Mus musculus OX=10090 G Basp1	41.59	10
Q91YD3	mRNA-decapping enzyme 1A OS=Mus musculus OX=10090 Dcp1a	5.81	3
Q91YD9	Actin nucleation-promoting factor WASL OS=Mus musculus Wasl	21.56	11
Q91YE3	Egl nine homolog 1 OS=Mus musculus OX=10090 GN=Egln1 Egln1	6	2
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A O Baz2a	0.37	1
Q91YE6	Importin-9 OS=Mus musculus OX=10090 GN=Ipo9 PE=1 SV=Ipo9	1.15	1
Q91YI1	Autophagy-related protein 13 OS=Mus musculus OX=10090 Atg13	3.88	2
Q91YI4	Beta-arrestin-2 OS=Mus musculus OX=10090 GN=Arrb2 PE= Arrb2	21.71	9
Q91YJ2	Sorting nexin-4 OS=Mus musculus OX=10090 GN=Snx4 PE=1Snx4	2.89	1
Q91YK2	Ribosomal RNA processing protein 1 homolog B OS=Mus mu Rrp1b	1.52	1
Q91YL2	E3 ubiquitin-protein ligase RNF126 OS=Mus musculus OX= Rnf126	5.75	2
Q91YN9	BAG family molecular chaperone regulator 2 OS=Mus musc Bag2	12.38	3
Q91YP2	Neurolysin, mitochondrial OS=Mus musculus OX=10090 GN= Nln	3.84	3
Q91YQ5	Dolichyl-diphosphooligosaccharide--protein glycosyltransf Rpn1	8.22	5
Q91YR1	Twinfilin-1 OS=Mus musculus OX=10090 GN=Twf1 PE=1 SVTwf1	8.57	3
Q91YT0	NADH dehydrogenase [ubiquinone] flavoprotein 1, mitoch Ndufv1	13.15	6
Q91Z67	SLIT-ROBO Rho GTPase-activating protein 2 OS=Mus musc Srgap2	7.28	7
Q91ZA3	Propionyl-CoA carboxylase alpha chain, mitochondrial OS Pcca	7.32	5
Q91ZJ5	UTP--glucose-1-phosphate uridylyltransferase OS=Mus mus Ugp2	2.36	1
Q91ZM2	SH2B adapter protein 1 OS=Mus musculus OX=10090 GN=Sh Sh2b1	2.91	2
Q91ZP9	N-terminal EF-hand calcium-binding protein 2 OS=Mus mus Necab2	21.08	8
Q91ZR2	Sorting nexin-18 OS=Mus musculus OX=10090 GN=Snx18 PESnx18	3.09	2
Q91ZU6	Dystonin OS=Mus musculus OX=10090 GN=Dst PE=1 SV=2 Dst	3.65	25
Q91ZW3	SWI/SNF-related matrix-associated actin-dependent regulat Smarca5	2.95	3
Q91ZX7	Prolow-density lipoprotein receptor-related protein 1 OS= Lrp1	2.66	12
Q91ZZ3	Beta-synuclein OS=Mus musculus OX=10090 GN=Sncb PE=1 Sncb	32.33	5
Q920A7	AFG3-like protein 1 OS=Mus musculus OX=10090 GN=Afg3l Afg3l1	2.79	2
Q920E5	Farnesyl pyrophosphate synthase OS=Mus musculus OX=100 Fdps	6.23	2
Q920P3	BMP/retinoic acid-inducible neural-specific protein 1 OS= Brinp1	1.32	1
Q920Q4	Vacuolar protein sorting-associated protein 16 homolog O Vps16	5.13	4
Q920Q6	RNA-binding protein Musashi homolog 2 OS=Mus musculus Msi2	3.47	1
Q921D4	Mediator of RNA polymerase II transcription subunit 6 OS Med6	8.54	2
Q921E2	Ras-related protein Rab-31 OS=Mus musculus OX=10090 GN Rab31	10.82	2
Q921F2	TAR DNA-binding protein 43 OS=Mus musculus OX=10090 Tardbp	17.63	8
Q921G7	Electron transfer flavoprotein-ubiquinone oxidoreductase, Etfdh	7.95	4
Q921J2	GTP-binding protein Rheb OS=Mus musculus OX=10090 GN=Rheb	24.46	4
Q921L3	Calcium load-activated calcium channel OS=Mus musculus Tmco1	7.45	1
Q921M3	Splicing factor 3B subunit 3 OS=Mus musculus OX=10090 G Sf3b3	10.19	12
Q921M4	Golgin subfamily A member 2 OS=Mus musculus OX=10090 Golga2	0.8	1
Q921M7	CYFIP-related Rac1 interactor B OS=Mus musculus OX=100 Cyrib	14.51	5
Q921Q7	Ras and Rab interactor 1 OS=Mus musculus OX=10090 GN=R Rin1	7.34	5
Q921W0	Charged multivesicular body protein 1a OS=Mus musculus Chmp1a	20.92	5
Q922B1	ADP-ribose glycohydrolase MACROD1 OS=Mus musculus O Macrocl1	3.41	1
Q922D8	C-1-tetrahydrofolate synthase, cytoplasmic OS=Mus muscul Mthfd1	6.74	5
Q922J3	CAP-Gly domain-containing linker protein 1 OS=Mus muscu Clip1	1.22	3
Q922M3	BTB/POZ domain-containing adapter for CUL3-mediated Rho Kctd10	8.57	2
Q922P9	Cytokine-like nuclear factor N-PAC OS=Mus musculus OX= Gylr1	13.92	7
Q922R8	Protein disulfide-isomerase A6 OS=Mus musculus OX=10090 Pdia6	6.36	2
Q922S4	cGMP-dependent 3',5'-cyclic phosphodiesterase OS=Mus mu Pde2a	2.77	3
Q922U2	Keratin, type II cytoskeletal 5 OS=Mus musculus OX=10090 Krt5	20	17
Q922Y1	UBX domain-containing protein 1 OS=Mus musculus OX=10 Ubxn1	5.39	2

Q923D5	WW domain-binding protein 11 OS=Mus musculus OX=1009	Wbp11	10.14	6
Q923T9	Calcium/calmodulin-dependent protein kinase type II sub	Camk2g	28.36	16
Q923X4	Glutaredoxin-2, mitochondrial OS=Mus musculus OX=10090	Glrx2	6.41	1
Q924A2	Protein capicua homolog OS=Mus musculus OX=10090 GN=C	Cic	1.31	3
Q924C1	Exportin-5 OS=Mus musculus OX=10090 GN=Xpo5 PE=1 SV	Xpo5	2.16	2
Q924L1	LETM1 domain-containing protein 1 OS=Mus musculus OX=	Letmd1	26.94	10
Q925I1	ATPase family AAA domain-containing protein 3 OS=Mus m	Atad3	22.34	14
Q925J9	Mediator of RNA polymerase II transcription subunit 1 OS	Med1	2.86	4
Q925T6	Glutamate receptor-interacting protein 1 OS=Mus musculus	Grip1	0.8	1
Q93092	Transaldolase OS=Mus musculus OX=10090 GN=Taldo1 PE=1	Taldo1	12.46	4
Q96DY5	RING finger protein 112 OS=Mus musculus OX=10090 GN=R	Rnf112	1.53	1
Q99020	Heterogeneous nuclear ribonucleoprotein A/B OS=Mus musc	Hnrnpab	16.84	4
Q99104	Unconventional myosin-Va OS=Mus musculus OX=10090 GN	Myo5a	35.46	73
Q99J09	Methylosome protein WDR77 OS=Mus musculus OX=10090	Wdr77	16.08	5
Q99J47	Dehydrogenase/reductase SDR family member 7B OS=Mus m	Dhrs7b	27.86	8
Q99J85	Neuronal pentraxin receptor OS=Mus musculus OX=10090 G	Nptxr	1.83	1
Q99J95	Cyclin-dependent kinase 9 OS=Mus musculus OX=10090 GN	Cdk9	16.4	6
Q99J99	3-mercaptopyruvate sulfurtransferase OS=Mus musculus OX	Mpst	7.74	2
Q99JB2	Stomatin-like protein 2, mitochondrial OS=Mus musculus O	Stoml2	21.81	7
Q99JF8	PC4 and SFRS1-interacting protein OS=Mus musculus OX=1	Psip1	28.79	16
Q99JG2	G-protein coupled receptor 37-like 1 OS=Mus musculus OX	Gpr37l1	3.74	2
Q99JI6	Ras-related protein Rap-1b OS=Mus musculus OX=10090 GN	Rap1b	22.83	4
Q99JR1	Sideroflexin-1 OS=Mus musculus OX=10090 GN=Sfxn1 PE=1	Sfxn1	14.29	4
Q99JW4	LIM and senescent cell antigen-like-containing domain pro	Lims1	13.54	4
Q99JY0	Trifunctional enzyme subunit beta, mitochondrial OS=Mus	Hadhb	23.58	11
Q99JY8	Phospholipid phosphatase 3 OS=Mus musculus OX=10090 GN	Plpp3	7.69	2
Q99JY9	Actin-related protein 3 OS=Mus musculus OX=10090 GN=Act	Actr3	20.81	8
Q99K10	Neuroigin-1 OS=Mus musculus OX=10090 GN=Nlgn1 PE=1	Nlgn1	5.22	4
Q99K28	ADP-ribosylation factor GTPase-activating protein 2 OS=M	Arfgap2	5.38	3
Q99K48	Non-POU domain-containing octamer-binding protein OS=M	Nono	32.14	18
Q99KB8	Hydroxyacylglutathione hydrolase, mitochondrial OS=Mus	Hagh	12.3	3
Q99KE1	NAD-dependent malic enzyme, mitochondrial OS=Mus musc	Me2	2.55	1
Q99KG3	RNA-binding protein 10 OS=Mus musculus OX=10090 GN=R	Rbm10	4.09	4
Q99KI0	Aconitate hydratase, mitochondrial OS=Mus musculus OX=1	Aco2	28.08	22
Q99KJ8	Dynactin subunit 2 OS=Mus musculus OX=10090 GN=Dctn2	Dctn2	18.91	7
Q99KK2	N-acylneuraminate cytidylyltransferase OS=Mus musculus	Cmas	26.16	11
Q99KP6	Pre-mRNA-processing factor 19 OS=Mus musculus OX=1009	Prpf19	11.31	5
Q99KV1	DnaJ homolog subfamily B member 11 OS=Mus musculus O	Dnajb11	3.07	1
Q99KY4	Cyclin-G-associated kinase OS=Mus musculus OX=10090 GN	Gak	3.45	4
Q99L43	Phosphatidate cytidylyltransferase 2 OS=Mus musculus OX=	Cds2	2.7	1
Q99L45	Eukaryotic translation initiation factor 2 subunit 2 OS=Mus	Eif2s2	18.43	6
Q99LB2	Dehydrogenase/reductase SDR family member 4 OS=Mus mu	Dhrs4	11.11	3
Q99LC3	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subu	Ndufa10	5.92	2
Q99LF4	RNA-splicing ligase RtcB homolog OS=Mus musculus OX=1	Rtcb	22.57	10
Q99LI8	Hepatocyte growth factor-regulated tyrosine kinase substr	Hgs	12.13	9
Q99LR1	Lysophosphatidylserine lipase ABHD12 OS=Mus musculus	Abhd12	15.83	6
Q99LU0	Charged multivesicular body protein 1B1 OS=Mus musculu	Chmp1b1	8.04	2
Q99LX0	Parkinson disease protein 7 homolog OS=Mus musculus OX=	Park7	12.17	2
Q99M87	DnaJ homolog subfamily A member 3, mitochondrial OS=Mus	Dnaja3	12.92	5
Q99ME7	T-box transcription factor TBX19 OS=Mus musculus OX=10	Tbx19	2.02	1
Q99ME9	GTP-binding protein 4 OS=Mus musculus OX=10090 GN=Gtp	Gtpbp4	7.73	5
Q99MH5	Nucleoside diphosphate kinase homolog 5 OS=Mus musculu	Nme5	4.27	1
Q99MI1	ELKS/Rab6-interacting/CAST family member 1 OS=Mus mus	Erc1	6.25	8
Q99MK8	Beta-adrenergic receptor kinase 1 OS=Mus musculus OX=10	Grk2	9.29	6

Q99MN1	Lysine--tRNA ligase OS=Mus musculus OX=10090 GN=Kars1Kars1	10.42	7
Q99MR0	Actin-like protein 6B OS=Mus musculus OX=10090 GN=Actl Actl6b	12.21	5
Q99MR6	Serrate RNA effector molecule homolog OS=Mus musculus Srrt	5.49	5
Q99MR8	Methylcrotonoyl-CoA carboxylase subunit alpha, mitochon Mccc1	44.07	28
Q99MU3	Double-stranded RNA-specific adenosine deaminase OS=Mu Adar	1.1	1
Q99N28	Cell adhesion molecule 3 OS=Mus musculus OX=10090 GN= Cadm3	12.63	5
Q99N50	Synaptotagmin-like protein 2 OS=Mus musculus OX=10090 G Sytl2	8.63	9
Q99N57	RAF proto-oncogene serine/threonine-protein kinase OS=Mu Raf1	7.25	5
Q99NB1	Acetyl-coenzyme A synthetase 2-like, mitochondrial OS=M Acss1	2.05	1
Q99NB9	Splicing factor 3B subunit 1 OS=Mus musculus OX=10090 G Sf3b1	12.5	14
Q99NE5	Regulating synaptic membrane exocytosis protein 1 OS=Mu Rims1	19	24
Q99NF2	NMDA receptor synaptonuclear signaling and neuronal migr Nsmf	9.77	4
Q99NH0	Ankyrin repeat domain-containing protein 17 OS=Mus musc Ankrd17	3.73	10
Q99NH8	Triggering receptor expressed on myeloid cells 2 OS=Mus Trem2	8.37	2
Q99P72	Reticulon-4 OS=Mus musculus OX=10090 GN=Rtn4 PE=1 SVRtn4	11.53	13
Q99PL5	Ribosome-binding protein 1 OS=Mus musculus OX=10090 G Rrbp1	24.49	37
Q99PL6	UBX domain-containing protein 6 OS=Mus musculus OX=10 Ubxn6	2.26	1
Q99PP7	E3 ubiquitin-protein ligase TRIM33 OS=Mus musculus OX= Trim33	2.01	2
Q99PT1	Rho GDP-dissociation inhibitor 1 OS=Mus musculus OX=100 Arhgdia	18.14	4
Q99PU5	Long-chain-fatty-acid--CoA ligase ACSBG1 OS=Mus muscu Acsbg1	14.56	9
Q99PU8	ATP-dependent RNA helicase DHX30 OS=Mus musculus OX Dhx30	14.13	16
Q99PV0	Pre-mRNA-processing-splicing factor 8 OS=Mus musculus O Prpf8	13.36	31
Q99PV8	B-cell lymphoma/leukemia 11B OS=Mus musculus OX=10090 Bcl11b	2.04	2
Q9CPP6	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex sub Ndufa5	8.62	1
Q9CPR4	Large ribosomal subunit protein uL22 OS=Mus musculus OX Rpl17	32.07	7
Q9CPU0	Lactoylglutathione lyase OS=Mus musculus OX=10090 GN=G Glo1	17.93	4
Q9CPU4	Glutathione S-transferase 3, mitochondrial OS=Mus muscul Mgst3	14.38	2
Q9CPX6	Ubiquitin-like-conjugating enzyme ATG3 OS=Mus musculus Atg3	4.14	1
Q9CPY7	Cytosol aminopeptidase OS=Mus musculus OX=10090 GN=LaLap3	10.79	5
Q9CQ10	Charged multivesicular body protein 3 OS=Mus musculus Chmp3	17.86	4
Q9CQ43	Deoxyuridine 5'-triphosphate nucleotidohydrolase OS=Mus Dut	14.81	2
Q9CQ69	Cytochrome b-c1 complex subunit 8 OS=Mus musculus OX= Uqcrq	58.54	6
Q9CQ92	Mitochondrial fission 1 protein OS=Mus musculus OX=10090 Fis1	16.45	2
Q9CQA3	Succinate dehydrogenase [ubiquinone] iron-sulfur subunit, Sdhb	21.63	6
Q9CQC9	GTP-binding protein SAR1b OS=Mus musculus OX=10090 G Sar1b	13.64	3
Q9CQD1	Ras-related protein Rab-5A OS=Mus musculus OX=10090 GN Rab5a	26.98	5
Q9CQD4	Charged multivesicular body protein 1B2 OS=Mus muscul Chmp1b2	8.04	2
Q9CQF3	Cleavage and polyadenylation specificity factor subunit 5 Nudt21	29.52	6
Q9CQI9	Mediator of RNA polymerase II transcription subunit 30 Med30	6.74	1
Q9CQM9	Glutaredoxin-3 OS=Mus musculus OX=10090 GN=Glr3 PE= Glrx3	5.93	2
Q9CQP2	Trafficking protein particle complex subunit 2 OS=Mus mus Trappc2	10.71	2
Q9CQR2	Small ribosomal subunit protein eS21 OS=Mus musculus OX Rps21	22.89	2
Q9CQR4	Acyl-coenzyme A thioesterase 13 OS=Mus musculus OX=100 Acot13	22.86	3
Q9CQR6	Serine/threonine-protein phosphatase 6 catalytic subunit Ppp6c	13.77	4
Q9CQS4	Mitochondrial outer membrane protein SLC25A46 OS=Mus m Slc25a46	2.15	1
Q9CQV1	Mitochondrial import inner membrane translocase subunit Pam16	31.2	4
Q9CQV6	Microtubule-associated proteins 1A/1B light chain 3B OS= Map1lc3b	24	4
Q9CQV7	Mitochondrial import inner membrane translocase subunit Dnajc19	19.83	2
Q9CQV8	14-3-3 protein beta/alpha OS=Mus musculus OX=10090 GN= Ywhab	34.55	9
Q9CQW1	Synaptobrevin homolog YKT6 OS=Mus musculus OX=10090 Ykt6	14.65	3
Q9CQW2	ADP-ribosylation factor-like protein 8B OS=Mus musculus Arl8b	36.56	5
Q9CQW7	Cytochrome c oxidase assembly factor 8 OS=Mus musculus Coa8	6.77	1
Q9CQY6	Ubiquinol-cytochrome c reductase complex assembly facto Uqcc2	6.62	1
Q9CR16	Peptidyl-prolyl cis-trans isomerase D OS=Mus musculus OX Ppid	13.78	6

Q9CR51	V-type proton ATPase subunit G 1 OS=Mus musculus OX=10	Atp6v1g1	9.32	1
Q9CR57	Large ribosomal subunit protein eL14 OS=Mus musculus OX	Rpl14	18.43	4
Q9CR62	Mitochondrial 2-oxoglutarate/malate carrier protein OS=Mu	Slc25a11	29.3	9
Q9CR67	Transmembrane protein 33 OS=Mus musculus OX=10090 GN	Tmem33	8.91	2
Q9CR68	Cytochrome b-c1 complex subunit Rieske, mitochondrial O	Uqcrc1	25.18	7
Q9CR95	Adaptin ear-binding coat-associated protein 1 OS=Mus mus	Necap1	16.73	4
Q9CRB9	MICOS complex subunit Mic19 OS=Mus musculus OX=1009	Chchd3	24.67	5
Q9CRY7	Lysophospholipase D GDPD1 OS=Mus musculus OX=10090	Gdpd1	2.23	1
Q9CS42	Ribose-phosphate pyrophosphokinase 2 OS=Mus musculus O	Prps2	13.84	4
Q9CS84	Neurexin-1 OS=Mus musculus OX=10090 GN=Nrxn1 PE=1 S	Nrxn1	3.63	5
Q9CSB4	Partitioning defective 3 homolog B OS=Mus musculus OX=1	Pard3b	0.83	1
Q9CSN1	SNW domain-containing protein 1 OS=Mus musculus OX=10	Snw1	24.44	12
Q9CVB6	Actin-related protein 2/3 complex subunit 2 OS=Mus muscu	Arpc2	32.67	11
Q9CWF2	Tubulin beta-2B chain OS=Mus musculus OX=10090 GN=Tub	Tubb2b	42.7	17
Q9CWK8	Sorting nexin-2 OS=Mus musculus OX=10090 GN=Snx2 PE=1	Snx2	4.82	2
Q9CWS0	N(G),N(G)-dimethylarginine dimethylaminohydrolase 1 OS	Ddah1	21.75	6
Q9CWW6	PRKR-interacting protein 1 OS=Mus musculus OX=10090 GN	Prkrip1	29.03	6
Q9CWW7	CXXC-type zinc finger protein 1 OS=Mus musculus OX=100	Cxxc1	15.61	10
Q9CZW3	RNA-binding protein 8A OS=Mus musculus OX=10090 GN=RR	Rbm8a	15.52	3
Q9CX00	IST1 homolog OS=Mus musculus OX=10090 GN=Ist1 PE=1 S	Ist1	7.73	3
Q9CX34	Protein SGT1 homolog OS=Mus musculus OX=10090 GN=Su	Sugt1	6.55	2
Q9CX86	Heterogeneous nuclear ribonucleoprotein A0 OS=Mus muscu	Hnrnpa0	10.82	3
Q9CXI5	Mesencephalic astrocyte-derived neurotrophic factor OS=M	Manf	18.44	3
Q9CXJ4	Mitochondrial potassium channel ATP-binding subunit OS=	Abcb8	1.12	1
Q9CXS4	Centromere protein V OS=Mus musculus OX=10090 GN=Cen	Cenpv	34.52	7
Q9CXV1	Succinate dehydrogenase [ubiquinone] cytochrome b small s	Sdhb	6.29	1
Q9CXW3	Calcyclin-binding protein OS=Mus musculus OX=10090 GN=	Cacybp	21.4	5
Q9CXW4	Large ribosomal subunit protein uL5 OS=Mus musculus OX=	Rpl11	49.44	14
Q9CXY6	Interleukin enhancer-binding factor 2 OS=Mus musculus OX	Ilf2	17.44	6
Q9CXZ1	NADH dehydrogenase [ubiquinone] iron-sulfur protein 4, m	Ndufs4	5.14	1
Q9CY27	Very-long-chain enoyl-CoA reductase OS=Mus musculus OX	Tecr	29.55	10
Q9CY57	Chromatin target of PRMT1 protein OS=Mus musculus OX=1	Chtop	20.88	6
Q9CY58	SERPINE1 mRNA-binding protein 1 OS=Mus musculus OX=1	Serbp1	29.98	12
Q9CYC6	m7GpppN-mRNA hydrolase OS=Mus musculus OX=10090 G	Dcp2	5.45	2
Q9CYN9	Renin receptor OS=Mus musculus OX=10090 GN=Atp6ap2 PE	Atp6ap2	6.29	2
Q9CZ13	Cytochrome b-c1 complex subunit 1, mitochondrial OS=Mus	Uqcrc1	12.5	6
Q9CZ42	ATP-dependent (S)-NAD(P)H-hydrate dehydratase OS=Mus	Naxd	7.29	2
Q9CZ44	NSFL1 cofactor p47 OS=Mus musculus OX=10090 GN=Nsfl1	Nsfl1c	4.32	1
Q9CZD3	Glycine--tRNA ligase OS=Mus musculus OX=10090 GN=Gars	Gars1	3.29	2
Q9CZM2	Large ribosomal subunit protein eL15 OS=Mus musculus OX	Rpl15	44.12	12
Q9CZN7	Serine hydroxymethyltransferase, mitochondrial OS=Mus m	Shmt2	2.18	1
Q9CZT8	Ras-related protein Rab-3B OS=Mus musculus OX=10090 GN	Rab3b	16.44	3
Q9CZW4	Fatty acid CoA ligase Acsl3 OS=Mus musculus OX=10090 G	Acsl3	5.97	4
Q9CZW5	Mitochondrial import receptor subunit TOM70 OS=Mus mu	Tomm70	5.89	4
Q9CZX0	Elongator complex protein 3 OS=Mus musculus OX=10090 G	Elp3	9.69	6
Q9CZX7	Type 2 phosphatidylinositol 4,5-bisphosphate 4-phosphata	Pip4p2	7.78	2
Q9CZX8	Small ribosomal subunit protein eS19 OS=Mus musculus OX	Rps19	60	12
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 OS=Mus muscul	Ube2v1	19.73	3
Q9D0E1	Heterogeneous nuclear ribonucleoprotein M OS=Mus muscu	Hnrnmp	37.72	27
Q9D0I9	Arginine--tRNA ligase, cytoplasmic OS=Mus musculus OX=	Rars1	12.88	8
Q9D0K2	Succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitoch	Oxct1	16.35	8
Q9D0M3	Cytochrome c1, heme protein, mitochondrial OS=Mus muscu	Cyc1	15.69	5
Q9D0P7	Proline/serine-rich coiled-coil protein 1 OS=Mus musculus	Psrc1	10.03	3
Q9D0R2	Threonine--tRNA ligase 1, cytoplasmic OS=Mus musculus O	Tars1	7.2	5

Q9D0T1	NHP2-like protein 1 OS=Mus musculus OX=10090 GN=Snu13Snu13	26.56	3
Q9D0W5	Peptidyl-prolyl cis-trans isomerase-like 1 OS=Mus musculus Ppil1	15.06	2
Q9D1A2	Cytosolic non-specific dipeptidase OS=Mus musculus OX=1 Cndp2	6.95	3
Q9D1E6	Tubulin-folding cofactor B OS=Mus musculus OX=10090 GN Tbcbl	8.2	2
Q9D1G1	Ras-related protein Rab-1B OS=Mus musculus OX=10090 GN Rab1b	25.37	5
Q9D1M0	Protein SEC13 homolog OS=Mus musculus OX=10090 GN=SeSec13	8.7	3
Q9D1M4	Eukaryotic translation elongation factor 1 epsilon-1 OS=M Eef1e1	12.07	2
Q9D1R9	Large ribosomal subunit protein eL34 OS=Mus musculus OX Rpl34	37.61	7
Q9D1T0	Leucine-rich repeat and immunoglobulin-like domain-contain Lingo1	2.93	2
Q9D2G2	Dihydrolipoyllysine-residue succinyltransferase component Dlst	9.25	4
Q9D2G5	Synaptojanin-2 OS=Mus musculus OX=10090 GN=Synj2 PE= Synj2	1.26	2
Q9D2N4	Dystrobrevin alpha OS=Mus musculus OX=10090 GN=Dtna P Dtna	3.89	3
Q9D2N9	Vacuolar protein sorting-associated protein 33A OS=Mus m Vps33a	6.69	4
Q9D2V7	Coronin-7 OS=Mus musculus OX=10090 GN=Coro7 PE=1 SV Coro7	2.28	2
Q9D328	Novel acetylcholine receptor chaperone OS=Mus musculus Tmem35a	14.97	3
Q9D358	Low molecular weight phosphotyrosine protein phosphatas Acp1	13.29	2
Q9D394	Protein RUFY3 OS=Mus musculus OX=10090 GN=Rufy3 PE=Rufy3	19.62	9
Q9D3A8	Carboxyl-terminal PDZ ligand of neuronal nitric oxide syn Nos1ap	6.16	3
Q9D3A9	Protein tweety homolog 1 OS=Mus musculus OX=10090 GN= Ttyh1	2.67	1
Q9D415	Disks large-associated protein 1 OS=Mus musculus OX=100 Dlgap1	9.78	9
Q9D4H1	Exocyst complex component 2 OS=Mus musculus OX=10090 Exoc2	5.19	5
Q9D4H8	Cullin-2 OS=Mus musculus OX=10090 GN=Cul2 PE=1 SV=2 Cul2	3.62	3
Q9D4J7	PHD finger protein 6 OS=Mus musculus OX=10090 GN=Phf6 Phf6	10.44	4
Q9D5T0	Outer mitochondrial transmembrane helix translocase OS=M Atad1	5.82	2
Q9D658	Protein tyrosine phosphatase type IVA 3 OS=Mus musculus Ptp4a3	16.18	2
Q9D6F9	Tubulin beta-4A chain OS=Mus musculus OX=10090 GN=Tub Tubb4a	30.18	14
Q9D6K5	Synaptojanin-2-binding protein OS=Mus musculus OX=1009 Synj2bp	8.28	1
Q9D6R2	Isocitrate dehydrogenase [NAD] subunit alpha, mitochondr Idh3a	23.5	9
Q9D708	Protein S100-A16 OS=Mus musculus OX=10090 GN=S100a16S100a16	9.68	1
Q9D7G0	Ribose-phosphate pyrophosphokinase 1 OS=Mus musculus O Prps1	15.41	5
Q9D7P6	Iron-sulfur cluster assembly enzyme ISCU OS=Mus musculus Iscu	17.26	2
Q9D7S9	Charged multivesicular body protein 5 OS=Mus musculus Chmp5	11.87	2
Q9D823	Large ribosomal subunit protein eL37 OS=Mus musculus OX Rpl37	31.96	4
Q9D883	Splicing factor U2AF 35 kDa subunit OS=Mus musculus OX U2af1	20.92	6
Q9D892	Inosine triphosphate pyrophosphatase OS=Mus musculus OX Itpa	5.56	1
Q9D8B3	Charged multivesicular body protein 4b OS=Mus musculus Chmp4b	27.68	6
Q9D8E6	Large ribosomal subunit protein uL4 OS=Mus musculus OX= Rpl4	36.28	16
Q9D8T7	SRA stem-loop-interacting RNA-binding protein, mitochondr Slirp	27.68	3
Q9D906	Ubiquitin-like modifier-activating enzyme ATG7 OS=Mus m Atg7	1.58	1
Q9D945	Protein LLP homolog OS=Mus musculus OX=10090 GN=Llph Llph	6.15	1
Q9DAZ9	Abcission/NoCut checkpoint regulator OS=Mus musculus Zfyve19	4.88	2
Q9DB05	Alpha-soluble NSF attachment protein OS=Mus musculus O Napa	28.14	7
Q9DB34	Charged multivesicular body protein 2a OS=Mus musculus Chmp2a	22.52	6
Q9DB60	Prostamide/prostaglandin F synthase OS=Mus musculus OX= Prxl2b	7.46	2
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial OS=Mus Uqcrc2	23.62	9
Q9DBC7	cAMP-dependent protein kinase type I-alpha regulatory sub Prkar1a	7.87	4
Q9DBD5	Proline-, glutamic acid- and leucine-rich protein 1 OS=Mus Pelp1	2.14	2
Q9DBE9	pre-rRNA 2'-O-ribose RNA methyltransferase FTSJ3 OS=Mus Ftsj3	2.03	2
Q9DBF1	Alpha-amino adipic semialdehyde dehydrogenase OS=Mus mu Aldh7a1	10.02	5
Q9DBG3	AP-2 complex subunit beta OS=Mus musculus OX=10090 GN Ap2b1	34.26	37
Q9DBH0	NEDD4-like E3 ubiquitin-protein ligase WWP2 OS=Mus mu Wwp2	6.21	5
Q9DBJ1	Phosphoglycerate mutase 1 OS=Mus musculus OX=10090 GN Pgam1	19.69	5
Q9DBL7	Bifunctional coenzyme A synthase OS=Mus musculus OX=10 Coasy	1.6	1
Q9DBP5	UMP-CMP kinase OS=Mus musculus OX=10090 GN=Cmpk1 Cmpk1	35.71	6

Q9DBR7	Protein phosphatase 1 regulatory subunit 12A OS=Mus musc	Ppp1r12a	6.9	6
Q9DBS2	Tumor protein p63-regulated gene 1-like protein OS=Mus m	Tprg1l	4.14	1
Q9DBT5	AMP deaminase 2 OS=Mus musculus OX=10090 GN=Ampd2	Ampd2	8.62	7
Q9DBZ5	Eukaryotic translation initiation factor 3 subunit K OS=Mu	Eif3k	18.35	3
Q9DC04	Regulator of G-protein signaling 3 OS=Mus musculus OX=1	Rgs3	5.28	6
Q9DC28	Casein kinase I isoform delta OS=Mus musculus OX=10090	Csnk1d	32.77	14
Q9DCB4	cAMP-regulated phosphoprotein 21 OS=Mus musculus OX=1	Arpp21	2.35	2
Q9DCC8	Mitochondrial import receptor subunit TOM20 homolog O	Tomm20	18.62	3
Q9DCH4	Eukaryotic translation initiation factor 3 subunit F OS=Mus	Eif3f	5.26	2
Q9DCM0	Persulfide dioxygenase ETHE1, mitochondrial OS=Mus musc	Ethe1	9.06	2
Q9DCN2	NADH-cytochrome b5 reductase 3 OS=Mus musculus OX=10	Cyb5r3	6.98	2
Q9DCR2	AP-3 complex subunit sigma-1 OS=Mus musculus OX=10090	Ap3s1	15.03	4
Q9DCS3	Enoyl-[acyl-carrier-protein] reductase, mitochondrial OS=	Mecr	5.63	2
Q9DCT2	NADH dehydrogenase [ubiquinone] iron-sulfur protein 3, m	Ndufs3	17.87	4
Q9DCW4	Electron transfer flavoprotein subunit beta OS=Mus muscul	Etfb	16.86	4
Q9DCZ4	MICOS complex subunit Mic26 OS=Mus musculus OX=1009	Apoo	7.58	1
Q9DD03	Ras-related protein Rab-13 OS=Mus musculus OX=10090 GN	Rab13	10.89	2
Q9EP53	Hamartin OS=Mus musculus OX=10090 GN=Tsc1 PE=1 SV=1Tsc1		7.32	8
Q9EP69	Phosphatidylinositol-3-phosphatase SAC1 OS=Mus musculu	Sacm1l	18.57	11
Q9EPA7	Nicotinamide/nicotinic acid mononucleotide adenylyltrans	Nmnat1	3.86	1
Q9EPL2	Calsyntenin-1 OS=Mus musculus OX=10090 GN=Clstn1 PE=1Clstn1		4.39	4
Q9EPL8	Importin-7 OS=Mus musculus OX=10090 GN=Ipo7 PE=1 SV=Ipo7		4.34	4
Q9EPN1	Neurobeachin OS=Mus musculus OX=10090 GN=Nbea PE=1	Nbea	4.9	10
Q9EPR5	VPS10 domain-containing receptor SorCS2 OS=Mus musculu	Sorcs2	3.8	4
Q9EPU0	Regulator of nonsense transcripts 1 OS=Mus musculus OX=	Upf1	13.88	14
Q9EPW0	Inositol polyphosphate-4-phosphatase type I A OS=Mus mus	Inpp4a	22.26	19
Q9EQ20	Methylmalonate-semialdehyde/malonate-semialdehyde dehydr	Aldh6a1	15.7	8
Q9EQ61	Pescadillo homolog OS=Mus musculus OX=10090 GN=Pes1 P Pes1		4.97	3
Q9EQ80	NIF3-like protein 1 OS=Mus musculus OX=10090 GN=Nif3l1	Nif3l1	6.38	2
Q9EQH3	Vacuolar protein sorting-associated protein 35 OS=Mus mu	Vps35	11.68	9
Q9EQJ9	Membrane-associated guanylate kinase, WW and PDZ domain	Magi3	2.17	3
Q9EQP2	EH domain-containing protein 4 OS=Mus musculus OX=1009	Ehd4	7.02	3
Q9EQQ9	Protein O-GlcNAcase OS=Mus musculus OX=10090 GN=Oga	Oga	0.98	1
Q9EQT6	Synaptotagmin-13 OS=Mus musculus OX=10090 GN=Syt13 P	Syt13	1.88	1
Q9EQU5	Protein SET OS=Mus musculus OX=10090 GN=Set PE=1 SV=Set		7.27	2
Q9EQZ6	Rap guanine nucleotide exchange factor 4 OS=Mus musculu	Rapgef4	12.36	12
Q9EQZ7	Regulating synaptic membrane exocytosis protein 2 OS=Mu	Rims2	10.98	14
Q9ER00	Syntaxin-12 OS=Mus musculus OX=10090 GN=Stx12 PE=1 S	Stx12	6.93	2
Q9ER35	Fructosamine-3-kinase OS=Mus musculus OX=10090 GN=Fn3Fn3k		7.44	2
Q9ER65	Calsyntenin-2 OS=Mus musculus OX=10090 GN=Clstn2 PE=1Clstn2		2.17	1
Q9ER69	Pre-mRNA-splicing regulator WTAP OS=Mus musculus OX=	Wtap	8.08	3
Q9ERA6	Tuftelin-interacting protein 11 OS=Mus musculus OX=10090	Tfip11	1.19	1
Q9ERD7	Tubulin beta-3 chain OS=Mus musculus OX=10090 GN=Tubb	Tubb3	43.78	19
Q9ERG2	Striatin-3 OS=Mus musculus OX=10090 GN=Strn3 PE=1 SV=	Strn3	11.06	7
Q9ERL9	Guanylate cyclase soluble subunit alpha-1 OS=Mus muscul	Gucy1a1	4.92	3
Q9ERR1	Nuclear distribution protein nudE-like 1 OS=Mus musculus	Ndel1	18.84	6
Q9ERS5	Pleckstrin homology domain-containing family A member 2	Plekha2	4.94	2
Q9ERU9	E3 SUMO-protein ligase RanBP2 OS=Mus musculus OX=100	Ranbp2	11.99	34
Q9ERV1	E3 ubiquitin-protein ligase makorin-2 OS=Mus musculus O	Mkrn2	1.92	1
Q9ES28	Rho guanine nucleotide exchange factor 7 OS=Mus musculu	Arhgef7	14.27	11
Q9ES56	Trafficking protein particle complex subunit 4 OS=Mus mus	Trappc4	8.68	2
Q9ES74	Serine/threonine-protein kinase Nek7 OS=Mus musculus OX	Nek7	9.6	3
Q9ES97	Reticulon-3 OS=Mus musculus OX=10090 GN=Rtn3 PE=1 SV	Rtn3	14.21	13
Q9ESC8	AF4/FMR2 family member 4 OS=Mus musculus OX=10090 G	Aff4	7.67	7

Q9ESN6	Tripartite motif-containing protein 2 OS=Mus musculus OX	Trim2	11.16	7
Q9ESN9	C-Jun-amino-terminal kinase-interacting protein 3 OS=Mus	Mapk8ip3	8.3	11
Q9ESW4	Acylglycerol kinase, mitochondrial OS=Mus musculus OX=1	Agk	11.4	4
Q9ESX5	H/ACA ribonucleoprotein complex subunit DKC1 OS=Mus m	Dkc1	3.93	2
Q9ESZ8	General transcription factor II-I OS=Mus musculus OX=1009	Gtf2i	9.02	11
Q9ET77	Junctophilin-3 OS=Mus musculus OX=10090 GN=Jph3 PE=1	Jph3	14.38	11
Q9ET78	Junctophilin-2 OS=Mus musculus OX=10090 GN=Jph2 PE=1	Jph2	2.73	2
Q9ET80	Junctophilin-1 OS=Mus musculus OX=10090 GN=Jph1 PE=1	Jph1	18.03	15
Q9JHG6	Calcipressin-1 OS=Mus musculus OX=10090 GN=Rcan1 PE=1Rcan1		7.57	2
Q9JHH6	Carboxypeptidase B2 OS=Mus musculus OX=10090 GN=Cpb2Cpb2		2.84	1
Q9JHI5	Isovaleryl-CoA dehydrogenase, mitochondrial OS=Mus musc	Ivd	10.61	4
Q9JHL1	Na(+)/H(+) exchange regulatory cofactor NHE-RF2 OS=Mus	Nherf2	21.96	7
Q9JHR7	Insulin-degrading enzyme OS=Mus musculus OX=10090 GN=	Ide	2.16	2
Q9JHS4	ATP-dependent Clp protease ATP-binding subunit clpX-like	Clpx	5.99	3
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 OS=Mus musculus OX=	Dync1h1	24.12	110
Q9JHW4	Selenocysteine-specific elongation factor OS=Mus musculu	Eefsec	24.19	11
Q9JHW9	Retinaldehyde dehydrogenase 3 OS=Mus musculus OX=1009	Aldh1a3	3.52	2
Q9JI46	Diphosphoinositol polyphosphate phosphohydrolase 1 OS=M	Nudt3	23.81	4
Q9JI90	E3 ubiquitin-protein ligase RNF14 OS=Mus musculus OX=1	Rnf14	4.54	2
Q9JI91	Alpha-actinin-2 OS=Mus musculus OX=10090 GN=Actn2 PE=Actn2		25.5	22
Q9JIA1	Leucine-rich glioma-inactivated protein 1 OS=Mus musculu	Lgi1	14.9	9
Q9JIF7	Coatomer subunit beta OS=Mus musculus OX=10090 GN=CopCpb1		3.04	3
Q9JIH2	Nuclear pore complex protein Nup50 OS=Mus musculus OX	Nup50	2.15	1
Q9JII6	Aldo-keto reductase family 1 member A1 OS=Mus musculus	Akr1a1	14.15	4
Q9JIK5	Nucleolar RNA helicase 2 OS=Mus musculus OX=10090 GN=	Ddx21	7.4	6
Q9JIS5	Synaptic vesicle glycoprotein 2A OS=Mus musculus OX=100	Sv2a	9.57	7
Q9JIX8	Apoptotic chromatin condensation inducer in the nucleus	Acin1	6.65	9
Q9JIY5	Serine protease HTRA2, mitochondrial OS=Mus musculus O	Htra2	2.62	1
Q9JJ28	Protein flightless-1 homolog OS=Mus musculus OX=10090 GN=	Flii	9.44	11
Q9JJA9	General receptor for phosphoinositides 1-associated scaffo	Tamalin	2.55	1
Q9JJC6	RILP-like protein 1 OS=Mus musculus OX=10090 GN=Rilpl1	Rilpl1	3.2	1
Q9JJD0	THAP domain-containing protein 11 OS=Mus musculus OX=	Thap11	5.9	2
Q9JJF3	Ribosomal oxygenase 1 OS=Mus musculus OX=10090 GN=	Riox1	10.12	5
Q9JJH7	Transient receptor potential cation channel subfamily M	Trpm5	0.86	1
Q9JJI8	Large ribosomal subunit protein eL38 OS=Mus musculus OX	Rpl38	45.71	3
Q9JJT9	Phosphorylated adapter RNA export protein OS=Mus muscu	Phax	3.12	1
Q9JJV2	Profilin-2 OS=Mus musculus OX=10090 GN=Pfn2 PE=1 SV=	Pfn2	42.86	6
Q9JJY4	Probable ATP-dependent RNA helicase DDX20 OS=Mus mus	Ddx20	1.21	1
Q9JZ2	Tubulin alpha-8 chain OS=Mus musculus OX=10090 GN=Tub	Tuba8	28.73	13
Q9JZ5	Epidermal growth factor-like protein 6 OS=Mus musculus O	Egfl6	1.45	1
Q9JZ6	Krueppel-like factor 13 OS=Mus musculus OX=10090 GN=	Klf13	9.69	3
Q9JKC6	Cell cycle exit and neuronal differentiation protein 1 OS=	Cend1	26.85	4
Q9JKC8	AP-3 complex subunit mu-1 OS=Mus musculus OX=10090 G	Ap3m1	4.78	2
Q9JKF1	Ras GTPase-activating-like protein IQGAP1 OS=Mus muscu	Iqgap1	10.08	15
Q9JKK7	Tropomodulin-2 OS=Mus musculus OX=10090 GN=Tmod2 P	Tmod2	31.05	12
Q9JKR6	Hypoxia up-regulated protein 1 OS=Mus musculus OX=1009	Hyou1	6.21	6
Q9JKS5	Intracellular hyaluronan-binding protein 4 OS=Mus muscul	Habp4	11.19	5
Q9JKV1	Proteasomal ubiquitin receptor ADRM1 OS=Mus musculus	Adrm1	3.93	1
Q9JKY5	Huntingtin-interacting protein 1-related protein OS=Mus m	Hip1r	10.67	11
Q9JL04	Formin-2 OS=Mus musculus OX=10090 GN=Fmn2 PE=1 SV=	Fmn2	1.39	2
Q9JLF6	Protein-glutamine gamma-glutamyltransferase K OS=Mus m	Tgm1	3.31	2
Q9JLI8	Squamous cell carcinoma antigen recognized by T-cells 3	Sart3	13.1	12
Q9JLJ2	4-trimethylaminobutyraldehyde dehydrogenase OS=Mus mus	Aldh9a1	8.5	4
Q9JLK7	Calcium-binding protein 1 OS=Mus musculus OX=10090 GN	Cabp1	3.96	1

Q9JLM8	Serine/threonine-protein kinase DCLK1 OS=Mus musculus	Dclk1	25.53	20
Q9JLN9	Serine/threonine-protein kinase mTOR OS=Mus musculus O	Mtor	2.67	6
Q9JLV5	Cullin-3 OS=Mus musculus OX=10090 GN=Cul3 PE=1 SV=1	Cul3	6.38	5
Q9JLZ3	Methylglutaconyl-CoA hydratase, mitochondrial OS=Mus m	Auh	19.11	6
Q9JM52	Misshapen-like kinase 1 OS=Mus musculus OX=10090 GN=M	Mink1	23.55	34
Q9JM63	ATP-sensitive inward rectifier potassium channel 10 OS=M	Kcnj10	2.9	1
Q9JMA1	Ubiquitin carboxyl-terminal hydrolase 14 OS=Mus musculu	Usp14	10.95	5
Q9JMB0	G kinase-anchoring protein 1 OS=Mus musculus OX=10090	Gkap1	7.38	3
Q9JMC8	Band 4.1-like protein 4B OS=Mus musculus OX=10090 GN=E	Epb4114b	9.68	4
Q9JMD0	BUB3-interacting and GLEBS motif-containing protein ZN	Znf207	4.04	2
Q9JME5	AP-3 complex subunit beta-2 OS=Mus musculus OX=10090	Ap3b2	13.12	14
Q9JMG7	Hepatoma-derived growth factor-related protein 3 OS=Mus	Hdgfl3	19.31	4
Q9JMH9	Unconventional myosin-XVIIIa OS=Mus musculus OX=1009	Myo18a	17.8	38
Q9JMK2	Casein kinase I isoform epsilon OS=Mus musculus OX=1009	Csnk1e	41.11	17
Q9QUG9	RAS guanyl-releasing protein 2 OS=Mus musculus OX=1009	Rasgrp2	11.18	6
Q9QUI0	Transforming protein RhoA OS=Mus musculus OX=10090 G	Rhoa	26.42	6
Q9QUI6	Atypical chemokine receptor 1 OS=Mus musculus OX=10090	Ackr1	2.1	1
Q9QUJ7	Long-chain-fatty-acid--CoA ligase 4 OS=Mus musculus OX=	Acsl4	2.95	2
Q9QUM9	Proteasome subunit alpha type-6 OS=Mus musculus OX=100	PsmA6	23.17	5
Q9QUR7	Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1 OS	Pin1	16.36	3
Q9QVP9	Protein-tyrosine kinase 2-beta OS=Mus musculus OX=10090	Ptk2b	12.29	12
Q9QWH1	Polyhomeotic-like protein 2 OS=Mus musculus OX=10090 G	Phc2	0.94	1
Q9QWI6	SRC kinase signaling inhibitor 1 OS=Mus musculus OX=1009	Srcin1	28.24	34
Q9QWL7	Keratin, type I cytoskeletal 17 OS=Mus musculus OX=10090	Krt17	15.24	9
Q9QWT9	Kinesin-like protein KIFC1 OS=Mus musculus OX=10090 GN	Kifc1	3.86	2
Q9QWV9	Cyclin-T1 OS=Mus musculus OX=10090 GN=Ccnt1 PE=1 SV	Ccnt1	8.29	6
Q9QWY8	Arf-GAP with SH3 domain, ANK repeat and PH domain-cont	Asap1	2.09	2
Q9QX11	Cytohesin-1 OS=Mus musculus OX=10090 GN=Cyth1 PE=1 S	Cyth1	12.06	5
Q9QX47	Protein SON OS=Mus musculus OX=10090 GN=Son PE=1 SV	Son	5.81	12
Q9QXK3	Coatomer subunit gamma-2 OS=Mus musculus OX=10090 GN	Copg2	1.38	1
Q9QXK7	Cleavage and polyadenylation specificity factor subunit 3	Cpsf3	24.42	15
Q9QXL1	Kinesin-like protein KIF21B OS=Mus musculus OX=10090 G	Kif21b	3.96	6
Q9QXL2	Kinesin-like protein KIF21A OS=Mus musculus OX=10090 G	Kif21a	20.87	34
Q9QXM1	Junction-mediating and -regulatory protein OS=Mus muscul	Jmy	3.15	3
Q9QXS1	Plectin OS=Mus musculus OX=10090 GN=Plec PE=1 SV=3	Plec	22.11	107
Q9QXS6	Drebrin OS=Mus musculus OX=10090 GN=Dbn1 PE=1 SV=4	Dbn1	18.13	16
Q9QXV0	ProSAAS OS=Mus musculus OX=10090 GN=Pcsk1n PE=1 SV	Pcsk1n	10.47	2
Q9QXY6	EH domain-containing protein 3 OS=Mus musculus OX=1009	Ehd3	16.64	8
Q9QXZ0	Microtubule-actin cross-linking factor 1, isoforms 1/2/3/	Macf1	11.12	79
Q9QY76	Vesicle-associated membrane protein-associated protein B	Vapb	15.64	4
Q9QYB5	Gamma-adducin OS=Mus musculus OX=10090 GN=Add3 PE=	Add3	16.29	10
Q9QYB8	Beta-adducin OS=Mus musculus OX=10090 GN=Add2 PE=1	Add2	28.41	19
Q9QYC0	Alpha-adducin OS=Mus musculus OX=10090 GN=Add1 PE=1	Add1	14.15	9
Q9QYF1	Retinol dehydrogenase 11 OS=Mus musculus OX=10090 GN=	Rdh11	7.28	2
Q9QYG0	Protein NDRG2 OS=Mus musculus OX=10090 GN=NdrG2 PE=	NdrG2	14.56	4
Q9QYH6	Melanoma-associated antigen D1 OS=Mus musculus OX=100	Maged1	1.42	1
Q9QYI5	DnaJ homolog subfamily B member 2 OS=Mus musculus OX	Dnajb2	14.2	4
Q9QYJ3	DnaJ homolog subfamily B member 1 OS=Mus musculus OX	Dnajb1	17.06	6
Q9QYR6	Microtubule-associated protein 1A OS=Mus musculus OX=1	Map1a	27.45	85
Q9QYS2	Metabotropic glutamate receptor 3 OS=Mus musculus OX=1	Grm3	7.39	6
Q9QYS9	KH domain-containing RNA-binding protein QKI OS=Mus m	Qki	2.35	1
Q9QYX7	Protein piccolo OS=Mus musculus OX=10090 GN=Pclo PE=1	Pclo	12.1	54
Q9QYY8	Spastin OS=Mus musculus OX=10090 GN=Spast PE=1 SV=3	Spast	7.49	4
Q9QZ06	Toll-interacting protein OS=Mus musculus OX=10090 GN=	Tollip	3.28	1

Q9QZ88	Vacuolar protein sorting-associated protein 29 OS=Mus mu	Vps29	31.32	5
Q9QZD9	Eukaryotic translation initiation factor 3 subunit I OS=Mus	Eif3i	15.08	4
Q9QZQ1	Afadin OS=Mus musculus OX=10090 GN=Afdn PE=1 SV=3	Afdn	17.75	30
Q9QZQ8	Core histone macro-H2A.1 OS=Mus musculus OX=10090 GN=	Macroh2a1	2.71	1
Q9QZS3	Protein numb homolog OS=Mus musculus OX=10090 GN=Nu	Numb	20.21	15
Q9QZX7	Serine racemase OS=Mus musculus OX=10090 GN=Srr PE=1	Srr	2.65	1
Q9R0A0	Peroxisomal membrane protein PEX14 OS=Mus musculus OX=	Pex14	5.59	2
Q9R0B7	Zinc finger protein 346 OS=Mus musculus OX=10090 GN=Zn	Znf346	11.22	3
Q9R0G7	Zinc finger E-box-binding homeobox 2 OS=Mus musculus O	Zeb2	1.65	2
Q9R0H0	Peroxisomal acyl-coenzyme A oxidase 1 OS=Mus musculus	Acox1	1.36	1
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 OS=Mus m	Atp2b2	17.03	17
Q9R0L6	Pericentriolar material 1 protein OS=Mus musculus OX=100	Pcm1	0.54	1
Q9R0L7	A-kinase anchor protein 8-like OS=Mus musculus OX=10090	Akap8l	3.43	2
Q9R0N0	Galactokinase OS=Mus musculus OX=10090 GN=Galk1 PE=1	Galk1	2.81	1
Q9R0N3	Synaptotagmin-11 OS=Mus musculus OX=10090 GN=Syt11 P	Syt11	15.12	5
Q9R0N4	Synaptotagmin-10 OS=Mus musculus OX=10090 GN=Syt10 P	Syt10	4.78	4
Q9R0N5	Synaptotagmin-5 OS=Mus musculus OX=10090 GN=Syt5 PE=Syt5		32.64	13
Q9R0N7	Synaptotagmin-7 OS=Mus musculus OX=10090 GN=Syt7 PE=Syt7		27.54	10
Q9R0N8	Synaptotagmin-6 OS=Mus musculus OX=10090 GN=Syt6 PE=Syt6		15.46	9
Q9R0N9	Synaptotagmin-9 OS=Mus musculus OX=10090 GN=Syt9 PE=Syt9		11.81	7
Q9R0P5	Destrin OS=Mus musculus OX=10090 GN=Dstn PE=1 SV=3	Dstn	30.91	8
Q9R0P9	Ubiquitin carboxyl-terminal hydrolase isozyme L1 OS=Mus	Uchl1	22.42	5
Q9R0U0	Serine/arginine-rich splicing factor 10 OS=Mus musculus O	Srsf10	11.07	3
Q9R0X4	Acyl-coenzyme A thioesterase 9, mitochondrial OS=Mus mu	Acot9	12.07	5
Q9R0Y5	Adenylate kinase isoenzyme 1 OS=Mus musculus OX=10090	Ak1	22.16	5
Q9R111	Guanine deaminase OS=Mus musculus OX=10090 GN=Gda P	Gda	20.04	9
Q9R118	Serine protease HTRA1 OS=Mus musculus OX=10090 GN=Ht	Htra1	8.33	4
Q9R171	Cerebellin-1 OS=Mus musculus OX=10090 GN=Cbln1 PE=1	SCbln1	10.88	2
Q9R190	Metastasis-associated protein MTA2 OS=Mus musculus OX=	Mta2	5.84	4
Q9R1B9	Slit homolog 2 protein OS=Mus musculus OX=10090 GN=Slit	Slit2	1.58	2
Q9R1C6	Diacylglycerol kinase epsilon OS=Mus musculus OX=10090	Dgke	6.21	4
Q9R1C7	Pre-mRNA-processing factor 40 homolog A OS=Mus muscul	Prpf40a	3.78	4
Q9R1E6	Ectonucleotide pyrophosphatase/phosphodiesterase family	Enpp2	1.04	1
Q9R1K5	Fizzy-related protein homolog OS=Mus musculus OX=10090	Fzr1	8.92	4
Q9R1L5	Microtubule-associated serine/threonine-protein kinase 1	Mast1	12.1	18
Q9R1P0	Proteasome subunit alpha type-4 OS=Mus musculus OX=100	Psma4	13.03	3
Q9R1P4	Proteasome subunit alpha type-1 OS=Mus musculus OX=100	Psma1	20.15	5
Q9R1Q9	V-type proton ATPase subunit S1 OS=Mus musculus OX=100	Atp6ap1	1.51	1
Q9R1R2	Tripartite motif-containing protein 3 OS=Mus musculus OX=	Trim3	21.24	14
Q9R1T4	Septin-6 OS=Mus musculus OX=10090 GN=Septin6 PE=1 SV=	Septin6	12.9	6
Q9R1V6	Disintegrin and metalloproteinase domain-containing prot	Adam22	11.28	9
Q9R1V7	Disintegrin and metalloproteinase domain-containing prot	Adam23	2.77	2
Q9R226	KH domain-containing, RNA-binding, signal transduction-as	Khdrbs3	16.76	6
Q9WTI7	Unconventional myosin-Ic OS=Mus musculus OX=10090 GN	Myo1c	4.14	4
Q9WTL7	Acyl-protein thioesterase 2 OS=Mus musculus OX=10090 GN	Lypla2	13.85	4
Q9WTL8	Basic helix-loop-helix ARNT-like protein 1 OS=Mus muscu	Bmal1	3.32	2
Q9WTM5	RuvB-like 2 OS=Mus musculus OX=10090 GN=Ruvbl2 PE=1	Ruvbl2	28.08	13
Q9WTP6	Adenylate kinase 2, mitochondrial OS=Mus musculus OX=1	Ak2	4.6	1
Q9WTP7	GTP:AMP phosphotransferase AK3, mitochondrial OS=Mus	Ak3	22.47	5
Q9WTQ5	A-kinase anchor protein 12 OS=Mus musculus OX=10090 GN	Akap12	0.65	1
Q9WTR5	Cadherin-13 OS=Mus musculus OX=10090 GN=Cdh13 PE=1	Cdh13	3.64	2
Q9WTR6	Cystine/glutamate transporter OS=Mus musculus OX=10090	Slc7a11	4.78	2
Q9WTS4	Teneurin-1 OS=Mus musculus OX=10090 GN=Tenm1 PE=1 S	Tenm1	0.4	1
Q9WTS5	Teneurin-2 OS=Mus musculus OX=10090 GN=Tenm2 PE=1 S	Tenm2	2.6	6

Q9WTU0	Lysine-specific demethylase PHF2 OS=Mus musculus OX=10	Phf2	3.01	3
Q9WTU3	Sodium channel protein type 8 subunit alpha OS=Mus musc	Scn8a	0.71	1
Q9WTU6	Mitogen-activated protein kinase 9 OS=Mus musculus OX=1	Mapk9	7.8	4
Q9WTX2	Interferon-inducible double-stranded RNA-dependent protei	Prkra	13.74	4
Q9WTX5	S-phase kinase-associated protein 1 OS=Mus musculus OX=	Skp1	39.88	6
Q9WTX6	Cullin-1 OS=Mus musculus OX=10090 GN=Cul1 PE=1 SV=1	Cul1	1.03	1
Q9WTZ1	RING-box protein 2 OS=Mus musculus OX=10090 GN=Rnf7	Rnf7	18.58	2
Q9WU00	Nuclear respiratory factor 1 OS=Mus musculus OX=10090 G	Nrf1	3.78	2
Q9WU01	KH domain-containing, RNA-binding, signal transduction-as	Khdrbs2	11.17	4
Q9WU22	Tyrosine-protein phosphatase non-receptor type 4 OS=Mus	Ptpn4	3.24	3
Q9WU78	Programmed cell death 6-interacting protein OS=Mus muscu	Pdcd6ip	7.13	5
Q9WUA3	ATP-dependent 6-phosphofructokinase, platelet type OS=Mu	Pfkip	11.99	12
Q9WUB3	Glycogen phosphorylase, muscle form OS=Mus musculus O	Pygm	6.53	6
Q9WUC3	Lymphocyte antigen 6H OS=Mus musculus OX=10090 GN=Ly6h	Ly6h	18.71	3
Q9WUD1	E3 ubiquitin-protein ligase CHIP OS=Mus musculus OX=100	Stub1	14.8	4
Q9WUL7	ADP-ribosylation factor-like protein 3 OS=Mus musculus O	Arl3	17.58	2
Q9WUM3	Coronin-1B OS=Mus musculus OX=10090 GN=Coro1b PE=1	Coro1b	13.64	7
Q9WUM4	Coronin-1C OS=Mus musculus OX=10090 GN=Coro1c PE=1	Coro1c	22.57	13
Q9WUN2	Serine/threonine-protein kinase TBK1 OS=Mus musculus O	Tbk1	1.51	1
Q9WUQ2	Prolactin regulatory element-binding protein OS=Mus musc	Preb	8.15	3
Q9WUQ5	C-X-C motif chemokine 14 OS=Mus musculus OX=10090 GN	Cxcl14	24.24	3
Q9WUR9	Adenylate kinase 4, mitochondrial OS=Mus musculus OX=1	Ak4	26.91	5
Q9WUT3	Ribosomal protein S6 kinase alpha-2 OS=Mus musculus OX	Rps6ka2	2.32	2
Q9WUU9	Germinal-center associated nuclear protein OS=Mus muscu	Mcm3ap	1.22	2
Q9WV02	RNA-binding motif protein, X chromosome OS=Mus muscul	RbmX	26.09	10
Q9WV18	Gamma-aminobutyric acid type B receptor subunit 1 OS=Mu	Gabbr1	2.29	2
Q9WV30	Nuclear factor of activated T-cells 5 OS=Mus musculus OX=	Nfat5	1.76	2
Q9WV34	MAGUK p55 subfamily member 2 OS=Mus musculus OX=10	Mpp2	26.27	14
Q9WV54	Acid ceramidase OS=Mus musculus OX=10090 GN=Asah1 PE=1	Asah1	2.28	1
Q9WV55	Vesicle-associated membrane protein-associated protein A	Vapa	14.86	4
Q9WV60	Glycogen synthase kinase-3 beta OS=Mus musculus OX=100	Gsk3b	16.67	8
Q9WV69	Dematin OS=Mus musculus OX=10090 GN=Dmt1 PE=1 SV=1	Dmt1	33.33	11
Q9WV80	Sorting nexin-1 OS=Mus musculus OX=10090 GN=Snx1 PE=1	Snx1	5.17	2
Q9WV92	Band 4.1-like protein 3 OS=Mus musculus OX=10090 GN=Ep	Epb41l3	44.67	46
Q9WVB4	Slit homolog 3 protein OS=Mus musculus OX=10090 GN=Slit	Slit3	1.31	2
Q9WVE8	Protein kinase C and casein kinase substrate in neurons pr	Pacsin2	8.02	4
Q9WVG6	Histone-arginine methyltransferase CARM1 OS=Mus muscu	Carm1	8.22	5
Q9WVH4	Forkhead box protein O3 OS=Mus musculus OX=10090 GN=F	Foxo3	1.79	1
Q9WVK4	EH domain-containing protein 1 OS=Mus musculus OX=1009	Ehd1	12.92	6
Q9WVK8	Cholesterol 24-hydroxylase OS=Mus musculus OX=10090 G	Cyp46a1	13.4	6
Q9WVM3	Anaphase-promoting complex subunit 7 OS=Mus musculus	Anapc7	24.25	13
Q9WVQ1	Membrane-associated guanylate kinase, WW and PDZ domain	Magi2	4	5
Q9WVR4	RNA-binding protein FXR2 OS=Mus musculus OX=10090 GN=	Fxr2	18.13	11
Q9Z0E0	Neurochondrin OS=Mus musculus OX=10090 GN=Ncdn PE=1	Ncdn	12.35	8
Q9Z0G0	PDZ domain-containing protein GIPC1 OS=Mus musculus O	Gipc1	12.01	3
Q9Z0H3	SWI/SNF-related matrix-associated actin-dependent regulat	Smad3	11.43	4
Q9Z0H4	CUGBP Elav-like family member 2 OS=Mus musculus OX=10	Celf2	8.86	4
Q9Z0H8	CAP-Gly domain-containing linker protein 2 OS=Mus muscu	Clip2	36.39	39
Q9Z0J4	Nitric oxide synthase 1 OS=Mus musculus OX=10090 GN=No	Nos1	13.65	18
Q9Z0P4	Paralemmin-1 OS=Mus musculus OX=10090 GN=Palm PE=1	Palm	11.23	4
Q9Z0P5	Twinfilin-2 OS=Mus musculus OX=10090 GN=Twf2 PE=1 SV=	Twf2	6.3	1
Q9Z0R4	Intersectin-1 OS=Mus musculus OX=10090 GN=Itsn1 PE=1	Itsn1	13.65	22
Q9Z0R6	Intersectin-2 OS=Mus musculus OX=10090 GN=Itsn2 PE=1	Itsn2	4.4	7
Q9Z0U1	Tight junction protein ZO-2 OS=Mus musculus OX=10090 G	Tjp2	18.85	22

Q9Z0X1	Apoptosis-inducing factor 1, mitochondrial OS=Mus muscu	Aifm1	6.05	3
Q9Z103	Activity-dependent neuroprotector homeobox protein OS=M	Adnp	2.17	2
Q9Z108	Double-stranded RNA-binding protein Stauf homolog 1 O	Stau1	18.07	8
Q9Z110	Delta-1-pyrroline-5-carboxylate synthase OS=Mus muscu	Aldh18a1	1.13	1
Q9Z126	Platelet factor 4 OS=Mus musculus OX=10090 GN=Pf4 PE=1	Pf4	11.43	1
Q9Z127	Large neutral amino acids transporter small subunit 1 OS=	Slc7a5	2.54	1
Q9Z130	Heterogeneous nuclear ribonucleoprotein D-like OS=Mus m	Hnmpdl	6.64	2
Q9Z140	Copine-6 OS=Mus musculus OX=10090 GN=Cpne6 PE=1 SV=Cpne6		28.19	16
Q9Z1B3	1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase	Plcb1	19.49	25
Q9Z1D1	Eukaryotic translation initiation factor 3 subunit G OS=Mu	Eif3g	4.06	1
Q9Z1F9	SUMO-activating enzyme subunit 2 OS=Mus musculus OX=1	Uba2	3.76	2
Q9Z1G3	V-type proton ATPase subunit C 1 OS=Mus musculus OX=10	Atp6v1c1	17.02	8
Q9Z1G4	V-type proton ATPase 116 kDa subunit a 1 OS=Mus muscul	Atp6v0a1	17.64	14
Q9Z1J3	Cysteine desulfurase OS=Mus musculus OX=10090 GN=Nfs1	Nfs1	9.8	4
Q9Z1N5	Spliceosome RNA helicase Ddx39b OS=Mus musculus OX=1	Ddx39b	11.92	5
Q9Z1R2	Large proline-rich protein BAG6 OS=Mus musculus OX=100	Bag6	4.16	5
Q9Z1S3	RAS guanyl-releasing protein 1 OS=Mus musculus OX=1009	Rasgrp1	3.65	3
Q9Z1S5	Neuronal-specific septin-3 OS=Mus musculus OX=10090 GN=Septin3		20.57	7
Q9Z1S8	GRB2-associated-binding protein 2 OS=Mus musculus OX=1	Gab2	5.56	3
Q9Z1T1	AP-3 complex subunit beta-1 OS=Mus musculus OX=10090	Ap3b1	2.35	3
Q9Z1T6	1-phosphatidylinositol 3-phosphate 5-kinase OS=Mus muscu	Pikfyve	1.43	3
Q9Z1W9	STE20/SPS1-related proline-alanine-rich protein kinase O	Stk39	11.15	6
Q9Z1X4	Interleukin enhancer-binding factor 3 OS=Mus musculus OX	Ilf3	10.69	10
Q9Z1Z0	General vesicular transport factor p115 OS=Mus musculus	Uso1	2.5	2
Q9Z1Z2	Serine-threonine kinase receptor-associated protein OS=Mu	Strap	17.71	5
Q9Z204	Heterogeneous nuclear ribonucleoproteins C1/C2 OS=Mus m	Hnrnpc	38.66	12
Q9Z2A0	3-phosphoinositide-dependent protein kinase 1 OS=Mus mu	Pdpk1	10.02	5
Q9Z2A5	Arginyl-tRNA--protein transferase 1 OS=Mus musculus OX=	Ate1	12.4	6
Q9Z2B9	Ribosomal protein S6 kinase alpha-4 OS=Mus musculus OX	Rps6ka4	3.1	2
Q9Z2C4	Myotubularin-related protein 1 OS=Mus musculus OX=1009	Mtmr1	13.3	10
Q9Z2D0	Myotubularin-related protein 9 OS=Mus musculus OX=1009	Mtmr9	4.22	2
Q9Z2D1	Myotubularin-related protein 2 OS=Mus musculus OX=1009	Mtmr2	10.73	7
Q9Z2D6	Methyl-CpG-binding protein 2 OS=Mus musculus OX=10090	Mecp2	33.26	16
Q9Z2D8	Methyl-CpG-binding domain protein 3 OS=Mus musculus O	Mbd3	3.51	1
Q9Z2H5	Band 4.1-like protein 1 OS=Mus musculus OX=10090 GN=Ep	Epb4111	32.65	32
Q9Z2I0	Mitochondrial proton/calcium exchanger protein OS=Mus m	Letm1	8.81	7
Q9Z2I2	Peptidyl-prolyl cis-trans isomerase FKBP1B OS=Mus muscu	Fkbp1b	25	2
Q9Z2I8	Succinate--CoA ligase [GDP-forming] subunit beta, mitoch	Suc1g2	21.71	9
Q9Z2K1	Keratin, type I cytoskeletal 16 OS=Mus musculus OX=10090	Krt16	15.78	9
Q9Z2Q6	Septin-5 OS=Mus musculus OX=10090 GN=Septin5 PE=1 SV=Septin5		37.13	15
Q9Z2U0	Proteasome subunit alpha type-7 OS=Mus musculus OX=100	Psma7	8.06	2
Q9Z2U1	Proteasome subunit alpha type-5 OS=Mus musculus OX=100	Psma5	9.54	2
Q9Z2V5	Histone deacetylase 6 OS=Mus musculus OX=10090 GN=Hda	Hdac6	1.31	1
Q9Z2V6	Histone deacetylase 5 OS=Mus musculus OX=10090 GN=Hda	Hdac5	3.59	4
Q9Z2W1	Serine/threonine-protein kinase 25 OS=Mus musculus OX=1	Stk25	2.11	1
Q9Z2X8	Kelch-like ECH-associated protein 1 OS=Mus musculus OX	Keap1	1.6	1
Q9Z2Y3	Homer protein homolog 1 OS=Mus musculus OX=10090 GN=	Homer1	43.72	15
Q9Z315	U4/U6.U5 tri-snRNP-associated protein 1 OS=Mus musculus	Sart1	22.46	17
Q9Z351	Potassium voltage-gated channel subfamily KQT member 2	Kcnq2	1.19	1
A2A690	Protein TANC2 OS=Mus musculus OX=10090 GN=Tanc2 PE=Tanc2		8.48	16
A2AFR3	FERM and PDZ domain-containing protein 4 OS=Mus muscu	Frmpd4	2.05	3
A2AHC3	Calmodulin-regulated spectrin-associated protein 1 OS=Mu	Camsap1	12.46	16
A2AHG0	Leucine zipper putative tumor suppressor 3 OS=Mus muscul	Lzts3	3.14	2
A2ALK8	Tyrosine-protein phosphatase non-receptor type 3 OS=Mus	Ptpn3	10.84	9

A2APV2	Formin-like protein 2 OS=Mus musculus OX=10090 GN=FmnlFmnl2	23.66	26
A2AR02	Peptidyl-prolyl cis-trans isomerase G OS=Mus musculus OX Ppig	3.46	2
A2AR50	Ras-specific guanine nucleotide-releasing factor RalGPS1 Ralgps1	5.13	3
A2AWA9	Rab GTPase-activating protein 1 OS=Mus musculus OX=100 Rabgap1	1.88	2
A2AWP8	Rho guanine nucleotide exchange factor 10-like protein OS Arhgef10l	12.58	14
A2AWT3	Ataxin-7-like protein 3 OS=Mus musculus OX=10090 GN=AtxAtxn7l3	4.32	1
A2RSJ4	Bridge-like lipid transfer protein family member 3B OS=Mus Bltp3b	3.98	4
B1AXV0	DOMON domain-containing protein FRRS1L OS=Mus muscul Frrs1l	7.51	2
D3YUB6	BTB/POZ domain-containing protein 8 OS=Mus musculus O Btbd8	17.93	29
E9Q6B2	Coiled-coil domain-containing protein 85C OS=Mus muscul Ccdc85c	2.38	1
E9Q6J5	Biorientation of chromosomes in cell division protein 1-li Bod1l	6.37	18
G3X9Z4	Pre-mRNA cleavage complex 2 protein Pcf11 OS=Mus muscu Pcf11	1.74	2
G5E8V9	Arfaptin-1 OS=Mus musculus OX=10090 GN=Arfp1 PE=1 SVArfp1	2.95	1
O08582	GTP-binding protein 1 OS=Mus musculus OX=10090 GN=Gtp Gtpbp1	6.59	4
O08664	B-cell CLL/lymphoma 7 protein family member C OS=Mus m Bcl7c	4.61	1
O08672	Kinesin-like protein KIFC2 OS=Mus musculus OX=10090 GN Kifc2	5.18	4
O08989	Ras-related protein M-Ras OS=Mus musculus OX=10090 GN=Mras	36.06	8
O09167	Large ribosomal subunit protein eL21 OS=Mus musculus OX Rpl21	31.87	6
O35066	Kinesin-like protein KIF3C OS=Mus musculus OX=10090 GN Kif3c	5.9	5
O35071	Kinesin-like protein KIF1C OS=Mus musculus OX=10090 GN Kif1c	0.82	1
O35218	Cleavage and polyadenylation specificity factor subunit 2 Cpsf2	28.26	20
O35691	Pinin OS=Mus musculus OX=10090 GN=Pnn PE=1 SV=4 Pnn	8	6
O35711	Liprin-beta-2 OS=Mus musculus OX=10090 GN=Ppfibp2 PE= Ppfibp2	4.76	3
O35737	Heterogeneous nuclear ribonucleoprotein H OS=Mus muscu Hnrnp1	17.59	7
O35841	Apoptosis inhibitor 5 OS=Mus musculus OX=10090 GN=Api5 Api5	6.55	3
O35857	Mitochondrial import inner membrane translocase subunit Timm44	7.08	3
O54984	ATPase GET3 OS=Mus musculus OX=10090 GN=Get3 PE=1 Get3	2.59	1
O70251	Elongation factor 1-beta OS=Mus musculus OX=10090 GN=E Eef1b	10.67	2
O70311	Glycylpeptide N-tetradecanoyltransferase 2 OS=Mus muscu Nmt2	6.43	3
O70493	Sorting nexin-12 OS=Mus musculus OX=10090 GN=Snx12 PESnx12	6.67	1
O70591	Prefoldin subunit 2 OS=Mus musculus OX=10090 GN=Pfdn2 Pfdn2	16.88	2
O88520	Leucine-rich repeat protein SHOC-2 OS=Mus musculus OX= Shoc2	3.09	2
O88532	Zinc finger RNA-binding protein OS=Mus musculus OX=100 Zfr	9.31	8
O88544	COP9 signalosome complex subunit 4 OS=Mus musculus OX Cops4	11.33	4
O88685	26S proteasome regulatory subunit 6A OS=Mus musculus O Psmc3	9.05	4
O88986	2-amino-3-ketobutyrate coenzyme A ligase, mitochondrial Gcat	5.05	2
P03911	NADH-ubiquinone oxidoreductase chain 4 OS=Mus musculu Mtnd4	3.05	1
P07310	Creatine kinase M-type OS=Mus musculus OX=10090 GN=Ck Ckm	5.77	2
P0C7L0	WAS/WASL-interacting protein family member 3 OS=Mus m Wipf3	9.48	4
P10630	Eukaryotic initiation factor 4A-II OS=Mus musculus OX=10 Eif4a2	27.76	10
P14685	26S proteasome non-ATPase regulatory subunit 3 OS=Mus Psmc3	16.79	8
P16014	Secretogranin-1 OS=Mus musculus OX=10090 GN=Chgb PE= Chgb	2.22	1
P17141	Zinc finger protein 37 OS=Mus musculus OX=10090 GN=Zfp Zfp37	1.35	1
P19783	Cytochrome c oxidase subunit 4 isoform 1, mitochondrial Cox4i1	27.81	5
P26516	26S proteasome non-ATPase regulatory subunit 7 OS=Mus Psmc7	5.92	2
P28658	Ataxin-10 OS=Mus musculus OX=10090 GN=Atxn10 PE=1 S Atxn10	5.68	2
P29387	Guanine nucleotide-binding protein subunit beta-4 OS=Mus Gnb4	17.65	6
P29758	Ornithine aminotransferase, mitochondrial OS=Mus muscul Oat	4.1	2
P30677	Guanine nucleotide-binding protein subunit alpha-14 OS=M Gna14	5.92	2
P40237	CD82 antigen OS=Mus musculus OX=10090 GN=Cd82 PE=1 Cd82	12.03	3
P41242	Megakaryocyte-associated tyrosine-protein kinase OS=Mus Matk	2.18	1
P43024	Cytochrome c oxidase subunit 6A1, mitochondrial OS=Mus Cox6a1	14.41	1
P45878	Peptidyl-prolyl cis-trans isomerase FKBP2 OS=Mus muscul Fkbp2	17.86	3
P47753	F-actin-capping protein subunit alpha-1 OS=Mus musculus Capza1	22.38	5

P47758	Signal recognition particle receptor subunit beta OS=Mus m	Srprb	9.67	2
P48024	Eukaryotic translation initiation factor 1 OS=Mus musculus	Eif1	28.32	4
P48722	Heat shock 70 kDa protein 4L OS=Mus musculus OX=10090	Hspa4l	13.13	10
P52623	Uridine-cytidine kinase 1 OS=Mus musculus OX=10090 GN=	Uck1	5.78	1
P53702	Holocytochrome c-type synthase OS=Mus musculus OX=100	Hccs	4.78	1
P53995	Anaphase-promoting complex subunit 1 OS=Mus musculus	Anapc1	13.89	26
P55937	Golgin subfamily A member 3 OS=Mus musculus OX=10090	Golga3	13.79	20
P56135	ATP synthase subunit f, mitochondrial OS=Mus musculus O	Atp5mf	13.64	1
P56183	Ribosomal RNA processing protein 1 homolog A OS=Mus m	Rrp1	20.65	10
P56212	cAMP-regulated phosphoprotein 19 OS=Mus musculus OX=1	Arpp19	23.21	3
P56380	Bis(5'-nucleosyl)-tetraphosphatase [asymmetrical] OS=Mus	Nudt2	10.2	1
P56387	Dynein light chain Tctex-type 3 OS=Mus musculus OX=1009	Dynlt3	8.62	1
P57746	V-type proton ATPase subunit D OS=Mus musculus OX=100	Atp6v1d	11.34	4
P57784	U2 small nuclear ribonucleoprotein A' OS=Mus musculus O	Snrpa1	25.88	7
P58069	Ras GTPase-activating protein 2 OS=Mus musculus OX=100	Rasa2	7.56	6
P58854	Gamma-tubulin complex component 3 OS=Mus musculus OX	Tubgcp3	2.76	2
P58871	182 kDa tankyrase-1-binding protein OS=Mus musculus OX	Tnks1bp1	4.24	6
P59325	Eukaryotic translation initiation factor 5 OS=Mus musculus	Eif5	9.32	3
P59708	Splicing factor 3B subunit 6 OS=Mus musculus OX=10090 G	Sf3b6	6.4	1
P59808	SAM and SH3 domain-containing protein 1 OS=Mus muscul	Sash1	3.17	3
P59999	Actin-related protein 2/3 complex subunit 4 OS=Mus muscu	Arpc4	25.6	5
P60191	Regulating synaptic membrane exocytosis protein 4 OS=M	Rims4	7.43	2
P61082	NEDD8-conjugating enzyme Ubc12 OS=Mus musculus OX=1	Ube2m	12.02	2
P61327	Protein mago nashi homolog OS=Mus musculus OX=10090	Magoh	13.01	2
P61971	Nuclear transport factor 2 OS=Mus musculus OX=10090 GN=	Nutf2	6.3	1
P62274	Small ribosomal subunit protein uS14 OS=Mus musculus OX	Rps29	66.07	5
P62307	Small nuclear ribonucleoprotein F OS=Mus musculus OX=10	Snrpf	15.12	1
P62309	Small nuclear ribonucleoprotein G OS=Mus musculus OX=10	Snrpg	25	2
P62313	U6 snRNA-associated Sm-like protein LSm6 OS=Mus muscu	Lsm6	22.5	2
P62334	26S proteasome regulatory subunit 10B OS=Mus musculus	Psmc6	11.83	4
P62761	Visinin-like protein 1 OS=Mus musculus OX=10090 GN=Vsnl	Vsnl1	35.6	7
P62892	Large ribosomal subunit protein eL39 OS=Mus musculus OX	Rpl39	19.61	2
P63030	Mitochondrial pyruvate carrier 1 OS=Mus musculus OX=10	Mpc1	15.6	2
P63046	Sulfotransferase 4A1 OS=Mus musculus OX=10090 GN=Sult4	Sult4a1	2.82	1
P63054	Calmodulin regulator protein PCP4 OS=Mus musculus OX=1	Pcp4	16.13	1
P63213	Guanine nucleotide-binding protein G(I)/G(S)/G(O) subun	Gng2	29.58	2
P63216	Guanine nucleotide-binding protein G(I)/G(S)/G(O) subun	Gng3	38.67	3
P70397	Homeobox protein DLX-6 OS=Mus musculus OX=10090 GN=Dlx6	Dlx6	6.86	1
P70404	Isocitrate dehydrogenase [NAD] subunit gamma 1, mitochon	Idh3g	10.43	3
P84089	Enhancer of rudimentary homolog OS=Mus musculus OX=10	Erh	18.27	3
P97315	Cysteine and glycine-rich protein 1 OS=Mus musculus OX=1	Csrp1	39.38	6
P97376	Protein FRG1 OS=Mus musculus OX=10090 GN=Frg1 PE=1	SFrg1	24.42	6
P97379	Ras GTPase-activating protein-binding protein 2 OS=Mus	G3bp2	22.41	10
P97390	Vacuolar protein sorting-associated protein 45 OS=Mus mu	Vps45	1.93	1
P97450	ATP synthase-coupling factor 6, mitochondrial OS=Mus mus	Atp5pf	24.07	3
P99027	Large ribosomal subunit protein P2 OS=Mus musculus OX=1	Rplp2	21.74	2
P99028	Cytochrome b-c1 complex subunit 6, mitochondrial OS=Mus	Uqcrh	16.85	2
Q04899	Cyclin-dependent kinase 18 OS=Mus musculus OX=10090 G	Cdk18	14.19	6
Q06185	ATP synthase subunit e, mitochondrial OS=Mus musculus	Atp5me	43.66	4
Q07417	Short-chain specific acyl-CoA dehydrogenase, mitochondri	Acads	2.43	1
Q07646	Mesoderm-specific transcript protein OS=Mus musculus OX	Mest	5.37	2
Q08274	Dystrophin myotonia WD repeat-containing protein OS=M	Dmwd	9.47	6
Q08331	Calretinin OS=Mus musculus OX=10090 GN=Calb2 PE=1 SV=	Calb2	11.81	3
Q0P678	Zinc finger CCCH domain-containing protein 18 OS=Mus m	Zc3h18	1.05	1

Q148V7	RAB11-binding protein RELCH OS=Mus musculus OX=1009CRelch	4.61	5
Q149L6	DnaJ homolog subfamily B member 14 OS=Mus musculus O Dnajb14	10.82	4
Q14AI6	Mitochondrial mRNA pseudouridine synthase Rpusd3 OS=M Rpusd3	11.05	4
Q14CH7	Alanine--tRNA ligase, mitochondrial OS=Mus musculus OX Aars2	1.22	1
Q3LAC4	Phosphatidylinositol 3,4,5-trisphosphate-dependent Rac ex Prex2	1.38	2
Q3TB82	Pleckstrin homology domain-containing family F member 1 Plekhf1	2.51	1
Q3TBD2	Rho GTPase-activating protein 45 OS=Mus musculus OX=10 Arhgap45	2.24	2
Q3THG9	Alanyl-tRNA editing protein Aarsd1 OS=Mus musculus OX= Aarsd1	2.67	1
Q3TJZ6	Protein FAM98A OS=Mus musculus OX=10090 GN=Fam98a Fam98a	4.66	2
Q3TLH4	Protein PRRC2C OS=Mus musculus OX=10090 GN=Prrc2c PEPrrc2c	3.41	9
Q3TLI0	Trafficking protein particle complex subunit 10 OS=Mus m Trappc10	3.5	3
Q3TQF0	F-box only protein 31 OS=Mus musculus OX=10090 GN=Fbx Fbxo31	1.78	1
Q3TXS7	26S proteasome non-ATPase regulatory subunit 1 OS=Mus Psmd1	1.68	2
Q3TY86	Apoptosis-inducing factor 3 OS=Mus musculus OX=10090 G Aifm3	7.27	4
Q3U214	Microtubule-associated serine/threonine-protein kinase 3 Mast3	9.61	11
Q3U2U7	Methyltransferase-like protein 17, mitochondrial OS=Mus m Mettl17	5.86	3
Q3UEB3	Poly(U)-binding-splicing factor PUF60 OS=Mus musculus O Puf60	12.06	7
Q3UGY8	Brefeldin A-inhibited guanine nucleotide-exchange protein Arfgef3	3.36	6
Q3UH68	LIM and calponin homology domains-containing protein 1 Limch1	8.33	7
Q3UHD3	Microtubule-associated tumor suppressor candidate 2 hom Mtus2	1.11	1
Q3UHE1	Membrane-associated phosphatidylinositol transfer protein Pitpm3	12.01	9
Q3UHL1	CaM kinase-like vesicle-associated protein OS=Mus muscu Camkv	23.24	13
Q3UJB9	Enhancer of mRNA-decapping protein 4 OS=Mus musculus Edc4	10.74	13
Q3UKJ7	WD40 repeat-containing protein SMU1 OS=Mus musculus Smu1	7.6	4
Q3ULD5	Methylcrotonoyl-CoA carboxylase beta chain, mitochondri Mccc2	44.58	23
Q3UM45	Protein phosphatase 1 regulatory subunit 7 OS=Mus muscul Ppp1r7	10.25	4
Q3UMT1	Protein phosphatase 1 regulatory subunit 12C OS=Mus musc Ppp1r12c	1.66	1
Q3UQ44	Ras GTPase-activating-like protein IQGAP2 OS=Mus muscu Iqgap2	4.63	8
Q3UV70	[Pyruvate dehydrogenase [acetyl-transferring]]-phosphatas Pdp1	2.79	1
Q3UYC0	Protein phosphatase 1H OS=Mus musculus OX=10090 GN=Pp Ppm1h	6.63	2
Q45VN2	Alpha-defensin 20 OS=Mus musculus OX=10090 GN=Defa20 Defa20	8.42	1
Q4VAA2	Protein CDV3 OS=Mus musculus OX=10090 GN=Cdv3 PE=1 Cdv3	12.81	3
Q4VAE3	Transmembrane protein 65 OS=Mus musculus OX=10090 GN Tmem65	8.97	2
Q504M8	Ras-related protein Rab-26 OS=Mus musculus OX=10090 GN Rab26	4.23	1
Q505D7	Optic atrophy 3 protein homolog OS=Mus musculus OX=100 Opa3	16.76	3
Q505G8	Zinc finger protein 827 OS=Mus musculus OX=10090 GN=Zn Znf827	1.02	1
Q50H33	BTB/POZ domain-containing protein KCTD8 OS=Mus muscu Kctd8	13.03	6
Q52KG4	Zinc finger and BTB domain-containing protein 45 OS=Mus Zbtb45	3.65	2
Q56A08	G-patch domain and KOW motifs-containing protein OS=MU Gpkow	6.15	3
Q571J5	Zinc finger protein 354C OS=Mus musculus OX=10090 GN=Z Znf354c	3.21	2
Q5DTY9	BTB/POZ domain-containing protein KCTD16 OS=Mus musc Kctd16	30.68	16
Q5DU25	IQ motif and SEC7 domain-containing protein 2 OS=Mus mu Iqsec2	7.51	10
Q5F2E7	FMR1-interacting protein NUFIP2 OS=Mus musculus OX=10 Nufip2	12.86	8
Q5FWK3	Rho GTPase-activating protein 1 OS=Mus musculus OX=100 Arhgap1	14.35	7
Q5NCR9	Nuclear speckle splicing regulatory protein 1 OS=Mus musc Nsrp1	1.85	1
Q5PR69	Capping protein-inhibiting regulator of actin dynamics OS Cracd	2.09	2
Q5SFM8	RNA-binding protein 27 OS=Mus musculus OX=10090 GN=R Rbm27	5.38	6
Q5SRX1	TOM1-like protein 2 OS=Mus musculus OX=10090 GN=Tom1Tom1l2	9.07	4
Q5SUF2	Luc7-like protein 3 OS=Mus musculus OX=10090 GN=Luc7l3 Luc7l3	17.59	8
Q5SVL6	Rap1 GTPase-activating protein 2 OS=Mus musculus OX=10 Rap1gap2	5.62	4
Q5U458	DnaJ homolog subfamily C member 11 OS=Mus musculus OX Dnajc11	4.29	2
Q5U4C1	G-protein coupled receptor-associated sorting protein 1 O Gprasp1	3.71	5
Q5U4D9	THO complex subunit 6 homolog OS=Mus musculus OX=100 Thoc6	10.56	3
Q60854	Serpin B6 OS=Mus musculus OX=10090 GN=Serpib6 PE=1 Serpinb6	2.65	1

Q60899	ELAV-like protein 2 OS=Mus musculus OX=10090 GN=Elavl	Elavl2	11.94	4
Q60900	ELAV-like protein 3 OS=Mus musculus OX=10090 GN=Elavl	Elavl3	11.72	4
Q61035	Histidine--tRNA ligase, cytoplasmic OS=Mus musculus OX=	Hars1	6.48	3
Q61120	SHC-transforming protein 3 OS=Mus musculus OX=10090 G	Shc3	14.98	7
Q61151	Serine/threonine-protein phosphatase 2A 56 kDa regulatory	Ppp2r5e	11.35	4
Q61211	Eukaryotic translation initiation factor 2D OS=Mus muscul	Eif2d	2.46	1
Q61316	Heat shock 70 kDa protein 4 OS=Mus musculus OX=10090 G	Hspa4	24.49	18
Q61414	Keratin, type I cytoskeletal 15 OS=Mus musculus OX=10090	Krt15	11.06	7
Q61578	NADPH:adrenodoxin oxidoreductase, mitochondrial OS=Mus	Fdxr	14.57	6
Q61655	ATP-dependent RNA helicase DDX19A OS=Mus musculus O	Ddx19a	3.14	2
Q61703	Inter-alpha-trypsin inhibitor heavy chain H2 OS=Mus muscu	Itih2	2.01	2
Q61704	Inter-alpha-trypsin inhibitor heavy chain H3 OS=Mus muscu	Itih3	1.01	1
Q61792	LIM and SH3 domain protein 1 OS=Mus musculus OX=10090	Lasp1	40.68	12
Q62203	Splicing factor 3A subunit 2 OS=Mus musculus OX=10090 G	Sf3a2	6.53	3
Q62241	U1 small nuclear ribonucleoprotein C OS=Mus musculus OX	Snrpc	13.21	2
Q62267	Cornifin-B OS=Mus musculus OX=10090 GN=Sprr1b PE=2 S	Sprr1b	5.23	1
Q62426	Cystatin-B OS=Mus musculus OX=10090 GN=Cstb PE=1 SV=Cstb		9.18	1
Q62445	Transcription factor Sp4 OS=Mus musculus OX=10090 GN=S	Sp4	3.71	4
Q62446	Peptidyl-prolyl cis-trans isomerase FKBP3 OS=Mus muscul	Fkbp3	41.07	10
Q62511	E3 ubiquitin-protein ligase ZFP91 OS=Mus musculus OX=10	Zfp91	5.07	3
Q640R3	Hepatic and glial cell adhesion molecule OS=Mus musculu	Hepacam	5.26	2
Q64674	Spermidine synthase OS=Mus musculus OX=10090 GN=Srm	Srm	4.3	1
Q68EF6	Brain-enriched guanylate kinase-associated protein OS=M	Begain	4.83	3
Q68FE6	Rho family-interacting cell polarization regulator 1 OS=M	Ripor1	1.96	2
Q68FF0	SANT and BTB domain regulator of class switch recombina	Sanbr	3.34	2
Q68FM6	Protein phosphatase 1 regulatory subunit 29 OS=Mus muscu	Elfn2	1.22	1
Q69Z23	Dynein axonemal heavy chain 17 OS=Mus musculus OX=100	Dnah17	0.16	1
Q69ZZ6	Transmembrane and coiled-coil domains protein 1 OS=Mus	Tmcc1	12.79	7
Q6A0A2	La-related protein 4B OS=Mus musculus OX=10090 GN=Larp	Larp4b	5.4	4
Q6A0A9	Constitutive coactivator of PPAR-gamma-like protein 1	FAM120A	16.55	16
Q6I6G8	E3 ubiquitin-protein ligase HECW2 OS=Mus musculus OX=	Hecw2	10.96	16
Q6IFZ6	Keratin, type II cytoskeletal 1b OS=Mus musculus OX=1009	Krt77	8.74	7
Q6IME9	Keratin, type II cytoskeletal 72 OS=Mus musculus OX=1009	Krt72	3.65	2
Q6IRU2	Tropomyosin alpha-4 chain OS=Mus musculus OX=10090 G	Tpm4	12.1	3
Q6KAR6	Exocyst complex component 3 OS=Mus musculus OX=10090	Exoc3	8.74	7
Q6KAU4	Multivesicular body subunit 12B OS=Mus musculus OX=10	Mvb12b	3.47	1
Q6NSW3	A-kinase anchor protein SPHKAP OS=Mus musculus OX=100	Sphkap	0.59	1
Q6NV83	U2 snRNP-associated SURP motif-containing protein OS=M	U2surp	17.01	18
Q6NVE8	WD repeat-containing protein 44 OS=Mus musculus OX=100	Wdr44	2.3	2
Q6NXI8	CXXC-type zinc finger protein 4 OS=Mus musculus OX=100	Cxxc4	5.56	1
Q6NZL8	Signal peptide, CUB and EGF-like domain-containing prote	Scube1	1.47	1
Q6NZN0	RNA-binding protein 26 OS=Mus musculus OX=10090 GN=R	Rbm26	5.34	4
Q6P1F6	Serine/threonine-protein phosphatase 2A 55 kDa regulatory	Ppp2r2a	17.45	7
Q6P3A8	2-oxoisovalerate dehydrogenase subunit beta, mitochondri	Bckdhd	26.92	7
Q6P542	ATP-binding cassette sub-family F member 1 OS=Mus musc	Abcf1	16.61	13
Q6P5D3	Putative ATP-dependent RNA helicase DHX57 OS=Mus mus	Dhx57	2.31	3
Q6P9K8	Caskin-1 OS=Mus musculus OX=10090 GN=Caskin1 PE=1 SV	Caskin1	27.39	35
Q6PCM2	Integrator complex subunit 6 OS=Mus musculus OX=10090 G	Ints6	8.04	6
Q6PCZ4	Melanoma-associated antigen E1 OS=Mus musculus OX=100	Magee1	0.98	1
Q6PD28	Serine/threonine-protein phosphatase 2A 56 kDa regulatory	Ppp2r5b	9.86	4
Q6PDL0	Cytoplasmic dynein 1 light intermediate chain 2 OS=Mus m	Dync1li2	12.6	5
Q6PEB6	MOB-like protein phocein OS=Mus musculus OX=10090 GN	Mob4	6.22	1
Q6PGF7	Exocyst complex component 8 OS=Mus musculus OX=10090	Exoc8	4.47	3
Q6PHQ8	N-alpha-acetyltransferase 35, NatC auxiliary subunit OS=	Naa35	2.62	2

Q6WVG3	BTB/POZ domain-containing protein KCTD12 OS=Mus musc	Kctd12	11.93	4
Q6ZPL9	ATP-dependent RNA helicase DDX55 OS=Mus musculus OX	Ddx55	4.5	3
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 OS=Mus mu	Cand1	6.1	7
Q71LX4	Talin-2 OS=Mus musculus OX=10090 GN=Tln2 PE=1 SV=3	Tln2	6.36	12
Q78ZA7	Nucleosome assembly protein 1-like 4 OS=Mus musculus O	Nap1l4	10.67	4
Q791T5	Mitochondrial carrier homolog 1 OS=Mus musculus OX=100	Mtch1	7.97	3
Q7TN02	Mediator of RNA polymerase II transcription subunit 26	Med26	4.08	2
Q7TN33	CUGBP Elav-like family member 6 OS=Mus musculus OX=10	Celf6	5.87	3
Q7TNF0	Double C2-like domain-containing protein alpha OS=Mus m	Doc2a	17.28	7
Q7TNG5	Echinoderm microtubule-associated protein-like 2 OS=Mus	Eml2	6.01	4
Q7TPG7	Chemokine-like protein TAFA-2 OS=Mus musculus OX=1009	Tafa2	8.4	1
Q7TPM6	Fibronectin type III and SPRY domain-containing protein	Fsd1	4.84	2
Q7TPV2	E3 ubiquitin-protein ligase DZIP3 OS=Mus musculus OX=10	Dzip3	0.91	1
Q7TPW1	Nexilin OS=Mus musculus OX=10090 GN=Nexn PE=1 SV=3	Nexn	2.31	1
Q7TQF2	F-box only protein 10 OS=Mus musculus OX=10090 GN=Fbx	Fbxo10	1.05	1
Q7TQH0	Ataxin-2-like protein OS=Mus musculus OX=10090 GN=Atxn	Atxn2l	4.29	5
Q7TT28	RNA exonuclease 1 homolog OS=Mus musculus OX=10090 G	Rexo1	1.24	1
Q80T23	Synaptotagmin-like protein 5 OS=Mus musculus OX=10090 G	Syt15	10.09	7
Q80T69	Lysine-specific demethylase 9 OS=Mus musculus OX=10090	Rsb1	3.14	2
Q80TL4	PHD finger protein 24 OS=Mus musculus OX=10090 GN=Phf	Phf24	10.25	4
Q80U12	Small G protein signaling modulator 2 OS=Mus musculus O	Sgsm2	1.99	2
Q80U23	Syntrophin OS=Mus musculus OX=10090 GN=Snph PE=1 SV	Snph	18.59	7
Q80U57	Regulating synaptic membrane exocytosis protein 3 OS=Mus	Rims3	31.27	8
Q80U95	Ubiquitin-protein ligase E3C OS=Mus musculus OX=10090	Ube3c	2.03	2
Q80UM7	Mannosyl-oligosaccharide glucosidase OS=Mus musculus O	Mogs	6.47	5
Q80V91	Probable E3 ubiquitin-protein ligase DTX3 OS=Mus muscul	Dtx3	21.61	7
Q80VP5	Mitochondrial translation release factor in rescue OS=Mus	Mtrfr	17.39	3
Q80W14	Pre-mRNA-processing factor 40 homolog B OS=Mus muscul	Prpf40b	2.53	2
Q80W21	Glutathione S-transferase Mu 7 OS=Mus musculus OX=1009	Gstm7	16.06	4
Q80WS3	rRNA/tRNA 2'-O-methyltransferase fibrillarin-like protein	Fbl1	16.56	4
Q80X66	BTB/POZ domain-containing protein 10 OS=Mus musculus	Btd10	1.68	1
Q80X82	Symplekin OS=Mus musculus OX=10090 GN=Sympk PE=1 S	Sympk	3.26	4
Q80XA6	RalBP1-associated Eps domain-containing protein 2 OS=Mus	Reps2	12.52	6
Q80XC3	USP6 N-terminal-like protein OS=Mus musculus OX=10090	Usp6nl	2.2	1
Q80XC6	Nuclear exosome regulator NRDE2 OS=Mus musculus OX=1	Nrde2	1.88	1
Q80XN0	D-beta-hydroxybutyrate dehydrogenase, mitochondrial OS=	Bdh1	25.36	8
Q80YN3	Breast carcinoma-amplified sequence 1 homolog OS=Mus m	Bcas1	22.43	14
Q80YR5	Scaffold attachment factor B2 OS=Mus musculus OX=10090	Safb2	14.43	13
Q80YS6	Actin filament-associated protein 1 OS=Mus musculus OX=1	Afap1	6.7	5
Q80YT7	Myomegalin OS=Mus musculus OX=10090 GN=Pde4dip PE=1Pde4dip		1.03	2
Q810D6	Glutamate-rich WD repeat-containing protein 1 OS=Mus mu	Grwd1	3.14	1
Q810U5	Coiled-coil domain-containing protein 50 OS=Mus musculu	Ccdc50	3.93	1
Q811L6	Microtubule-associated serine/threonine-protein kinase 4	Mast4	2.6	6
Q8BFR5	Elongation factor Tu, mitochondrial OS=Mus musculus OX=	Tufm	43.81	19
Q8BFX3	BTB/POZ domain-containing protein KCTD3 OS=Mus muscu	Kctd3	2.33	2
Q8BFY7	Protein PIMREG OS=Mus musculus OX=10090 GN=Pimreg P	Pimreg	3.46	1
Q8BFY9	Transportin-1 OS=Mus musculus OX=10090 GN=Tnp1 PE=1	Tnp1	2.56	2
Q8BFZ3	Beta-actin-like protein 2 OS=Mus musculus OX=10090 GN=A	Actb12	14.36	7
Q8BFZ9	Erlin-2 OS=Mus musculus OX=10090 GN=Erlin2 PE=1 SV=1	Erlin2	3.24	1
Q8BG05	Heterogeneous nuclear ribonucleoprotein A3 OS=Mus muscu	Hnrnpa3	18.21	7
Q8BG17	Nucleolar protein 12 OS=Mus musculus OX=10090 GN=Nol12	Nol12	5.53	1
Q8BGB7	Enolase-phosphatase E1 OS=Mus musculus OX=10090 GN=E	Enoph1	4.67	1
Q8BGC0	HIV Tat-specific factor 1 homolog OS=Mus musculus OX=10	Htatsf1	1.19	1
Q8BGS3	Zinc finger protein with KRAB and SCAN domains 1 OS=Mus	Zkscan1	5.88	3

Q8BGT7	Survival of motor neuron-related-splicing factor 30 OS=M	Smndc1	17.65	4
Q8BGY7	Protein FAM210A OS=Mus musculus OX=10090 GN=Fam21C	Fam210a	4.4	1
Q8BGZ4	Cell division cycle protein 23 homolog OS=Mus musculus	Cdc23	24.29	14
Q8BH15	CCR4-NOT transcription complex subunit 10 OS=Mus muscu	Cnot10	1.48	1
Q8BH44	Coronin-2B OS=Mus musculus OX=10090 GN=Coro2b PE=1	Coro2b	21.67	11
Q8BHE5	Bone morphogenetic protein 3 OS=Mus musculus OX=10090	Bmp3	3.21	1
Q8BHF7	CDP-diacylglycerol--glycerol-3-phosphate 3-phosphatidyltr	Pgs1	3.25	2
Q8BHL5	Engulfment and cell motility protein 2 OS=Mus musculus	Elmo2	3.42	3
Q8BHS3	Pre-mRNA-splicing factor RBM22 OS=Mus musculus OX=1	Rbm22	2.62	1
Q8BI22	Centrosomal protein of 128 kDa OS=Mus musculus OX=1009	Cep128	0.64	1
Q8BI72	CDKN2A-interacting protein OS=Mus musculus OX=10090 G	Cdkn2aip	8.7	4
Q8BIQ5	Cleavage stimulation factor subunit 2 OS=Mus musculus OX	Cstf2	5.86	3
Q8BIZ6	Smad nuclear-interacting protein 1 OS=Mus musculus OX=1	Snip1	11.75	4
Q8BJ05	Zinc finger CCH domain-containing protein 14 OS=Mus m	Zc3h14	8.3	6
Q8BK64	Activator of 90 kDa heat shock protein ATPase homolog 1	Ahsa1	8.28	3
Q8BK72	Small ribosomal subunit protein mS27 OS=Mus musculus O	Mrps27	2.65	1
Q8BK75	Elongator complex protein 6 OS=Mus musculus OX=10090 G	Elp6	22.56	5
Q8BKZ9	Pyruvate dehydrogenase protein X component, mitochondri	Pdhx	22.95	10
Q8BM55	Transmembrane protein 214 OS=Mus musculus OX=10090 G	Tmem214	11.35	7
Q8BMA6	Signal recognition particle subunit SRP68 OS=Mus musculu	Srp68	3.2	2
Q8BMF3	NADP-dependent malic enzyme, mitochondrial OS=Mus mus	Me3	3.15	2
Q8BMG7	Rab3 GTPase-activating protein non-catalytic subunit OS=	Rab3gap2	1.61	2
Q8BP47	Asparagine--tRNA ligase, cytoplasmic OS=Mus musculus	NARS1	8.05	4
Q8BPM2	Mitogen-activated protein kinase kinase kinase 5	Map4k5	3.78	3
Q8BQZ4	Ral GTPase-activating protein subunit beta OS=Mus muscul	Ralgapb	5.12	8
Q8BQZ5	Cleavage and polyadenylation specificity factor subunit 4	Cpsf4	21.33	5
Q8BSN5	PHD finger protein 23 OS=Mus musculus OX=10090 GN=Phf	Phf23	2.99	1
Q8BTI8	Serine/arginine repetitive matrix protein 2 OS=Mus muscul	Srrm2	7.88	19
Q8BTU1	Cilia- and flagella-associated protein 20 OS=Mus musculus	Cfap20	44.04	9
Q8BTV1	Tumor suppressor candidate 3 OS=Mus musculus OX=10090	Tusc3	10.66	4
Q8BTV2	Cleavage and polyadenylation specificity factor subunit 7	Cpsf7	20.81	10
Q8BTZ4	Anaphase-promoting complex subunit 5 OS=Mus musculus	Anapc5	27.03	19
Q8BVI4	Dihydropteridine reductase OS=Mus musculus OX=10090 GN	Qdpr	26.56	5
Q8BVQ5	Protein phosphatase methylesterase 1 OS=Mus musculus OX	Ppme1	6.22	2
Q8BVY0	Ribosomal L1 domain-containing protein 1 OS=Mus muscul	Rsl1d1	4.87	2
Q8BW10	RNA-binding protein NOB1 OS=Mus musculus OX=10090 G	Nob1	9.18	4
Q8BW74	Hepatic leukemia factor OS=Mus musculus OX=10090 GN=Hl	Hlf	4.41	1
Q8BZ81	Leucine-rich repeat transmembrane neuronal protein 3 OS=	Lrrtm3	7.22	4
Q8BZH4	Pogo transposable element with ZNF domain OS=Mus muscu	Pogz	0.64	1
Q8BZX4	Splicing regulatory glutamine/lysine-rich protein 1 OS=M	Srek1	5.26	2
Q8C033	Rho guanine nucleotide exchange factor 10 OS=Mus muscul	Arhgef10	6.91	8
Q8C079	Striatin-interacting protein 1 OS=Mus musculus OX=10090 G	Strip1	1.19	1
Q8C0M9	Isoaspartyl peptidase/L-asparaginase OS=Mus musculus OX=	Asrgl1	22.09	6
Q8C163	Nuclease EXOG, mitochondrial OS=Mus musculus OX=1009	Exog	6.79	2
Q8C166	Copine-1 OS=Mus musculus OX=10090 GN=Cpne1 PE=1 SV=Cpne1		2.05	1
Q8C181	Muscleblind-like protein 2 OS=Mus musculus OX=10090 GN	Mbnl2	7.51	3
Q8C1A5	Thimet oligopeptidase OS=Mus musculus OX=10090 GN=Tho	Thop1	4.37	3
Q8C3X4	Translation factor Guf1, mitochondrial OS=Mus musculus	Guf1	4.61	3
Q8C460	ERI1 exoribonuclease 3 OS=Mus musculus OX=10090 GN=Er	Eri3	8.01	3
Q8C570	mRNA export factor OS=Mus musculus OX=10090 GN=Rae1	Rae1	9.51	3
Q8C5H8	NAD kinase 2, mitochondrial OS=Mus musculus OX=10090	Nadk2	2.65	1
Q8C5Q4	G-rich sequence factor 1 OS=Mus musculus OX=10090 GN=G	Grsf1	2.3	1
Q8C6B9	Active regulator of SIRT1 OS=Mus musculus OX=10090 GN=	Rps19bp1	9.79	1
Q8C761	Cytoplasmic dynein 2 intermediate chain 1 OS=Mus muscul	Dync2i1	2.4	2

Q8C7X2	ER membrane protein complex subunit 1 OS=Mus musculus	Emc1	2.11	2
Q8CAK3	Shiftless antiviral inhibitor of ribosomal frameshifting pr	Shfl	7.59	2
Q8CAY6	Acetyl-CoA acetyltransferase, cytosolic OS=Mus musculus	Acat2	4.53	2
Q8CB44	GRAM domain-containing protein 4 OS=Mus musculus OX=	Gramd4	2.05	1
Q8CBE3	WD repeat-containing protein 37 OS=Mus musculus OX=100	Wdr37	21.77	9
Q8CBY8	Dynactin subunit 4 OS=Mus musculus OX=10090 GN=Dctn4	Dctn4	17.34	7
Q8CEC5	NF-kappa-B inhibitor-interacting Ras-like protein 1 OS=M	Nkiras1	16.67	3
Q8CES0	N-alpha-acetyltransferase 30 OS=Mus musculus OX=10090	Naa30	5.77	2
Q8CFI7	DNA-directed RNA polymerase II subunit RPB2 OS=Mus mu	Polr2b	1.7	2
Q8CGC4	Protein LSM14 homolog B OS=Mus musculus OX=10090 GN	Lsm14b	8.05	3
Q8CGZ0	Calcium homeostasis endoplasmic reticulum protein OS=M	Cherp	14.21	12
Q8CH25	SAFB-like transcription modulator OS=Mus musculus OX=1	Sltn	22.79	25
Q8CHP5	Partner of Y14 and mago OS=Mus musculus OX=10090 GN=	Pym1	15.76	3
Q8CI08	SLAIN motif-containing protein 2 OS=Mus musculus OX=100	Slain2	1.89	1
Q8CI43	Myosin light chain 6B OS=Mus musculus OX=10090 GN=Myl	Myl6b	21.74	4
Q8CI94	Glycogen phosphorylase, brain form OS=Mus musculus OX=	Pygb	19.81	17
Q8JZM0	Dimethyladenosine transferase 1, mitochondrial OS=Mus m	Tfb1m	17.68	7
Q8JZP2	Synapsin-3 OS=Mus musculus OX=10090 GN=Syn3 PE=1 SV	Syn3	6.74	4
Q8JZW4	Copine-5 OS=Mus musculus OX=10090 GN=Cpne5 PE=1 SV=	Cpne5	1.85	1
Q8JZX4	Splicing factor 45 OS=Mus musculus OX=10090 GN=Rbm17	Rbm17	12.1	5
Q8K0T0	Reticulon-1 OS=Mus musculus OX=10090 GN=Rtn1 PE=1 SV	Rtn1	9.23	7
Q8K1Z0	Ubiquinone biosynthesis protein COQ9, mitochondrial OS=	Coq9	2.24	1
Q8K215	LYR motif-containing protein 4 OS=Mus musculus OX=1009	Lym4	37.36	3
Q8K298	Anillin OS=Mus musculus OX=10090 GN=Anln PE=1 SV=2	Anln	9.1	10
Q8K2A1	PTB domain-containing engulfment adapter protein 1 OS=M	Gulp1	9.54	3
Q8K2F0	Bromodomain-containing protein 3 OS=Mus musculus OX=1	Brd3	6.89	5
Q8K2H2	Deubiquitinase OTUD6B OS=Mus musculus OX=10090 GN=	COtud6b	7.14	2
Q8K2H6	Anaphase-promoting complex subunit 10 OS=Mus musculus	Anapc10	17.84	3
Q8K2L8	Trafficking protein particle complex subunit 12 OS=Mus m	Trappc12	1.38	1
Q8K327	Chromosome alignment-maintaining phosphoprotein 1 OS=	Champ1	3.74	3
Q8K354	Carbonyl reductase [NADPH] 3 OS=Mus musculus OX=1009	Cbr3	18.05	5
Q8K363	ATP-dependent RNA helicase DDX18 OS=Mus musculus OX	Ddx18	11.36	7
Q8K4P0	pre-mRNA 3' end processing protein WDR33 OS=Mus muscu	Wdr33	13.38	17
Q8K4Z5	Splicing factor 3A subunit 1 OS=Mus musculus OX=10090 G	Sf3a1	9.1	7
Q8K561	Otoancorin OS=Mus musculus OX=10090 GN=Otoa PE=2 SV=	Otoa	0.97	1
Q8QZR5	Alanine aminotransferase 1 OS=Mus musculus OX=10090 GN	Gpt	1.61	1
Q8QZT2	Centriole, cilia and spindle-associated protein OS=Mus mu	Ccsap	36.51	8
Q8R016	Bleomycin hydrolase OS=Mus musculus OX=10090 GN=Blmh	Blmh	7.47	3
Q8R066	Complement C1q tumor necrosis factor-related protein 4 O	C1qtnf4	3.68	1
Q8R0A0	General transcription factor IIF subunit 2 OS=Mus musculu	Gtf2f2	14.86	4
Q8R2R6	Mitochondrial ribosome-associated GTPase 1 OS=Mus musc	Mtg1	10.74	3
Q8R349	Cell division cycle protein 16 homolog OS=Mus musculus	Cdc16	20.32	14
Q8R3V5	Endophilin-B2 OS=Mus musculus OX=10090 GN=Sh3glb2 PE	Sh3glb2	18	7
Q8R4H2	Rho guanine nucleotide exchange factor 12 OS=Mus muscul	Arhgef12	3.11	5
Q8R4U7	Leucine zipper protein 1 OS=Mus musculus OX=10090 GN=L	Luzp1	5.06	5
Q8R554	OTU domain-containing protein 7A OS=Mus musculus OX=1	Otud7a	8.53	6
Q8VBV7	COP9 signalosome complex subunit 8 OS=Mus musculus OX	Cops8	13.88	2
Q8VCC9	Spondin-1 OS=Mus musculus OX=10090 GN=Spon1 PE=1 SV	Spon1	13.75	11
Q8VCD6	Receptor expression-enhancing protein 2 OS=Mus musculus	Reep2	14.57	3
Q8VCM8	BOS complex subunit NCLN OS=Mus musculus OX=10090 G	Ncln	2.49	1
Q8VCT3	Aminopeptidase B OS=Mus musculus OX=10090 GN=Rnpep	Rnpep	2	1
Q8VDM6	Heterogeneous nuclear ribonucleoprotein U-like protein 1	Hnmpul1	6.17	5
Q8VDP6	CDP-diacylglycerol--inositol 3-phosphatidyltransferase OS	Cdipt	4.69	1
Q8VDU5	SNF-related serine/threonine-protein kinase OS=Mus muscu	Snrk	2.81	2

Q8VE97	Serine/arginine-rich splicing factor 4 OS=Mus musculus OX	Srsf4	11.25	6
Q8VEH3	ADP-ribosylation factor-like protein 8A OS=Mus musculus	Arl8a	36.56	5
Q8VEM8	Solute carrier family 25 member 3 OS=Mus musculus OX=10	Slc25a3	20.45	10
Q91V81	RNA-binding protein 42 OS=Mus musculus OX=10090 GN=R	Rbm42	6.9	3
Q91VM3	WD repeat domain phosphoinositide-interacting protein 4	Wdr45	16.11	5
Q91VM9	Inorganic pyrophosphatase 2, mitochondrial OS=Mus muscu	Ppa2	19.7	6
Q91VN4	MICOS complex subunit Mic25 OS=Mus musculus OX=1009	Chchd6	12.45	3
Q91VR2	ATP synthase subunit gamma, mitochondrial OS=Mus muscu	Atp5f1c	36.58	13
Q91W18	Tudor domain-containing protein 3 OS=Mus musculus OX=1	Tdrd3	7.13	5
Q91W39	Nuclear receptor coactivator 5 OS=Mus musculus OX=10090	Ncoa5	18.83	11
Q91W50	Cold shock domain-containing protein E1 OS=Mus musculu	Csde1	16.67	12
Q91W96	Anaphase-promoting complex subunit 4 OS=Mus musculus	Anapc4	22.8	15
Q91WA3	Histone deacetylase 11 OS=Mus musculus OX=10090 GN=Hd	Hdac11	16.43	5
Q91WB4	Pleckstrin homology domain-containing family F member 2	Plekhf2	25.3	5
Q91WE9	Chemokine-like protein TAFA-5 OS=Mus musculus OX=1009	Tafa5	8.33	1
Q91X97	Neurocalcin-delta OS=Mus musculus OX=10090 GN=Ncald P	Ncald	25.39	5
Q91YE7	RNA-binding protein 5 OS=Mus musculus OX=10090 GN=Rb	Rbm5	3.19	3
Q91YJ5	Translation initiation factor IF-2, mitochondrial OS=Mus m	Mtif2	1.38	1
Q91YK0	Leucine-rich repeat-containing protein 49 OS=Mus musculu	Lrrc49	2.62	2
Q91YL3	Uridine-cytidine kinase-like 1 OS=Mus musculus OX=10090	Uckl1	1.46	1
Q91YR7	Pre-mRNA-processing factor 6 OS=Mus musculus OX=10090	Prpf6	10.63	10
Q91Z53	Glyoxylate reductase/hydroxypyruvate reductase OS=Mus m	Grhpr	13.41	4
Q920D3	Mediator of RNA polymerase II transcription subunit 28	Med28	7.3	1
Q920M7	Synaptotagmin-17 OS=Mus musculus OX=10090 GN=Syt17 P	Syt17	20.21	10
Q920P5	Adenylate kinase isoenzyme 5 OS=Mus musculus OX=10090	Ak5	8.54	4
Q921F4	Heterogeneous nuclear ribonucleoprotein L-like OS=Mus mu	Hnrnp1l	10.15	5
Q921G8	Gamma-tubulin complex component 2 OS=Mus musculus OX	Tubgcp2	0.99	1
Q921N6	Probable ATP-dependent RNA helicase DDX27 OS=Mus mus	Ddx27	4.61	3
Q922B2	Aspartate--tRNA ligase, cytoplasmic OS=Mus musculus OX=	Dars1	29.14	13
Q922D4	Serine/threonine-protein phosphatase 6 regulatory subunit	Ppp6r3	2.73	2
Q922E4	Ethanolamine-phosphate cytidyltransferase OS=Mus musc	Pcyt2	2.97	1
Q922F4	Tubulin beta-6 chain OS=Mus musculus OX=10090 GN=Tubb	Tubb6	27.96	13
Q922H2	[Pyruvate dehydrogenase (acetyl-transferring)] kinase isoz	Pdk3	4.82	2
Q922J6	Tetraspanin-2 OS=Mus musculus OX=10090 GN=Tspan2 PE=	Tspan2	5.43	1
Q922Q1	Mitochondrial amidoxime reducing component 2 OS=Mus mu	Mtarc2	13.91	5
Q922Q4	Pyrroline-5-carboxylate reductase 2 OS=Mus musculus OX=	Pycr2	17.5	5
Q922Q9	Chitinase domain-containing protein 1 OS=Mus musculus O	Chid1	9.67	4
Q922U1	U4/U6 small nuclear ribonucleoprotein Prp3 OS=Mus muscu	Prpf3	4.1	3
Q923D2	Flavin reductase (NADPH) OS=Mus musculus OX=10090 GN=Blvrb		9.22	2
Q923D4	Splicing factor 3B subunit 5 OS=Mus musculus OX=10090 G	Sf3b5	40.7	3
Q923G2	DNA-directed RNA polymerases I, II, and III subunit RPA	Polr2h	8.67	1
Q923Z3	Protein MTO1 homolog, mitochondrial OS=Mus musculus O	Mto1	1.64	1
Q925N0	Sideroflexin-5 OS=Mus musculus OX=10090 GN=Sfxn5 PE=1	Sfxn5	11.7	4
Q99JP0	Mitogen-activated protein kinase kinase kinase kinase 3	Map4k3	15.66	13
Q99JX4	Eukaryotic translation initiation factor 3 subunit M OS=M	Eif3m	5.35	2
Q99K46	Ubiquitin carboxyl-terminal hydrolase 11 OS=Mus musculu	Usp11	1.09	1
Q99K51	Plastin-3 OS=Mus musculus OX=10090 GN=Pls3 PE=1 SV=3	Pls3	6.19	4
Q99K85	Phosphoserine aminotransferase OS=Mus musculus OX=1009	Psat1	25.14	8
Q99KN1	Arrestin domain-containing protein 1 OS=Mus musculus OX	Arrdc1	3.69	1
Q99KP3	Lambda-crystallin homolog OS=Mus musculus OX=10090 GN	Cryl1	3.45	1
Q99L47	Hsc70-interacting protein OS=Mus musculus OX=10090 GN=	SSt13	6.74	2
Q99L85	Elongator complex protein 5 OS=Mus musculus OX=10090 G	Elp5	12.67	4
Q99LC5	Electron transfer flavoprotein subunit alpha, mitochondria	Etfa	21.92	6
Q99LD4	COP9 signalosome complex subunit 1 OS=Mus musculus OX	Gps1	13.16	6

Q99LP6	GrpE protein homolog 1, mitochondrial OS=Mus musculus O	Grpel1	5.07	1
Q99LT0	Protein dpy-30 homolog OS=Mus musculus OX=10090 GN=D	Dpy30	11.11	2
Q99M28	RNA-binding protein with serine-rich domain 1 OS=Mus mu	Rnps1	5.57	2
Q99MB7	RING finger protein 141 OS=Mus musculus OX=10090 GN=R	Rnf141	6.09	1
Q99MN9	Propionyl-CoA carboxylase beta chain, mitochondrial OS=	Pccb	2.03	1
Q99MR1	GRB10-interacting GYF protein 1 OS=Mus musculus OX=10	Gigyf1	2.59	2
Q99PJ0	Neurotrimin OS=Mus musculus OX=10090 GN=Ntm PE=1 SV	Ntm	11.63	4
Q9CPV2	Anaphase-promoting complex subunit 16 OS=Mus musculus	Anapc16	10.91	1
Q9CPW4	Actin-related protein 2/3 complex subunit 5 OS=Mus muscu	Arpc5	16.56	2
Q9CPX9	Anaphase-promoting complex subunit 11 OS=Mus musculus	Anapc11	13.1	1
Q9CQ62	2,4-dienoyl-CoA reductase [(3E)-enoyl-CoA-producing], mi	Decr1	6.87	2
Q9CQ75	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex sub	Ndufa2	14.14	1
Q9CQI6	Coactosin-like protein OS=Mus musculus OX=10090 GN=Cotl	Cotl1	5.63	1
Q9CQI7	U2 small nuclear ribonucleoprotein B" OS=Mus musculus O	Snrpb2	16.44	3
Q9CQN1	Heat shock protein 75 kDa, mitochondrial OS=Mus musculu	Trap1	5.24	3
Q9CQQ7	ATP synthase F(0) complex subunit B1, mitochondrial OS=	Atp5pb	32.42	10
Q9CQS8	Protein transport protein Sec61 subunit beta OS=Mus musc	Sec61b	21.88	2
Q9CR26	Vacuolar protein sorting-associated protein VTA1 homolog	Vta1	11.33	4
Q9CR39	WD repeat domain phosphoinositide-interacting protein 3	Wdr45b	4.07	1
Q9CR61	NADH dehydrogenase [ubiquinone] 1 beta subcomplex subu	Ndufb7	6.57	1
Q9CR86	Calcium-regulated heat stable protein 1 OS=Mus musculus	Carhsp1	36.49	5
Q9CRB6	Tubulin polymerization-promoting protein family member	Tppp3	13.07	2
Q9CWT6	Probable ATP-dependent RNA helicase DDX28 OS=Mus mus	Ddx28	1.67	1
Q9CWW6	Peptidyl-prolyl cis-trans isomerase NIMA-interacting 4 OS	Pin4	25.19	3
Q9CWX4	Pseudouridylate synthase RPUSD4, mitochondrial OS=Mus	Rpusd4	30.24	12
Q9CWX9	Probable ATP-dependent RNA helicase DDX47 OS=Mus mus	Ddx47	18.46	8
Q9CWZ7	Gamma-soluble NSF attachment protein OS=Mus musculus	Napg	25.64	8
Q9CXI0	2-methoxy-6-polyprenyl-1,4-benzoquinol methylase, mitoc	Coq5	3.06	1
Q9CXU0	Mediator of RNA polymerase II transcription subunit 10	Med10	7.41	1
Q9CY64	Biliverdin reductase A OS=Mus musculus OX=10090 GN=Blv	Blvra	8.47	2
Q9CYG7	Mitochondrial import receptor subunit TOM34 OS=Mus mu	Tomm34	48.87	17
Q9CYH6	Ribosome biogenesis regulatory protein homolog OS=Mus m	Rrs1	2.19	1
Q9CYI4	Putative RNA-binding protein Luc7-like 1 OS=Mus musculu	Luc7l	30.19	13
Q9CYR0	Single-stranded DNA-binding protein, mitochondrial OS=M	Ssbp1	15.79	2
Q9CYR6	Phosphoacetylglucosamine mutase OS=Mus musculus OX=1	Pgm3	1.85	1
Q9CYT6	Adenylyl cyclase-associated protein 2 OS=Mus musculus O	Cap2	24.16	10
Q9CZ04	COP9 signalosome complex subunit 7a OS=Mus musculus O	Cops7a	8	2
Q9CZ30	Obg-like ATPase 1 OS=Mus musculus OX=10090 GN=Ola1 P	Ola1	7.58	3
Q9CZ62	Centrosomal protein of 97 kDa OS=Mus musculus OX=10090	Cep97	7.36	6
Q9CZU6	Citrate synthase, mitochondrial OS=Mus musculus OX=1009	Cs	15.09	7
Q9D023	Mitochondrial pyruvate carrier 2 OS=Mus musculus OX=10	Mpc2	31.5	4
Q9D051	Pyruvate dehydrogenase E1 component subunit beta, mitoc	Pdhb	44.01	14
Q9D0B0	Serine/arginine-rich splicing factor 9 OS=Mus musculus OX	Srsf9	12.61	3
Q9D0D4	Probable dimethyladenosine transferase OS=Mus musculus	Dimt1	27.48	9
Q9D0D5	General transcription factor IIE subunit 1 OS=Mus musculu	Gtf2e1	11.59	4
Q9D0F9	Phosphoglucosmutase-1 OS=Mus musculus OX=10090 GN=Pg	Pgm1	6.58	3
Q9D115	Zinc finger protein 706 OS=Mus musculus OX=10090 GN=Zn	Znf706	30.26	2
Q9D1C8	Vacuolar protein sorting-associated protein 28 homolog O	Vps28	18.55	4
Q9D1H7	Golgi to ER traffic protein 4 homolog OS=Mus musculus O	Get4	3.67	1
Q9D1J3	SAP domain-containing ribonucleoprotein OS=Mus musculu	Sarnp	25.24	5
Q9D1K2	V-type proton ATPase subunit F OS=Mus musculus OX=1009	Atp6v1f	41.18	5
Q9D2P8	Myelin-associated oligodendrocyte basic protein OS=Mus	Mobp	22.35	5
Q9D3D9	ATP synthase subunit delta, mitochondrial OS=Mus muscul	Atp5f1d	13.69	2
Q9D554	Splicing factor 3A subunit 3 OS=Mus musculus OX=10090 G	Sf3a3	10.18	6

Q9D5V5	Cullin-5 OS=Mus musculus OX=10090 GN=Cul5 PE=1 SV=3	Cul5	7.31	5
Q9D662	Protein transport protein Sec23B OS=Mus musculus OX=100	Sec23b	1.83	1
Q9D6N5	Dr1-associated corepressor OS=Mus musculus OX=10090 GN	Drap1	5.37	1
Q9D6Z1	Nucleolar protein 56 OS=Mus musculus OX=10090 GN=Nop5	Nop56	6.55	3
Q9D7H3	RNA 3'-terminal phosphate cyclase OS=Mus musculus OX=1	RtcA	5.46	2
Q9D7N9	Adipocyte plasma membrane-associated protein OS=Mus mu	Apmap	4.82	2
Q9D824	Pre-mRNA 3'-end-processing factor FIP1 OS=Mus musculus	Fip1l1	11.7	6
Q9D868	Peptidyl-prolyl cis-trans isomerase H OS=Mus musculus OX	Ppih	4.79	1
Q9D880	Mitochondrial import inner membrane translocase subunit	Timm50	5.38	2
Q9D8W5	26S proteasome non-ATPase regulatory subunit 12 OS=Mus	Psmd12	8.11	4
Q9DAK9	14 kDa phosphohistidine phosphatase OS=Mus musculus OX	Phpt1	19.35	2
Q9DAW9	Calponin-3 OS=Mus musculus OX=10090 GN=Cnn3 PE=1 SV	Cnn3	6.97	2
Q9DB15	Large ribosomal subunit protein bL12m OS=Mus musculus	Mrpl12	5.47	1
Q9DB20	ATP synthase subunit O, mitochondrial OS=Mus musculus	Atp5po	63.38	13
Q9DB41	Mitochondrial glutamate carrier 2 OS=Mus musculus OX=10	Slc25a18	25.94	8
Q9DBC0	Protein adenyllyltransferase SelO, mitochondrial OS=Mus m	Selenoo	1.65	1
Q9DBE8	Alpha-1,3/1,6-mannosyltransferase ALG2 OS=Mus musculus	Alg2	16.63	7
Q9DBG6	Dolichyl-diphosphooligosaccharide--protein glycosyltransf	Rpn2	2.69	2
Q9DBS9	Oxysterol-binding protein-related protein 3 OS=Mus muscu	Osbp13	18.01	13
Q9DBU6	Serine/Arginine-related protein 53 OS=Mus musculus OX=10	Rsrc1	3.59	1
Q9DC16	Endoplasmic reticulum-Golgi intermediate compartment pro	Ergic1	9.66	3
Q9DC63	F-box only protein 3 OS=Mus musculus OX=10090 GN=Fbxo	Fbxo3	1.88	1
Q9DC69	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subu	Ndufa9	16.98	6
Q9DC70	NADH dehydrogenase [ubiquinone] iron-sulfur protein 7, m	Ndufs7	8.48	2
Q9DCC4	Pyrroline-5-carboxylate reductase 3 OS=Mus musculus OX=	Pycr3	14.6	3
Q9DCD0	6-phosphogluconate dehydrogenase, decarboxylating OS=M	Pgd	1.45	1
Q9DCJ5	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex sub	Ndufa8	6.98	1
Q9DCJ7	Small ribosomal subunit protein mS38 OS=Mus musculus O	Aurkaip1	5	1
Q9DCL9	Bifunctional phosphoribosylaminoimidazole carboxylase/pho	Paics	5.18	2
Q9DCT1	1,5-anhydro-D-fructose reductase OS=Mus musculus OX=10	Akr1e2	2.66	1
Q9DCX2	ATP synthase subunit d, mitochondrial OS=Mus musculus O	Atp5pd	34.16	6
Q9DD18	D-aminoacyl-tRNA deacylase 1 OS=Mus musculus OX=1009	Dtd1	18.18	4
Q9EP89	Serine beta-lactamase-like protein LACTB, mitochondrial	Lactb	23.05	16
Q9EPJ9	ADP-ribosylation factor GTPase-activating protein 1 OS=M	Arfgap1	5.8	2
Q9EPK7	Exportin-7 OS=Mus musculus OX=10090 GN=Xpo7 PE=1 SV	Xpo7	1.75	2
Q9EQF6	Dihydropyrimidinase-related protein 5 OS=Mus musculus O	Dpysl5	11.52	6
Q9EQK5	Major vault protein OS=Mus musculus OX=10090 GN=Mvp P	Mvp	6.62	5
Q9ER58	Testican-2 OS=Mus musculus OX=10090 GN=Spock2 PE=1 S	Spock2	6.86	3
Q9ER72	Cysteine--tRNA ligase, cytoplasmic OS=Mus musculus OX=1	Cars1	7.82	6
Q9ER88	Small ribosomal subunit protein mS29 OS=Mus musculus O	Dap3	12.53	5
Q9ERI6	Retinol dehydrogenase 14 OS=Mus musculus OX=10090 GN=	Rdh14	7.49	2
Q9ERK4	Exportin-2 OS=Mus musculus OX=10090 GN=Cse1l PE=1 SV	Cse1l	0.93	1
Q9ERU3	Zinc finger protein 22 OS=Mus musculus OX=10090 GN=Znf	Znf22	5.06	1
Q9ESJ4	NCK-interacting protein with SH3 domain OS=Mus musculu	Nckipsd	12.89	9
Q9ESX4	Zinc finger CCHC domain-containing protein 17 OS=Mus m	Zcchc17	23.65	5
Q9JIK9	Small ribosomal subunit protein mS34 OS=Mus musculus O	Mrps34	15.14	3
Q9JIX0	Transcription and mRNA export factor ENY2 OS=Mus musc	Eny2	25.74	2
Q9JJ89	Coiled-coil domain-containing protein 86 OS=Mus musculu	Ccdc86	4.46	2
Q9JJA4	Ribosome biogenesis protein WDR12 OS=Mus musculus OX	Wdr12	3.55	1
Q9JJK2	LanC-like protein 2 OS=Mus musculus OX=10090 GN=Lancl2	Lancl2	17.33	7
Q9JKD3	Secretory carrier-associated membrane protein 5 OS=Mus	Scamp5	4.68	1
Q9JL25	Regulator of G-protein signaling 1 OS=Mus musculus OX=1	Rgs1	5.26	1
Q9JL62	Glycolipid transfer protein OS=Mus musculus OX=10090 GN	Gltp	5.74	1
Q9JLB0	Protein PALS2 OS=Mus musculus OX=10090 GN=Pals2 PE=1	Pals2	17.54	10

Q9JLM4	Zinc finger MYM-type protein 3 OS=Mus musculus OX=10	Zmym3	1.97	2
Q9JM76	Actin-related protein 2/3 complex subunit 3 OS=Mus muscu	Arpc3	25.28	5
Q9JMC3	DnaJ homolog subfamily A member 4 OS=Mus musculus OX	Dnaja4	6.3	2
Q9JMG1	Endothelial differentiation-related factor 1 OS=Mus muscu	Edf1	25	5
Q9QUH0	Glutaredoxin-1 OS=Mus musculus OX=10090 GN=Glrx PE=1	Glrx	12.15	1
Q9QUP5	Hyaluronan and proteoglycan link protein 1 OS=Mus muscu	Hapln1	22.47	8
Q9QUR6	Prolyl endopeptidase OS=Mus musculus OX=10090 GN=Prep	Prep	1.13	1
Q9QXA5	U6 snRNA-associated Sm-like protein LSm4 OS=Mus muscu	Lsm4	26.28	4
Q9QXB9	Developmentally-regulated GTP-binding protein 2 OS=Mus	Drg2	18.68	6
Q9QYI3	DnaJ homolog subfamily C member 7 OS=Mus musculus OX=	Dnajc7	4.66	2
Q9QYJ0	DnaJ homolog subfamily A member 2 OS=Mus musculus OX	Dnaja2	18.93	8
Q9QZB9	Dynactin subunit 5 OS=Mus musculus OX=10090 GN=Dctn5	Dctn5	6.04	1
Q9R020	Zinc finger Ran-binding domain-containing protein 2 OS=M	Zranb2	15.76	5
Q9R0I7	YLP motif-containing protein 1 OS=Mus musculus OX=1009	Ylpm1	2.16	3
Q9R0P3	S-formylglutathione hydrolase OS=Mus musculus OX=10090	Esd	6.74	2
Q9R0Q4	Mortality factor 4-like protein 2 OS=Mus musculus OX=100	Morf4l2	13.89	4
Q9R112	Sulfide:quinone oxidoreductase, mitochondrial OS=Mus mus	Sqor	17.33	6
Q9R1P3	Proteasome subunit beta type-2 OS=Mus musculus OX=1009	Psmb2	12.44	2
Q9R1T2	SUMO-activating enzyme subunit 1 OS=Mus musculus OX=1	Sae1	3.14	1
Q9WTT4	V-type proton ATPase subunit G 2 OS=Mus musculus OX=10	Atp6v1g2	51.69	5
Q9WUB4	Dynactin subunit 6 OS=Mus musculus OX=10090 GN=Dctn6	Dctn6	10	2
Q9WUK2	Eukaryotic translation initiation factor 4H OS=Mus muscul	Eif4h	5.24	1
Q9WUM5	Succinate--CoA ligase [ADP/GDP-forming] subunit alpha, m	Suclg1	36.42	13
Q9WV95	Pleckstrin homology-like domain family A member 3 OS=M	Phlda3	22.4	3
Q9WV98	Mitochondrial import inner membrane translocase subunit	Timm9	8.99	1
Q9WVA3	Mitotic checkpoint protein BUB3 OS=Mus musculus OX=10	Bub3	11.66	3
Q9WVJ2	26S proteasome non-ATPase regulatory subunit 13 OS=Mus	Psm13	14.1	6
Q9Z0N1	Eukaryotic translation initiation factor 2 subunit 3, X-lin	Eif2s3x	19.28	9
Q9Z0S1	3'(2'),5'-bisphosphate nucleotidase 1 OS=Mus musculus OX	Bpnt1	25.97	6
Q9Z0Y1	Dynactin subunit 3 OS=Mus musculus OX=10090 GN=Dctn3	Dctn3	27.96	6
Q9Z1Q9	Valine--tRNA ligase OS=Mus musculus OX=10090 GN=Vars1	Vars1	13.7	15
Q9Z210	Peroxisomal membrane protein 11B OS=Mus musculus OX=1	Pex11b	7.34	2
Q9Z2H2	Regulator of G-protein signaling 6 OS=Mus musculus OX=1	Rgs6	12.71	6
Q9Z2I9	Succinate--CoA ligase [ADP-forming] subunit beta, mitoch	Sucla2	29.81	16
Q9Z2X1	Heterogeneous nuclear ribonucleoprotein F OS=Mus muscul	Hnrnpf	7.47	3
Q9Z321	DNA topoisomerase 3-beta-1 OS=Mus musculus OX=10090	Top3b	3.13	2
A2A699	Protein FAM171A2 OS=Mus musculus OX=10090 GN=Fam17	Fam171a2	22.75	16
A2A6A1	G patch domain-containing protein 8 OS=Mus musculus OX=	Gpatch8	2.59	3
A2A791	Zinc finger MYM-type protein 4 OS=Mus musculus OX=10	Zmym4	0.71	1
A2A8Z1	Oxysterol-binding protein-related protein 9 OS=Mus muscu	Osbpl9	1.49	1
A2ADA5	tRNA pseudouridine synthase-like 1 OS=Mus musculus OX=1	Pusl1	3.78	1
A2AG50	MAP7 domain-containing protein 2 OS=Mus musculus OX=1	Map7d2	28.55	26
A2AJA9	Apical junction component 1 homolog OS=Mus musculus O	Ajm1	13.66	11
A2AJI0	MAP7 domain-containing protein 1 OS=Mus musculus OX=1	Map7d1	29.79	25
A2AJT4	Arginine/serine-rich protein PNISR OS=Mus musculus OX=1	Pnizr	1.49	1
A2AKB9	DDB1- and CUL4-associated factor 10 OS=Mus musculus O	Dcaf10	2.3	1
A6H5Z3	Exocyst complex component 6B OS=Mus musculus OX=1009	Exoc6b	4.32	3
A6H603	NACHT domain- and WD repeat-containing protein 1 OS=M	Nwd1	1.34	2
B1AR13	CDGSH iron-sulfur domain-containing protein 3, mitochond	Cisd3	13.14	2
B2RY56	RNA-binding protein 25 OS=Mus musculus OX=10090 GN=R	Rbm25	7.52	5
C0HKD8	Microfibrillar-associated protein 1A OS=Mus musculus OX	Mfap1a	6.61	3
D3YZI9	PiggyBac transposable element-derived protein 5 OS=Mus	Pgbd5	26.77	15
E9PV86	Multiple C2 and transmembrane domain-containing protein	Mctp1	6.94	6
E9PYL2	Proline-rich protein 12 OS=Mus musculus OX=10090 GN=Prr	Prr12	1.33	3

F6W8I0	YjeF N-terminal domain-containing protein 3 OS=Mus musc	Yjefn3	3.98	1
G5E8B9	Zinc finger and BTB domain-containing protein 11 OS=Mus	Zbtb11	3.05	3
O35098	Dihydropyrimidinase-related protein 4 OS=Mus musculus O	Dpysl4	20.63	10
O35127	Protein C10 OS=Mus musculus OX=10090 GN=Grcc10 PE=1	Grcc10	11.9	1
O35239	Tyrosine-protein phosphatase non-receptor type 9 OS=Mus	Ptpn9	9.44	5
O35680	Small ribosomal subunit protein uS12m OS=Mus musculus	Mrps12	22.3	4
O35682	Myeloid-associated differentiation marker OS=Mus muscul	Myadm	2.5	1
O54734	Dolichyl-diphosphooligosaccharide--protein glycosyltransf	Ddost	3.17	1
O54818	Tumor protein D53 OS=Mus musculus OX=10090 GN=Tpd521	Tpd521	12.25	2
O55125	Protein NipSnap homolog 1 OS=Mus musculus OX=10090 GN	Nipsnap1	17.25	6
O55126	Protein NipSnap homolog 2 OS=Mus musculus OX=10090 GN	Nipsnap2	25.98	8
O70554	Small proline-rich protein 2B OS=Mus musculus OX=10090	Sprr2b	9.18	1
O88545	COP9 signalosome complex subunit 6 OS=Mus musculus OX	Cops6	8.02	3
O88745	Scrapie-responsive protein 1 OS=Mus musculus OX=10090 G	Scrg1	33.67	3
O89114	DnaJ homolog subfamily B member 5 OS=Mus musculus OX	Dnajb5	25.57	9
P00416	Cytochrome c oxidase subunit 3 OS=Mus musculus OX=1009	mt-Co3	5.36	1
P00848	ATP synthase subunit a OS=Mus musculus OX=10090 GN=Mt	MtATP6	4.42	1
P03899	NADH-ubiquinone oxidoreductase chain 3 OS=Mus musculu	mt-Nd3	13.04	1
P03930	ATP synthase protein 8 OS=Mus musculus OX=10090 GN=Mt	MtATP8	34.33	2
P09541	Myosin light chain 4 OS=Mus musculus OX=10090 GN=Myl4	Myl4	12.44	2
P0DN34	NADH dehydrogenase [ubiquinone] 1 beta subcomplex subu	Ndufb1	19.3	1
P12787	Cytochrome c oxidase subunit 5A, mitochondrial OS=Mus m	Cox5a	16.44	2
P16254	Signal recognition particle 14 kDa protein OS=Mus muscul	Srp14	20	4
P17665	Cytochrome c oxidase subunit 7C, mitochondrial OS=Mus m	Cox7c	14.29	1
P19536	Cytochrome c oxidase subunit 5B, mitochondrial OS=Mus m	Cox5b	24.22	3
P36916	Guanine nucleotide-binding protein-like 1 OS=Mus musculu	Gnl1	14.83	8
P48771	Cytochrome c oxidase subunit 7A2, mitochondrial OS=Mus	Cox7a2	27.71	2
P49962	Signal recognition particle 9 kDa protein OS=Mus musculu	Srp9	53.49	5
P50136	2-oxoisovalerate dehydrogenase subunit alpha, mitochondr	Bckdha	20.59	9
P56375	Acylphosphatase-2 OS=Mus musculus OX=10090 GN=Acyp2	Acyp2	8.49	1
P56376	Acylphosphatase-1 OS=Mus musculus OX=10090 GN=Acyp1	Acyp1	16.16	2
P56382	ATP synthase subunit epsilon, mitochondrial OS=Mus musc	Atp5f1e	63.46	4
P56391	Cytochrome c oxidase subunit 6B1 OS=Mus musculus OX=1	Cox6b1	12.79	1
P58021	Transmembrane 9 superfamily member 2 OS=Mus musculus	Tm9sf2	1.81	1
P58064	Small ribosomal subunit protein bS6m OS=Mus musculus O	Mrps6	13.6	2
P58802	TBC1 domain family member 10A OS=Mus musculus OX=10	Tbc1d10a	10.2	5
P59281	Rho GTPase-activating protein 39 OS=Mus musculus OX=10	Arhgap39	5.24	5
P60007	Anaphase-promoting complex subunit 15 OS=Mus musculus	Anapc15	6.82	1
P61164	Alpha-actinin OS=Mus musculus OX=10090 GN=Actr1a P	Actr1a	11.97	5
P61963	DDB1- and CUL4-associated factor 7 OS=Mus musculus OX	Dcaf7	15.79	4
P62073	Mitochondrial import inner membrane translocase subunit	Timm10	7.78	1
P62075	Mitochondrial import inner membrane translocase subunit	Timm13	30.53	3
P62077	Mitochondrial import inner membrane translocase subunit	Timm8b	13.25	1
P70333	Heterogeneous nuclear ribonucleoprotein H2 OS=Mus musc	Hnrnp2	17.15	7
P97382	Voltage-gated potassium channel subunit beta-3 OS=Mus m	Kcnab3	3.61	1
P97950	Ras-related protein Rab-33A OS=Mus musculus OX=10090 G	Rab33a	13.08	3
Q00PI9	Heterogeneous nuclear ribonucleoprotein U-like protein 2	Hnrnpul2	16.38	12
Q02614	SAP30-binding protein OS=Mus musculus OX=10090 GN=Sap	Sap30bp	17.21	5
Q06138	Calcium-binding protein 39 OS=Mus musculus OX=10090 G	Cab39	7.62	3
Q0VE82	Copine-7 OS=Mus musculus OX=10090 GN=Cpne7 PE=1 SV=Cpne7		6.28	3
Q14CH0	Protein FAM171B OS=Mus musculus OX=10090 GN=Fam171	Fam171b	11.52	8
Q2MHE5	Docking protein 6 OS=Mus musculus OX=10090 GN=Dok6 P	Dok6	6.34	2
Q2TPA8	Hydroxysteroid dehydrogenase-like protein 2 OS=Mus musc	Hsd12	2.24	1
Q3TDD9	Protein phosphatase 1 regulatory subunit 21 OS=Mus muscu	Ppp1r21	6.67	4

Q3TPE9	Ankyrin repeat and MYND domain-containing protein 2 O	Ankmy2	2.05	1
Q3TRJ4	Keratin, type I cytoskeletal 26 OS=Mus musculus OX=10090	Krt26	1.73	1
Q3TUH1	Phosphatidate cytidylyltransferase, mitochondrial OS=Mus	Tamm41	12.17	4
Q3UC65	Arginine/serine-rich protein 1 OS=Mus musculus OX=10090	Rsrp1	7.72	2
Q3UFQ8	Capping protein, Arp2/3 and myosin-I linker protein 3 OS	Carmil3	1.24	1
Q3UGR5	Haloacid dehalogenase-like hydrolase domain-containing p	Hdhd2	3.09	1
Q3UHB1	5'-nucleotidase domain-containing protein 3 OS=Mus muscu	Nt5dc3	6.96	4
Q3UHX2	28 kDa heat- and acid-stable phosphoprotein OS=Mus musc	Pdap1	17.68	5
Q3UMG5	Leucine-rich repeat and calponin homology domain-contain	Lrch2	1.42	1
Q3UN16	Probable G-protein coupled receptor 162 OS=Mus musculus	Gpr162	1.7	1
Q3UQ84	Threonine--tRNA ligase, mitochondrial OS=Mus musculus O	Tars2	2.9	2
Q3URQ0	Testis-expressed protein 10 OS=Mus musculus OX=10090 G	Tex10	1.19	1
Q3UUF8	Ankyrin repeat domain-containing protein 34B OS=Mus mus	Ankrd34b	2.56	1
Q3UV17	Keratin, type II cytoskeletal 2 oral OS=Mus musculus OX=1	Krt76	8.59	6
Q3UVG3	Protein FAM91A1 OS=Mus musculus OX=10090 GN=Fam91aFam91a1		7.17	6
Q4FK66	Pre-mRNA-splicing factor 38A OS=Mus musculus OX=10090	Prpf38a	8.33	3
Q4FZF3	Probable ATP-dependent RNA helicase DDX49 OS=Mus mus	Ddx49	6.67	3
Q4V9W2	Protein SREK1IP1 OS=Mus musculus OX=10090 GN=Srek1ipSrek1ip1		5.23	1
Q5DTN8	Janus kinase and microtubule-interacting protein 3 OS=Mus	Jakmip3	13.15	11
Q5DU31	Interactor protein for cytohesin exchange factors 1 OS=Mus	Ipcef1	14.53	5
Q5HZI9	Mitochondrial nicotinamide adenine dinucleotide transpor	Slc25a51	5.37	2
Q5NCF2	Trafficking protein particle complex subunit 1 OS=Mus mus	Trappc1	7.59	1
Q5ND52	rRNA methyltransferase 3, mitochondrial OS=Mus musculu	Mrm3	2.39	1
Q5PR73	GTP-binding protein Di-Ras2 OS=Mus musculus OX=10090 G	Diras2	45.23	10
Q5RJ54	Zinc finger and SCAN domain-containing protein 26 OS=Mus	Zscan26	11.8	5
Q5SP85	Coiled-coil domain-containing protein 85A OS=Mus muscul	Ccdc85a	4.4	2
Q5SSI6	U3 small nucleolar RNA-associated protein 18 homolog OS	Utp18	5.62	2
Q5SWD9	Pre-rRNA-processing protein TSR1 homolog OS=Mus muscu	Tsr1	9.84	7
Q5SWP3	NAC-alpha domain-containing protein 1 OS=Mus musculus	Nacad	2.73	4
Q5SYL3	Bridge-like lipid transfer protein family member 2 OS=Mus	Bltp2	0.4	1
Q5U3K5	Rab-like protein 6 OS=Mus musculus OX=10090 GN=Rabl6 P	Rabl6	16.55	11
Q5U4C3	Splicing factor, arginine/serine-rich 19 OS=Mus musculus	Scaf1	6.61	7
Q60790	Ras GTPase-activating protein 3 OS=Mus musculus OX=100	Rasa3	22.06	17
Q60872	Eukaryotic translation initiation factor 1A OS=Mus muscul	Eif1a	35.42	6
Q61733	Small ribosomal subunit protein mS31 OS=Mus musculus O	Mrps31	2.08	1
Q61908	Cx9C motif-containing protein 4 OS=Mus musculus OX=100	Cmc4	14.71	1
Q62186	Translocon-associated protein subunit delta OS=Mus muscu	Ssr4	13.37	2
Q62189	U1 small nuclear ribonucleoprotein A OS=Mus musculus OX	Snrpa	3.48	1
Q62425	Cytochrome c oxidase subunit NDUFA4 OS=Mus musculus	Ndufa4	47.56	5
Q62465	Synaptic vesicle membrane protein VAT-1 homolog OS=Mus	Vat1	15.27	5
Q62513	Zinc finger protein 260 OS=Mus musculus OX=10090 GN=Zn	Znf260	4.18	2
Q641P0	Actin-related protein 3B OS=Mus musculus OX=10090 GN=Ar	Actr3b	17.46	7
Q64433	10 kDa heat shock protein, mitochondrial OS=Mus musculu	Hspe1	27.45	4
Q66JV4	RNA-binding protein 12B-B OS=Mus musculus OX=10090 G	Rbm12b2	3.48	3
Q68FD9	UPF0606 protein KIAA1549 OS=Mus musculus OX=10090 G	Kiaa1549	1.65	3
Q69Z99	Zinc finger protein 512 OS=Mus musculus OX=10090 GN=Zn	Znf512	11.92	5
Q69ZB3	Testis-specific Y-encoded-like protein 5 OS=Mus musculus	Tspyl5	21.43	7
Q69ZH9	Rho GTPase-activating protein 23 OS=Mus musculus OX=10	Arhgap23	11.06	15
Q69ZL1	FYVE, RhoGEF and PH domain-containing protein 6 OS=Mus	Fgd6	1.07	1
Q6A058	Armadillo repeat-containing X-linked protein 2 OS=Mus m	Armxc2	1.53	1
Q6DID5	PWWP domain-containing DNA repair factor 3A OS=Mus m	Pwwp3a	2.64	2
Q6GQT9	BOS complex subunit NOMO1 OS=Mus musculus OX=10090	Nomo1	0.91	1
Q6IFX2	Keratin, type I cytoskeletal 42 OS=Mus musculus OX=10090	Krt42	13.27	8
Q6NXK2	Zinc finger protein 532 OS=Mus musculus OX=10090 GN=Zn	Znf532	1.83	2

Q6NZB0	DnaJ homolog subfamily C member 8 OS=Mus musculus OX= Dnajc8	10.28	3
Q6NZF1	Zinc finger CCH domain-containing protein 11A OS=Mus Zc3h11a	11.87	9
Q6NZL0	Protein SOGA3 OS=Mus musculus OX=10090 GN=Soga3 PE=Soga3	17.99	17
Q6NZQ6	Zinc finger protein 740 OS=Mus musculus OX=10090 GN=Zn Znf740	5	1
Q6P5B0	RRP12-like protein OS=Mus musculus OX=10090 GN=Rrp12 Rrp12	5.1	6
Q6P5H6	FERM domain-containing protein 5 OS=Mus musculus OX=1 Frmd5	15.09	8
Q6PAM1	Alpha-taxilin OS=Mus musculus OX=10090 GN=Txlna PE=1 Txlna	6.32	3
Q6PB90	Protocadherin beta-14 OS=Mus musculus OX=10090 GN=Pcd Pcdhb14	1.26	1
Q6PDH0	Pleckstrin homology-like domain family B member 1 OS=Mus Phldb1	3.14	4
Q6PE01	U5 small nuclear ribonucleoprotein 40 kDa protein OS=Mus Snrnp40	17.04	4
Q6PE54	Probable ATP-dependent RNA helicase DHX40 OS=Mus mus Dhx40	1.28	1
Q6PEE2	CBP80/20-dependent translation initiation factor OS=Mus m Ctif	7.5	4
Q6PEV3	WAS/WASL-interacting protein family member 2 OS=Mus m Wipf2	40	16
Q6PGH1	Protein BUD31 homolog OS=Mus musculus OX=10090 GN=BBud31	40.97	6
Q6ZPJ0	Testis-expressed protein 2 OS=Mus musculus OX=10090 GN= Tex2	2.66	3
Q6ZPR4	Potassium channel subfamily T member 1 OS=Mus musculus Kcnt1	2.37	3
Q6ZQ18	Protein EFR3 homolog B OS=Mus musculus OX=10090 GN=EEfr3b	7.34	5
Q6ZQ82	Rho GTPase-activating protein 26 OS=Mus musculus OX=10 Arhgap26	15.97	14
Q6ZWY3	Small ribosomal subunit protein eS27-like OS=Mus musculus Rps27l	40.48	5
Q6ZWY8	Thymosin beta-10 OS=Mus musculus OX=10090 GN=Tmsb10 Tmsb10	18.18	1
Q78IK2	ATP synthase membrane subunit K, mitochondrial OS=Mus Atp5mk	44.83	3
Q78IK4	MICOS complex subunit Mic27 OS=Mus musculus OX=10090 Apool	11.7	2
Q7TPC1	Corneodesmosin OS=Mus musculus OX=10090 GN=Cdsn PE=Cdsn	1.6	1
Q7TSC1	Protein PRRC2A OS=Mus musculus OX=10090 GN=Prcc2a P Prcc2a	2.69	5
Q7TSH2	Phosphorylase b kinase regulatory subunit beta OS=Mus mu Phkb	1.66	1
Q7TSI3	Serine/threonine-protein phosphatase 6 regulatory subunit Ppp6r1	1.29	1
Q80TE4	Signal-induced proliferation-associated 1-like protein 2 O Sipal12	0.99	2
Q80TN4	DnaJ homolog subfamily C member 16 OS=Mus musculus OX Dnajc16	5.7	4
Q80U35	Rho guanine nucleotide exchange factor 17 OS=Mus musculus Arhgef17	2.09	3
Q80U49	Centrosomal protein of 170 kDa protein B OS=Mus musculus Cep170b	21.66	31
Q80U56	Late secretory pathway protein AVL9 homolog OS=Mus mus Avl9	1.54	1
Q80UK0	SEC14 domain and spectrin repeat-containing protein 1 OS Sestd1	2.59	2
Q80UW8	DNA-directed RNA polymerases I, II, and III subunit RPA Polr2e	10.95	2
Q80VD1	Protein FAM98B OS=Mus musculus OX=10090 GN=Fam98b Fam98b	9.79	4
Q80VY2	PAK4-inhibitor INKA2 OS=Mus musculus OX=10090 GN=InkInka2	3.67	1
Q80W04	Transmembrane and coiled-coil domains protein 2 OS=Mus Tmcc2	10.34	6
Q80WC7	Arf-GAP domain and FG repeat-containing protein 2 OS=Mus Agfg2	1.67	1
Q80X85	Small ribosomal subunit protein uS7m OS=Mus musculus O Mrps7	10.74	2
Q80XS6	Protein Smaug homolog 2 OS=Mus musculus OX=10090 GN= Samd4b	1.75	1
Q80ZJ6	Protein zer-1 homolog OS=Mus musculus OX=10090 GN=Zer Zer1	0.9	1
Q812A2	SLIT-ROBO Rho GTPase-activating protein 3 OS=Mus musc Srgap3	22.84	23
Q8BFU3	RING finger protein 214 OS=Mus musculus OX=10090 GN=R Rnf214	10.63	6
Q8BG18	N-terminal EF-hand calcium-binding protein 1 OS=Mus mus Necab1	2.27	1
Q8BG31	Vexin OS=Mus musculus OX=10090 GN=Vxn PE=2 SV=1 Vxn	4.83	1
Q8BG81	Polymerase delta-interacting protein 3 OS=Mus musculus O Poldip3	11.43	4
Q8BGB5	LIM domain-containing protein 2 OS=Mus musculus OX=10 Limd2	8.59	1
Q8BGD9	Eukaryotic translation initiation factor 4B OS=Mus musculus Eif4b	5.73	3
Q8BGH2	Sorting and assembly machinery component 50 homolog O Samm50	4.69	2
Q8BGN8	Synaptoporin OS=Mus musculus OX=10090 GN=Synpr PE=1 Synpr	12.83	3
Q8BGS0	Protein MAK16 homolog OS=Mus musculus OX=10090 GN=MMak16	12.84	3
Q8BGS2	BolaA-like protein 2 OS=Mus musculus OX=10090 GN=Bola2 Bola2	10.47	1
Q8BGY2	Eukaryotic translation initiation factor 5A-2 OS=Mus musc Eif5a2	15.69	2
Q8BGY4	Kelch-like protein 26 OS=Mus musculus OX=10090 GN=Klhl Klhl26	1.82	1
Q8BGZ1	Hippocalcin-like protein 4 OS=Mus musculus OX=10090 GN= Hpcal4	19.9	4

Q8BHG9	CGG triplet repeat-binding protein 1 OS=Mus musculus OX	Cggbp1	19.76	4
Q8BHL3	TBC1 domain family member 10B OS=Mus musculus OX=10	Tbc1d10b	17.92	15
Q8BHN5	RNA-binding protein 45 OS=Mus musculus OX=10090 GN=R	Rbm45	2.52	1
Q8BI08	Protein MAL2 OS=Mus musculus OX=10090 GN=Mal2 PE=1	Mal2	6.29	1
Q8BIF9	Zinc finger protein 787 OS=Mus musculus OX=10090 GN=Zn	Znf787	3.41	1
Q8BIJ6	Isoleucine--tRNA ligase, mitochondrial OS=Mus musculus O	Iars2	8.3	7
Q8BJH1	Zinc finger C2HC domain-containing protein 1A OS=Mus m	Zc2hc1a	44.75	18
Q8BJY1	26S proteasome non-ATPase regulatory subunit 5 OS=Mus	Psmd5	3.77	2
Q8BJZ4	Small ribosomal subunit protein mS35 OS=Mus musculus O	Mrps35	3.44	1
Q8BK30	NADH dehydrogenase [ubiquinone] flavoprotein 3, mitocho	Ndufv3	7.69	1
Q8BL74	General transcription factor 3C polypeptide 2 OS=Mus mus	Gtf3c2	2.54	2
Q8BLK3	Limbic system-associated membrane protein OS=Mus muscu	Lsamp	8.5	3
Q8BMJ3	Eukaryotic translation initiation factor 1A, X-chromosoma	Eif1ax	35.42	6
Q8BNE1	TRPM8 channel-associated factor 1 OS=Mus musculus OX=1	Tcaf1	0.97	1
Q8BP92	Reticulocalbin-2 OS=Mus musculus OX=10090 GN=Rcn2 PE=Rcn2		8.75	3
Q8BRJ3	RELT-like protein 2 OS=Mus musculus OX=10090 GN=Rell2	Rell2	8.58	3
Q8BSA9	tRNA wybutosine-synthesizing protein 3 homolog OS=Mus	Tyw3	4.67	1
Q8BSL7	ADP-ribosylation factor 2 OS=Mus musculus OX=10090 GN=	Arf2	36.46	5
Q8BTF8	RNA-binding Raly-like protein OS=Mus musculus OX=10090	Raly1	5.8	2
Q8BTY8	Sec1 family domain-containing protein 2 OS=Mus musculus	Scfd2	2.63	1
Q8BU14	Translocation protein SEC62 OS=Mus musculus OX=10090 G	Sec62	11.81	5
Q8BUY8	G-protein coupled receptor-associated sorting protein 2 O	Gprasp2	3.27	2
Q8BVE3	V-type proton ATPase subunit H OS=Mus musculus OX=100	Atp6v1h	13.46	6
Q8BWJ3	Phosphorylase b kinase regulatory subunit alpha, liver is	Phka2	0.73	1
Q8BXJ8	Zinc finger protein 385B OS=Mus musculus OX=10090 GN=Z	Znf385b	2.49	1
Q8BXT1	Regulator of G-protein signaling 8 OS=Mus musculus OX=1	Rgs8	31.67	6
Q8BYP3	Rho-related GTP-binding protein RhoF OS=Mus musculus O	Rhof	9.95	2
Q8C0C7	Phenylalanine--tRNA ligase alpha subunit OS=Mus musculu	Farsa	17.32	8
Q8C0D4	Rho GTPase-activating protein 12 OS=Mus musculus OX=10	Arhgap12	3.1	3
Q8C0K5	Solute carrier family 25 member 16 OS=Mus musculus OX=1	Slc25a16	6.63	2
Q8C0L0	Thioredoxin-related transmembrane protein 4 OS=Mus mus	Tmx4	3.58	1
Q8C0P5	Coronin-2A OS=Mus musculus OX=10090 GN=Coro2a PE=2	Coro2a	5.34	3
Q8C522	Endonuclease domain-containing 1 protein OS=Mus muscul	Endod1	4.59	2
Q8C561	G-protein coupled receptor-associated protein LMBRD2 O	Lmbrd2	2.02	1
Q8C6G8	WD repeat-containing protein 26 OS=Mus musculus OX=100	Wdr26	11.08	6
Q8C729	Hyccin 2 OS=Mus musculus OX=10090 GN=Hycc2 PE=1 SV=Hycc2		10.75	6
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial O	Mmaa	17.35	7
Q8CAA7	Glucose 1,6-bisphosphate synthase OS=Mus musculus OX=1	Pgm2l1	13.85	9
Q8CB77	Elongin-A OS=Mus musculus OX=10090 GN=Eloa PE=1 SV=Eloa		13.32	11
Q8CCJ4	APC membrane recruitment protein 2 OS=Mus musculus OX	Amer2	17.41	10
Q8CDN6	Thioredoxin-like protein 1 OS=Mus musculus OX=10090 GN=	Txn11	8.3	2
Q8CEG5	Coiled-coil domain-containing protein 28B OS=Mus muscul	Ccdc28b	5.5	1
Q8CH09	SURP and G-patch domain-containing protein 2 OS=Mus mu	Sugp2	3.19	3
Q8JZW5	SH2 domain-containing protein 5 OS=Mus musculus OX=100	Sh2d5	13.75	5
Q8K010	5-oxoprolinase OS=Mus musculus OX=10090 GN=Oplah PE=	Oplah	1.24	2
Q8K013	GTP-binding protein 10 OS=Mus musculus OX=10090 GN=Gt	Gtpbp10	17.76	7
Q8K031	StAR-related lipid transfer protein 8 OS=Mus musculus OX=	Stard8	4.22	3
Q8K070	Sterile alpha motif domain-containing protein 14 OS=Mus	Samd14	23.02	8
Q8K0S0	Phytanoyl-CoA hydroxylase-interacting protein OS=Mus mu	Phyhip	36.67	14
Q8K0U4	Heat shock 70 kDa protein 12A OS=Mus musculus OX=1009	Hspa12a	32.89	23
Q8K194	U4/U6.U5 small nuclear ribonucleoprotein 27 kDa protein	Snrnp27	16.77	3
Q8K1C0	Protein angel homolog 2 OS=Mus musculus OX=10090 GN=A	Angel2	4.04	2
Q8K1N4	Spermatogenesis-associated serine-rich protein 2 OS=Mus m	Spats2	1.65	1
Q8K268	ATP-binding cassette sub-family F member 3 OS=Mus musc	Abcf3	7.48	5

Q8K274	Ketosamine-3-kinase OS=Mus musculus OX=10090 GN=Fn3k Fn3krp	3.24	1
Q8K288	Tumor necrosis factor alpha-induced protein 8-like protein Tnfaip8l1	20.43	3
Q8K2D3	Enhancer of mRNA-decapping protein 3 OS=Mus musculus Edc3	7.87	4
Q8K2J7	RELT-like protein 1 OS=Mus musculus OX=10090 GN=Rell1 Rell1	7.35	2
Q8K2T1	NmrA-like family domain-containing protein 1 OS=Mus mus Nmr1	14.89	5
Q8K2Y7	Large ribosomal subunit protein uL29m OS=Mus musculus Mrpl47	4.37	1
Q8K370	Acyl-CoA dehydrogenase family member 10 OS=Mus muscul Acad10	2.34	2
Q8K386	Ras-related protein Rab-15 OS=Mus musculus OX=10090 GN Rab15	11.79	3
Q8K3I9	Glucocorticoid-induced transcript 1 protein OS=Mus muscul Glcci1	9.12	4
Q8K3M5	CDK5 and ABL1 enzyme substrate 2 OS=Mus musculus OX=1 Cables2	1.47	1
Q8QZV4	Serine/threonine-protein kinase 32C OS=Mus musculus OX= Stk32c	3.48	2
Q8R149	BUD13 homolog OS=Mus musculus OX=10090 GN=Bud13 P1Bud13	1.73	1
Q8R164	Valacyclovir hydrolase OS=Mus musculus OX=10090 GN=BplBphl	7.9	2
Q8R1F6	Protein HID1 OS=Mus musculus OX=10090 GN=Hid1 PE=1 SHid1	1.27	1
Q8R2L5	Small ribosomal subunit protein bS18m OS=Mus musculus Mrps18c	5.59	1
Q8R2M2	Deoxynucleotidyltransferase terminal-interacting protein Dnttip2	2.37	2
Q8R2N0	Thyroid transcription factor 1-associated protein 26 OS=M Ccdc59	14.58	4
Q8R2V5	Arf-GAP with dual PH domain-containing protein 2 OS=M Adap2	2.62	1
Q8R310	Transmembrane and coiled-coil domain protein 3 OS=Mus Tmcc3	11.95	6
Q8R3F5	Malonyl-CoA-acyl carrier protein transacylase, mitochondr Mcat	4.99	2
Q8R3N1	Nucleolar protein 14 OS=Mus musculus OX=10090 GN=Nop1 Nop14	2.09	1
Q8R3Q2	Serine/threonine-protein phosphatase 6 regulatory subunit Ppp6r2	3.36	3
Q8R404	MICOS complex subunit MIC13 OS=Mus musculus OX=1009 Micos13	11.76	2
Q8R4C2	RUN and FYVE domain-containing protein 2 OS=Mus muscu Rufy2	2.81	2
Q8R4E6	Purine-rich element-binding protein gamma OS=Mus muscul Purg	9.14	4
Q8R555	Cartilage acidic protein 1 OS=Mus musculus OX=10090 GN=CCrtac1	2.17	1
Q8R574	Phosphoribosyl pyrophosphate synthase-associated protein Prpsap2	13.55	4
Q8VCM3	Zinc finger FYVE domain-containing protein 21 OS=Mus mu Zfyve21	12.39	3
Q8VCR7	Putative protein-lysine deacylase ABHD14B OS=Mus muscu Abhd14b	5.24	1
Q8VCW8	Medium-chain acyl-CoA ligase ACSF2, mitochondrial OS=M Acsf2	3.25	2
Q8VD33	Small glutamine-rich tetratricopeptide repeat-containing p Sgtb	3.95	1
Q8VDJ3	Vigilin OS=Mus musculus OX=10090 GN=Hdlbp PE=1 SV=1 Hdlbp	3.79	4
Q8VDN4	Coiled-coil domain-containing protein 92 OS=Mus muscul Ccdc92	9.55	3
Q8VE22	Small ribosomal subunit protein mS23 OS=Mus musculus O Mrps23	19.21	3
Q8VEH5	EPM2A-interacting protein 1 OS=Mus musculus OX=10090 Epm2aip1	8.42	4
Q8VEL9	GTP-binding protein REM 2 OS=Mus musculus OX=10090 G Rem2	30.21	10
Q8VHZ7	U3 small nucleolar ribonucleoprotein protein IMP4 OS=M Imp4	6.19	2
Q91V61	Sideroflexin-3 OS=Mus musculus OX=10090 GN=Sfxn3 PE=1 Sfxn3	26.79	8
Q91VI7	Ribonuclease inhibitor OS=Mus musculus OX=10090 GN=RnhRnh1	7.02	3
Q91VW3	SH3 domain-binding glutamic acid-rich-like protein 3 OS= Sh3bgrl3	19.35	2
Q91WJ7	SPATS2-like protein OS=Mus musculus OX=10090 GN=Spats Spats2l	1.79	1
Q91WK0	Leucine-rich repeat flightless-interacting protein 2 OS=Mus Lrrfip2	14.7	5
Q91YJ3	Thymocyte nuclear protein 1 OS=Mus musculus OX=10090 Thyn1	45.13	10
Q91Z49	UAP56-interacting factor OS=Mus musculus OX=10090 GN=FFytttd1	9.78	3
Q91Z61	GTP-binding protein Di-Ras1 OS=Mus musculus OX=10090 G Diras1	32.83	7
Q920I9	WD repeat-containing protein 7 OS=Mus musculus OX=1009 Wdr7	18.4	28
Q922H9	Zinc finger protein 330 OS=Mus musculus OX=10090 GN=Zn Znf330	6.33	2
Q922Q8	Leucine-rich repeat-containing protein 59 OS=Mus muscul Lrrc59	27.04	10
Q923K4	tRNA modification GTPase GTPBP3, mitochondrial OS=Mus Gtpbp3	12.6	5
Q923S9	Ras-related protein Rab-30 OS=Mus musculus OX=10090 GN Rab30	5.42	1
Q924T2	Small ribosomal subunit protein uS2m OS=Mus musculus O Mrps2	4.47	1
Q925E7	Serine/threonine-protein phosphatase 2A 55 kDa regulatory Ppp2r2d	7.73	3
Q925N1	Sideroflexin-4 OS=Mus musculus OX=10090 GN=Sfxn4 PE=2 Sfxn4	5.11	1
Q99J77	Sialic acid synthase OS=Mus musculus OX=10090 GN=Nans Nans	2.79	1

Q99JI4	26S proteasome non-ATPase regulatory subunit 6 OS=Mus	Psm6	15.42	6
Q99JP4	Anaphase-promoting complex subunit CDC26 OS=Mus musc	Cdc26	23.53	3
Q99K01	Pyridoxal-dependent decarboxylase domain-containing prot	Pdxdc1	2.8	2
Q99K95	Replication termination factor 2 OS=Mus musculus OX=1009	Rtf2	6.84	2
Q99KK1	Receptor expression-enhancing protein 3 OS=Mus musculus	Reep3	7.87	2
Q99L04	Dehydrogenase/reductase SDR family member 1 OS=Mus mu	Dhrs1	22.68	7
Q99L27	GMP reductase 2 OS=Mus musculus OX=10090 GN=Gmpr2 P	Gmpr2	8.33	3
Q99LB6	Methionine adenosyltransferase 2 subunit beta OS=Mus mus	Mat2b	2.99	1
Q99LI7	Cleavage stimulation factor subunit 3 OS=Mus musculus OX	Cstf3	11.3	8
Q99LJ7	RCC1 and BTB domain-containing protein 2 OS=Mus muscu	Rcbtb2	8.17	4
Q99LY9	NADH dehydrogenase [ubiquinone] iron-sulfur protein 5 O	Ndufs5	35.85	4
Q99MX0	Transketolase-like protein 1 OS=Mus musculus OX=10090 G	Tktl1	1.68	1
Q99N84	Small ribosomal subunit protein mS40 OS=Mus musculus O	Mrps18b	3.94	1
Q99N85	Large ribosomal subunit protein mL66 OS=Mus musculus O	Mrps18a	3.57	1
Q99N87	Small ribosomal subunit protein uS5m OS=Mus musculus O	Mrps5	4.4	2
Q9CPQ1	Cytochrome c oxidase subunit 6C OS=Mus musculus OX=10	Cox6c	11.84	2
Q9CPQ8	ATP synthase subunit g, mitochondrial OS=Mus musculus	Atp5mg	12.62	1
Q9CPR5	Large ribosomal subunit protein uL15m OS=Mus musculus	Mrpl15	3.39	1
Q9CPT5	Nucleolar protein 16 OS=Mus musculus OX=10090 GN=Nop1	Nop16	38.2	7
Q9CPW7	Zinc finger matrin-type protein 2 OS=Mus musculus OX=10	Zmat2	16.58	4
Q9CPY0	rRNA methyltransferase 2, mitochondrial OS=Mus musculu	Mrm2	14.23	3
Q9CQ06	Large ribosomal subunit protein uL24m OS=Mus musculus	Mrpl24	4.63	1
Q9CQ54	NADH dehydrogenase [ubiquinone] 1 subunit C2 OS=Mus m	Ndufc2	18.33	2
Q9CQ91	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex sub	Ndufa3	13.1	1
Q9CQA1	Trafficking protein particle complex subunit 5 OS=Mus mus	Trappc5	12.23	2
Q9CQA6	Small ribosomal subunit protein mS37 OS=Mus musculus O	Chchd1	10.17	2
Q9CQA9	Cancer-related nucleoside-triphosphatase homolog OS=Mus	Ntpcr	6.32	1
Q9CQC7	NADH dehydrogenase [ubiquinone] 1 beta subcomplex subu	Ndufb4	8.53	1
Q9CQE8	RNA transcription, translation and transport factor prote	RTRAF	14.34	4
Q9CQF0	Large ribosomal subunit protein uL11m OS=Mus musculus	Mrpl11	34.9	6
Q9CQF4	Mitochondrial transcription rescue factor 1 OS=Mus muscul	Mtres1	18.33	4
Q9CQH3	NADH dehydrogenase [ubiquinone] 1 beta subcomplex subun	Ndufb5	4.23	1
Q9CQJ6	Density-regulated protein OS=Mus musculus OX=10090 GN=	Denr	14.14	3
Q9CQU5	ZW10 interactor OS=Mus musculus OX=10090 GN=Zwint PE	Zwint	13.1	4
Q9CQX8	Alpha-ketoglutarate dehydrogenase component 4 OS=Mus m	Mrps36	12.75	1
Q9CQZ1	Heat shock factor-binding protein 1 OS=Mus musculus OX=	Hsbp1	23.68	2
Q9CQZ5	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex sub	Ndufa6	8.4	1
Q9CQZ6	NADH dehydrogenase [ubiquinone] 1 beta subcomplex subu	Ndufb3	10.58	1
Q9CR00	26S proteasome non-ATPase regulatory subunit 9 OS=Mus	Psm6	19.37	4
Q9CR02	Translation machinery-associated protein 16 OS=Mus musc	Tma16	13.57	3
Q9CR80	Protein FAM32A OS=Mus musculus OX=10090 GN=Fam32a	Fam32a	19.64	2
Q9CRD2	ER membrane protein complex subunit 2 OS=Mus musculus	Emc2	4.04	1
Q9CT10	Ran-binding protein 3 OS=Mus musculus OX=10090 GN=Ran	Ranbp3	2.44	1
Q9CTY5	Calcium uptake protein 3, mitochondrial OS=Mus musculus	Micu3	4.21	2
Q9CU65	Zinc finger MYM-type protein 2 OS=Mus musculus OX=10	Zmym2	1.38	2
Q9CWD8	Iron-sulfur protein NUBPL OS=Mus musculus OX=10090 GN	Nubpl	11.91	3
Q9CWK3	CD2 antigen cytoplasmic tail-binding protein 2 OS=Mus mu	Cd2bp2	7.31	2
Q9CWM4	Prefoldin subunit 1 OS=Mus musculus OX=10090 GN=Pfdn1	Pfdn1	9.02	1
Q9CXG3	Peptidyl-prolyl cis-trans isomerase-like 4 OS=Mus musculu	Ppil4	18.9	8
Q9CXX9	RNA-binding protein 33 OS=Mus musculus OX=10090 GN=R	Rbm33	1.95	2
Q9CXW2	Small ribosomal subunit protein mS22 OS=Mus musculus O	Mrps22	8.91	3
Q9CYH2	Peroxiredoxin-like 2A OS=Mus musculus OX=10090 GN=Prxl	Prxl2a	8.26	2
Q9CYZ8	Single-stranded DNA-binding protein 2 OS=Mus musculus	Ssbp2	6.37	2
Q9CZ82	Mediator of RNA polymerase II transcription subunit 18	Med18	3.85	1

Q9CZ83	Large ribosomal subunit protein mL55 OS=Mus musculus O	Mrpl55	24.41	3
Q9CZC8	Secernin-1 OS=Mus musculus OX=10090 GN=Scrn1 PE=1 SV	Scrn1	16.67	6
Q9CZD5	Translation initiation factor IF-3, mitochondrial OS=Mus m	Mtif3	13.04	5
Q9D061	Acyl-CoA-binding domain-containing protein 6 OS=Mus mu	Acbd6	3.19	1
Q9D0J8	Parathymosin OS=Mus musculus OX=10090 GN=Ptms PE=1	Ptms	10.89	1
Q9D0M1	Phosphoribosyl pyrophosphate synthase-associated protein	Prpsap1	14.61	4
Q9D0R8	Protein LSM12 OS=Mus musculus OX=10090 GN=Lsm12 PE=Lsm12		4.62	1
Q9D168	Integrator complex subunit 12 OS=Mus musculus OX=10090	Ints12	3.04	1
Q9D289	Trafficking protein particle complex subunit 6B OS=Mus m	Trappc6b	6.33	1
Q9D4F8	Gamma-tubulin complex component 4 OS=Mus musculus OX	Tubgcp4	1.8	1
Q9D620	Rab11 family-interacting protein 1 OS=Mus musculus OX=1	Rab11fip1	9.77	5
Q9D6K8	FUN14 domain-containing protein 2 OS=Mus musculus OX=	Fundc2	7.28	1
Q9D6M3	Mitochondrial glutamate carrier 1 OS=Mus musculus OX=10	Slc25a22	17.96	6
Q9D706	RNA polymerase II-associated protein 3 OS=Mus musculus	Rpap3	4.39	2
Q9D7A6	Signal recognition particle 19 kDa protein OS=Mus muscul	Srp19	9.72	1
Q9D7N3	Small ribosomal subunit protein uS9m OS=Mus musculus O	Mrps9	6.41	2
Q9D819	Inorganic pyrophosphatase OS=Mus musculus OX=10090 GN	Ppa1	16.26	4
Q9D832	DnaJ homolog subfamily B member 4 OS=Mus musculus OX	Dnajb4	17.8	5
Q9D855	Cytochrome b-c1 complex subunit 7 OS=Mus musculus OX=	Uqcrb	25.23	3
Q9D898	Actin-related protein 2/3 complex subunit 5-like protein	Arpc5l	28.76	3
Q9D8N0	Elongation factor 1-gamma OS=Mus musculus OX=10090 GN	Eef1g	13.04	6
Q9D8X2	Coiled-coil domain-containing protein 124 OS=Mus muscul	Ccdc124	51.15	11
Q9D8Y0	EF-hand domain-containing protein D2 OS=Mus musculus O	Efhd2	24.58	5
Q9D8Y1	Transmembrane protein 126A OS=Mus musculus OX=10090	Tmem126a	4.08	1
Q9D902	General transcription factor IIE subunit 2 OS=Mus musculu	Gtf2e2	21.23	5
Q9D924	Iron-sulfur cluster assembly 1 homolog, mitochondrial OS=	Isca1	27.13	3
Q9DAJ5	Dynein light chain roadblock-type 2 OS=Mus musculus OX=	Dynlrb2	12.5	1
Q9DAS9	Guanine nucleotide-binding protein G(I)/G(S)/G(O) subun	Gng12	15.28	1
Q9DAW6	U4/U6 small nuclear ribonucleoprotein Prp4 OS=Mus muscu	Prpf4	8.45	4
Q9DB27	Malignant T-cell-amplified sequence 1 OS=Mus musculus O	Mcts1	22.65	4
Q9DB42	Zinc finger protein 593 OS=Mus musculus OX=10090 GN=Zn	Znf593	15.67	2
Q9DBN4	Putative monooxygenase p33MONOX OS=Mus musculus OX	P33monox	6.6	2
Q9DBR3	Armadillo repeat-containing protein 8 OS=Mus musculus O	Armcb8	2.82	2
Q9DC07	LIM zinc-binding domain-containing Nebulette OS=Mus mus	Neb1	37.78	12
Q9DC71	Small ribosomal subunit protein uS15m OS=Mus musculus	Mrps15	23.26	6
Q9DCE5	p21-activated protein kinase-interacting protein 1 OS=Mus	Pak1ip1	23.56	9
Q9DCI9	Large ribosomal subunit protein bL32m OS=Mus musculus	Mrpl32	18.72	3
Q9DCT8	Cysteine-rich protein 2 OS=Mus musculus OX=10090 GN=Cri	Crip2	9.13	3
Q9DCU2	Plasmolipin OS=Mus musculus OX=10090 GN=Plp PE=1 SV=Plp		8.79	1
Q9DCU6	Large ribosomal subunit protein uL4m OS=Mus musculus O	Mrpl4	3.74	1
Q9DCZ1	GMP reductase 1 OS=Mus musculus OX=10090 GN=Gmpr PE=Gmpr		8.41	3
Q9EPU4	Cleavage and polyadenylation specificity factor subunit 1	Cpsf1	23.32	32
Q9EQI8	Large ribosomal subunit protein mL46 OS=Mus musculus O	Mrpl46	15.9	4
Q9ER73	Elongator complex protein 4 OS=Mus musculus OX=10090 G	Elp4	40.28	17
Q9ESP1	Stromal cell-derived factor 2-like protein 1 OS=Mus muscu	Sdf2l1	5.88	1
Q9ESV0	ATP-dependent RNA helicase DDX24 OS=Mus musculus OX	Ddx24	4.55	3
Q9ET43	Claudin-12 OS=Mus musculus OX=10090 GN=Cldn12 PE=1 SCLdn12		6.15	1
Q9JI19	Acidic fibroblast growth factor intracellular-binding prot	Fibp	10.92	4
Q9JIL5	Tubby-related protein 4 OS=Mus musculus OX=10090 GN=Tu	Tulp4	1.42	2
Q9JJU8	Adapter Sh3bgrl OS=Mus musculus OX=10090 GN=Sh3bgrl P	Sh3bgrl	28.95	3
Q9JM93	ADP-ribosylation factor-like protein 6-interacting protein	Arl6ip4	24.45	6
Q9QYF9	Protein NDRG3 OS=Mus musculus OX=10090 GN=Ndr3 PE=Ndr3		11.2	3
Q9QYI4	DnaJ homolog subfamily B member 12 OS=Mus musculus O	Dnajb12	5.32	2
Q9QZB7	Actin-related protein 10 OS=Mus musculus OX=10090 GN=Ac	Actr10	8.87	4

Q9R099	Transducin beta-like protein 2 OS=Mus musculus OX=10090	Tbl2	18.78	8
Q9R0Q6	Actin-related protein 2/3 complex subunit 1A OS=Mus musc	Arpc1a	15.41	6
Q9R1Q8	Transgelin-3 OS=Mus musculus OX=10090 GN=Tagln3 PE=1	Tagln3	31.66	6
Q9WUA2	Phenylalanine--tRNA ligase beta subunit OS=Mus musculus	Farsb	17.66	10
Q9WVA2	Mitochondrial import inner membrane translocase subunit	Timm8a1	19.59	2
Q9Z1P6	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex sub	Ndufa7	55.75	6
Q9Z268	RasGAP-activating-like protein 1 OS=Mus musculus OX=100	Rasal1	20.15	15
S4R1M9	Oxysterol-binding protein-related protein 10 OS=Mus musc	Osbpl10	17.89	12
A2A6T1	Cerebellar degeneration-related protein 2-like OS=Mus mus	Cdr2l	2.15	1
A2A7S8	Uncharacterized protein KIAA1522 OS=Mus musculus OX=1	Kiaa1522	2.86	3
A2RT62	F-box/LRR-repeat protein 16 OS=Mus musculus OX=10090 G	Fbxl16	9.19	4
A2RTL5	Arginine/serine-rich coiled-coil protein 2 OS=Mus musculu	Rsrc2	2.66	1
B1AXH1	NHS-like protein 2 OS=Mus musculus OX=10090 GN=Nhsl2	Nhsl2	2.63	3
B2B9E1	Triple QxxK/R motif-containing protein OS=Mus musculus	Triqk	8.14	1
B2RXA1	PI-PLC X domain-containing protein 2 OS=Mus musculus O	Plcx2	7.65	2
E9Q3C1	C2 domain-containing protein 2 OS=Mus musculus OX=1009	C2cd2	1.44	1
E9Q6P5	Tetratricopeptide repeat protein 7B OS=Mus musculus OX=1	Ttc7b	8.19	6
P56379	ATP synthase subunit ATP5MPL, mitochondrial OS=Mus mu	Atp5mpl	34.48	2
P58059	Small ribosomal subunit protein bS21m OS=Mus musculus	Mrps21	16.09	1
P58468	Ribosome biogenesis protein SLX9 homolog OS=Mus muscul	Slx9	5.02	1
Q0VBF8	Protein stum homolog OS=Mus musculus OX=10090 GN=Stu	Stum	9.22	1
Q0VE29	Sterile alpha motif domain-containing protein 12 OS=Mus	Samd12	5.59	1
Q0VG62	Ribosomal biogenesis factor OS=Mus musculus OX=10090 G	Rbis	17.53	2
Q2TA57	Aspartate beta-hydroxylase domain-containing protein 1 O	Asphd1	4.17	1
Q3TC33	Coiled-coil domain-containing protein 127 OS=Mus muscul	Ccdc127	3.46	1
Q3TC72	Fumarylacetoacetate hydrolase domain-containing protein	Fahd2	5.75	2
Q3TY60	Protein FAM131B OS=Mus musculus OX=10090 GN=Fam131	Fam131b	8.13	2
Q3U0L2	Ankyrin repeat domain-containing protein 33B OS=Mus mus	Ankrd33b	4.32	2
Q3U276	Succinate dehydrogenase assembly factor 1, mitochondrial	Sdhaf1	11.86	2
Q3U3E2	Protein FAM117B OS=Mus musculus OX=10090 GN=Fam117	Fam117b	7.53	4
Q3UE31	Uncharacterized protein KIAA0930 homolog OS=Mus muscul	--	8.17	3
Q3UHB8	Coiled-coil domain-containing protein 177 OS=Mus muscul	Ccdc177	29.75	22
Q3UHD2	Glucose-fructose oxidoreductase domain-containing protei	Gfod1	5.13	2
Q3UL36	Arginine and glutamate-rich protein 1 OS=Mus musculus O	Arglu1	19.56	7
Q3UNZ8	Quinone oxidoreductase-like protein 2 OS=Mus musculus O	Cryz12	3.14	1
Q3UQA7	Selenoprotein H OS=Mus musculus OX=10090 GN=Selenoh P	Selenoh	8.62	1
Q3UXZ6	Protein FAM81A OS=Mus musculus OX=10090 GN=Fam81a	Fam81a	3.02	1
Q3UY34	Protein CUSTOS OS=Mus musculus OX=10090 GN=Custos P	Custos	20.7	4
Q3V038	Tetratricopeptide repeat protein 9A OS=Mus musculus OX=1	Ttc9	12.33	2
Q3V0G7	GTPase-activating Rap/Ran-GAP domain-like protein 3 OS=	Garnl3	0.87	1
Q505F5	Leucine-rich repeat-containing protein 47 OS=Mus musculu	Lrrc47	21.69	11
Q5HZI2	C2 calcium-dependent domain-containing protein 4C OS=M	C2cd4c	19.33	6
Q5M8N0	CB1 cannabinoid receptor-interacting protein 1 OS=Mus mu	Cnrip1	4.88	1
Q5M8N4	Epimerase family protein SDR39U1 OS=Mus musculus OX=1	Sdr39u1	10.92	3
Q6DIB4	Nucleolar protein 4-like OS=Mus musculus OX=10090 GN=NcNol4l		1.82	1
Q6NS60	F-box only protein 41 OS=Mus musculus OX=10090 GN=Fbx	Fbxo41	9.16	8
Q6P3B9	Putative ribosome-binding factor A, mitochondrial OS=Mus	Rbfa	20.57	7
Q6P5U7	NACHT and WD repeat domain-containing protein 2 OS=M	Nwd2	2.12	3
Q6PDC0	RUN domain-containing protein 3B OS=Mus musculus OX=1	Rundc3b	2.21	1
Q6PE13	Proline-rich transmembrane protein 3 OS=Mus musculus OX=	Prpt3	3.71	3
Q6PEM6	GRAM domain-containing protein 2B OS=Mus musculus OX	Gramd2b	2.02	1
Q6PIP5	NudC domain-containing protein 1 OS=Mus musculus OX=1	Nudcd1	1.89	1
Q6PNC0	DmX-like protein 1 OS=Mus musculus OX=10090 GN=Dmx1	Dmx1	1.86	6
Q6W8Q3	Purkinje cell protein 4-like protein 1 OS=Mus musculus OX	Pcp4l1	20.59	1

Q78JW9	Ubiquitin domain-containing protein UBFD1 OS=Mus muscu	Ubfd1	3.53	1
Q7TQG1	Pleckstrin homology domain-containing family A member 6	Plekha6	3.15	3
Q7TSQ8	Pyruvate dehydrogenase phosphatase regulatory subunit, mi	Pdpr	1.14	1
Q80SY5	Pre-mRNA-splicing factor 38B OS=Mus musculus OX=10090	Prpf38b	13.47	7
Q80TB8	Synaptic vesicle membrane protein VAT-1 homolog-like OS	Vat1l	6.71	3
Q80TC6	Zinc finger SWIM domain-containing protein 5 OS=Mus mu	Zswim5	0.76	1
Q80WB0	Fibronectin type III domain-containing protein 11 OS=Mus	Fndc11	3.99	1
Q80X32	UPF0461 protein C5orf24 homolog OS=Mus musculus OX=10 --		13.3	2
Q80XP8	Protein FAM76B OS=Mus musculus OX=10090 GN=Fam76b	Fam76b	5.31	2
Q80Y55	BSD domain-containing protein 1 OS=Mus musculus OX=10	Bsdc1	2.34	1
Q80ZK0	Small ribosomal subunit protein uS10m OS=Mus musculus	Mrps10	7.5	1
Q80ZW2	Protein THEM6 OS=Mus musculus OX=10090 GN=Them6 PE=Them6		4.83	1
Q8BG73	SH3 domain-binding glutamic acid-rich-like protein 2 OS=	Sh3bgrl2	29.91	3
Q8BG75	Transmembrane protein 198 OS=Mus musculus OX=10090 G	Tmem198	2.78	1
Q8BG94	COMM domain-containing protein 7 OS=Mus musculus OX	Comm7	6	1
Q8BGT8	Phytanoyl-CoA hydroxylase-interacting protein-like OS=M	Phyhl1	15.73	6
Q8BH55	Threonine synthase-like 1 OS=Mus musculus OX=10090 GN=	Thns1	2.41	2
Q8BHC4	Dephospho-CoA kinase domain-containing protein OS=Mus	Dcakd	3.46	1
Q8BHZ0	CYFIP-related Rac1 interactor A OS=Mus musculus OX=100	Cyria	7.74	3
Q8BLB8	Ankyrin repeat domain-containing protein 34C OS=Mus mus	Ankrd34c	4.87	2
Q8BLR2	Copine-4 OS=Mus musculus OX=10090 GN=Cpne4 PE=1 SV=Cpne4		17.95	9
Q8BLS7	Ankyrin repeat domain-containing protein SOWAHA OS=M	Sowaha	6.93	4
Q8BN57	Protein C3orf33 homolog OS=Mus musculus OX=10090 PE=2 --		3.74	1
Q8BNU0	Armadillo repeat-containing protein 6 OS=Mus musculus O	Arm6	7.26	3
Q8BNW9	Kelch repeat and BTB domain-containing protein 11 OS=M	Kbtbd11	16.59	9
Q8BP78	Protein FRA10AC1 homolog OS=Mus musculus OX=10090 G	Fra10ac1	2.22	1
Q8BQS4	EEIG family member 2 OS=Mus musculus OX=10090 GN=EeiEig2		23.01	6
Q8BQU3	Succinate dehydrogenase assembly factor 3, mitochondrial	Sdhaf3	8.8	1
Q8BU88	Large ribosomal subunit protein uL22m OS=Mus musculus	Mrpl22	25.73	5
Q8BW00	Probable peptidyl-tRNA hydrolase OS=Mus musculus OX=10	Pthr1	17.16	3
Q8BWS5	G protein-regulated inducer of neurite outgrowth 3 OS=M	Gprin3	6.42	4
Q8BXV2	BRI3-binding protein OS=Mus musculus OX=10090 GN=Bri3	Bri3bp	9.09	2
Q8BZW2	Ankyrin repeat domain-containing protein SOWAHB OS=M	Sowahb	5.92	3
Q8C008	Double zinc ribbon and ankyrin repeat-containing protein	Dzank1	11.44	7
Q8C3F2	Constitutive coactivator of PPAR-gamma-like protein 2 O	Fam120c	13.47	13
Q8C3I8	Protein HGH1 homolog OS=Mus musculus OX=10090 GN=HgHgh1		2.8	1
Q8C3W1	Uncharacterized protein C1orf198 homolog OS=Mus musculu	--	3.73	1
Q8C739	Protein FAM110B OS=Mus musculus OX=10090 GN=Fam110Fam110b		9.84	3
Q8CAK1	Putative transferase CAF17 homolog, mitochondrial OS=M	Iba57	6.7	2
Q8CCT4	Transcription elongation factor A protein-like 5 OS=Mus m	Tceal5	43	9
Q8CD19	LanC-like protein 3 OS=Mus musculus OX=10090 GN=Lancl3Lancl3		2.86	1
Q8CGI1	Protein FAM193A OS=Mus musculus OX=10090 GN=Fam193Fam193a		1.14	1
Q8JZS9	Large ribosomal subunit protein mL48 OS=Mus musculus O	Mrpl48	9	2
Q8JZZ6	AMMECR1-like protein OS=Mus musculus OX=10090 GN=A:Ammeccr1l		2.58	1
Q8K003	Translation machinery-associated protein 7 OS=Mus muscu	Tma7	29.69	2
Q8K353	Cysteine-rich and transmembrane domain-containing prote	Cystm1	9.62	1
Q8R0A7	Uncharacterized protein KIAA0513 OS=Mus musculus OX=1	Kiaa0513	19.41	7
Q8R127	Saccharopine dehydrogenase-like oxidoreductase OS=Mus m	Sccpdh	12.59	5
Q8R1F0	Leydig cell tumor 10 kDa protein homolog OS=Mus muscul	D8Ertd738e	19.15	2
Q8R3Q6	Protein MIX23 OS=Mus musculus OX=10090 GN=Mix23 PE=Mix23		7.64	1
Q8R3T5	Syntaxin-binding protein 6 OS=Mus musculus OX=10090 GN	Stxbp6	23.81	5
Q8R5C5	Beta-centractin OS=Mus musculus OX=10090 GN=Actr1b PE	Actr1b	14.36	6
Q8VCA8	Secernin-2 OS=Mus musculus OX=10090 GN=Scrn2 PE=1 SV	Scrn2	1.88	1
Q8VD62	UPF0696 protein C11orf68 homolog OS=Mus musculus OX=1	Bles03	6.38	2

Q8VD63	Testis-specific Y-encoded-like protein 4 OS=Mus musculus	Tspyl4	16.26	6
Q8VE33	Ganglioside-induced differentiation-associated protein 1-l	Gdap11l	8.65	2
Q8VE52	Opioid growth factor receptor-like protein 1 OS=Mus muscu	Ogfrl1	2.8	1
Q91V09	WD repeat-containing protein 13 OS=Mus musculus OX=100	Wdr13	5.57	2
Q91V16	Electron transfer flavoprotein regulatory factor 1 OS=Mus	Etfrf1	10.47	1
Q91YP0	L-2-hydroxyglutarate dehydrogenase, mitochondrial OS=Mus	L2hgdh	3.23	1
Q921S7	Large ribosomal subunit protein mL37 OS=Mus musculus O	Mrpl37	2.36	1
Q922G2	Protein FAM76A OS=Mus musculus OX=10090 GN=Fam76a	Fam76a	12.38	4
Q922H4	Mannose-1-phosphate guanyltransferase alpha OS=Mus mus	Gmppa	3.33	1
Q922R1	Phagosome assembly factor 1 OS=Mus musculus OX=10090	Phaf1	3.55	1
Q99J08	SEC14-like protein 2 OS=Mus musculus OX=10090 GN=Sec14	Sec14l2	2.98	1
Q99KC8	von Willebrand factor A domain-containing protein 5A OS	Vwa5a	5.8	4
Q99KX1	Myeloid leukemia factor 2 OS=Mus musculus OX=10090 GN=Mlf2	Mlf2	15.38	4
Q99LC2	Cleavage stimulation factor subunit 1 OS=Mus musculus OX	Cstf1	9.28	3
Q99LE6	ATP-binding cassette sub-family F member 2 OS=Mus musc	Abcf2	16.56	9
Q99LX5	Multiple myeloma tumor-associated protein 2 homolog OS	Mmtag2	5.38	1
Q99M07	Cytochrome c oxidase assembly factor 5 OS=Mus musculus	Coa5	20.27	1
Q99MX7	Transmembrane protein 121B OS=Mus musculus OX=10090	Tmem121b	1.57	1
Q99N93	Large ribosomal subunit protein uL16m OS=Mus musculus	Mrpl16	26.29	8
Q99N94	Large ribosomal subunit protein bL9m OS=Mus musculus O	Mrpl9	10.19	3
Q99N95	Large ribosomal subunit protein uL3m OS=Mus musculus O	Mrpl3	4.31	1
Q9CPS7	RNA-binding protein PNO1 OS=Mus musculus OX=10090 GNPno1	Pno1	12.9	3
Q9CPV4	Glyoxalase domain-containing protein 4 OS=Mus musculus	Glod4	18.46	5
Q9CPW3	Large ribosomal subunit protein mL54 OS=Mus musculus O	Mrpl54	7.41	1
Q9CQH7	Transcription factor BTF3 homolog 4 OS=Mus musculus OX=	Btf3l4	7.59	1
Q9CQL6	Large ribosomal subunit protein bL35m OS=Mus musculus	Mrpl35	4.26	1
Q9CQM0	Nicotin-1 OS=Mus musculus OX=10090 GN=Nicn1 PE=1 SV=Nicn1	Nicn1	5.16	1
Q9CQP0	Large ribosomal subunit protein bL33m OS=Mus musculus	Mrpl33	33.85	3
Q9CR09	Ubiquitin-fold modifier-conjugating enzyme 1 OS=Mus mus	Ufc1	5.99	1
Q9CR29	Coiled-coil domain-containing protein 43 OS=Mus musculu	Ccdc43	11.26	2
Q9CRC3	UPF0235 protein C15orf40 homolog OS=Mus musculus OX=1 --		30.16	3
Q9CVI2	Protein FAM133B OS=Mus musculus OX=10090 GN=Fam133Fam133b		8.57	2
Q9CWE0	Mitochondrial fission regulator 1-like OS=Mus musculus OX	Mtfr1l	11.76	3
Q9CYZ2	Tumor protein D54 OS=Mus musculus OX=10090 GN=Tpd52lTpd52l2		20	4
Q9CZJ2	Heat shock 70 kDa protein 12B OS=Mus musculus OX=1009	Hspa12b	14.16	10
Q9CZR8	Elongation factor Ts, mitochondrial OS=Mus musculus OX=	Tsfm	2.78	1
Q9CZT6	Protein CMSS1 OS=Mus musculus OX=10090 GN=Cmss1 PE=Cmss1		3.99	1
Q9D0B5	Thiosulfate sulfurtransferase/rhodanese-like domain-contai	Tstd3	6.37	1
Q9D0G0	Large ribosomal subunit protein mL65 OS=Mus musculus O	Mrps30	2.49	1
Q9D172	Glutamine amidotransferase-like class 1 domain-containing	Gatd3	13.53	3
Q9D1G5	Leucine-rich repeat-containing protein 57 OS=Mus musculu	Lrrc57	8.37	2
Q9D1H8	Large ribosomal subunit protein mL53 OS=Mus musculus O	Mrpl53	10.17	1
Q9D1I6	Large ribosomal subunit protein uL14m OS=Mus musculus	Mrpl14	28.97	5
Q9D4H2	GRIP and coiled-coil domain-containing protein 1 OS=Mus	Gcc1	1.03	1
Q9D6S7	Ribosome-recycling factor, mitochondrial OS=Mus musculu	Mrrf	17.56	4
Q9D735	Telomerase RNA component interacting RNase OS=Mus musc	Trir	13.87	3
Q9D7V2	LysM and putative peptidoglycan-binding domain-containin	Lysmd2	5.12	1
Q9D882	Protein FAM241B OS=Mus musculus OX=10090 GN=Fam241Fam241b		10	1
Q9D8W7	OCIA domain-containing protein 2 OS=Mus musculus OX=10	Ociad2	18.18	3
Q9D9V7	Protein DENND6B OS=Mus musculus OX=10090 GN=DenndDennd6b		7.69	4
Q9DB32	Hydroxyacylglutathione hydrolase-like protein OS=Mus mus	Haghl	3.89	1
Q9DB72	BTB/POZ domain-containing protein 17 OS=Mus musculus	Btbd17	8.58	3
Q9DBR2	Protein FAM13C OS=Mus musculus OX=10090 GN=Fam13c	Fam13c	1.66	1
Q9DCA2	Small ribosomal subunit protein uS11m OS=Mus musculus	Mrps11	5.24	1

Q9DCS2	Methyltransferase-like 26 OS=Mus musculus OX=10090 GN=Mettl26	4.9	1
Q9JHN8	Inactive serine/threonine-protein kinase 19 OS=Mus muscul Stk19	3.94	1
Q9JKL4	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex asse Ndufaf3	5.41	1
Q9JKV5	Secretory carrier-associated membrane protein 4 OS=Mus Scamp4	4.78	1
A2ARS0	Ankyrin repeat domain-containing protein 63 OS=Mus musc Ankrd63	19.49	7
Q8BRV5	Uncharacterized protein KIAA1671 OS=Mus musculus OX=1 Kiaa1671	6.82	2
Q91XA8	Kelch domain-containing protein 8A OS=Mus musculus OX= Klhdc8a	6	2
Q9D7X1	BTB/POZ domain-containing protein KCTD4 OS=Mus muscu Kctd4	5.02	1
Q9D937	Uncharacterized protein C11orf98 homolog OS=Mus musculu --	37.4	4
Q9JJR9	Nuclear receptor-interacting protein 3 OS=Mus musculus O Nrip3	12.08	2

Razor + unique peptides	Unique peptides	Intensity
1	0	1521.04
2	2	2171.05
10	10	9084.39
7	7	4641.14
5	5	3255.09
1	1	2188.08
2	2	1264.03
11	11	2801.09
1	1	501.016
6	6	1791.05
2	2	2309.08
12	12	1830.06
6	6	4252.17
30	30	12177.3
6	6	4513.1
3	3	3161.08
7	7	2576.07
2	2	3278.1
8	7	2376.06
3	3	1783.05
5	5	2871.09
4	4	1458.06
1	1	2044.05
2	2	1357.04
2	2	1839.04
2	2	3676.11
8	8	17364.4
4	4	1482.05
1	1	986.027
3	3	2223.07
7	7	7274.2
18	17	2505.09
5	5	3124.11
5	5	2272.04
5	5	19104.4
1	1	2105.05
2	2	994.039
12	12	6093.15
2	2	2401.04
6	6	3025.1
6	6	7935.23
25	25	96971.8
9	9	6747.18
11	11	5031.12
23	23	24562.5
10	10	2951.08
9	9	10202.3
10	10	12847.3
3	3	7955.18
1	0	1292.05

13	13	6212.19
6	6	3913.12
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2	2	1403.04
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2	2	1945.06
13	13	3564.1
5	5	3651.08
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8	8	7144.19
27	26	16322.4
3	3	1442.03
23	23	38537.1
2	2	1696.06
24	24	6493.19
1	1	773.02
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20	20	14299.3
2	2	2093.06
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7	7	4049.09
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4	4	2023.06
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2	2	1969.06

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1	1	5561.18
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3	3	3160.08
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1	1	408.011
3	2	1810.04
2	2	3273.1
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22	19	16619.4
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5	5	4020.14
27	27	35102.8
11	11	8668.23
2	2	2735.08
2	2	1913.03

9	9	8296.29
8	8	11863.4
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7	7	23596.9
5	5	4749.11
3	3	4819.13
1	1	1921.06
1	1	3019.1
7	7	6506.19
2	2	2165.04
2	2	2483.09
1	1	2961.06
6	6	5603.14
27	26	13059.5
14	14	5460.13
4	4	3355.09
11	11	7617.23
1	1	4988.12
6	6	7206.17
1	1	695.021
7	7	6873.21
1	1	950.028
1	1	2815.09
9	6	22815.4
2	2	1114.03
5	5	4484.12
3	3	4038.12
4	4	4297.11
5	5	8014.16
12	10	22655.7
5	5	13703.3
16	16	6283.17
2	2	2350.06
1	1	1996.06
2	2	1929.05
1	1	1920.07
21	21	9672.21
3	3	4467.11
21	21	86160.8
2	2	1856.05
9	9	9338.28
3	3	3331.09
2	2	986.032
10	10	8280.29
10	10	8528.17
3	3	4981.12
24	23	45931
7	7	15955.6
1	1	1819.06
2	2	1436.03
1	1	2032.07
1	1	1860.05
5	5	3338.11

1	1	1368.05
1	1	2493.06
7	7	14545.6
5	5	1915.07
6	6	6188.16
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9	9	3765.09
1	1	1598.06
1	1	870.029
1	1	1571.03
8	8	67616
3	3	2607.07
1	1	1582.05
3	3	5223.12
5	5	3655.1
1	1	5636.19
1	1	6369.22
1	1	3450.07
1	1	1504.04
3	3	18453.4
1	1	2065.07
2	2	5429.17
3	3	3349.12
2	2	2605.06
3	3	3125.08
4	4	4412.12
7	7	3941.11
1	1	1595.04
1	1	870.021
1	1	1381.04
1	1	3262.09
3	3	3459.09
2	2	1405.03
1	1	536.013
5	5	95189.4
1	1	4807.1
4	4	25435.3
3	3	8807.29
1	1	1780.05
1	1	773.02
3	3	3018.07
4	4	2933.06
1	1	861.025
3	3	5769.15
1	1	1223.03
1	1	955.024

1	1	2367.07
1	1	1437.04
1	1	1411.04
1	1	1208.04
7	7	15310.4
2	2	2867.08
2	2	1391.03
1	1	558.022
4	4	21538.8
2	2	2401.08

The different genes in microglia after treated with hCyst-C, related to Figure 7.

Gene	p_val	avg_logFC	pct.1	pct.2	avg_logExp.1
Fgf13	1.1827071E-31	1.0887512057		0.346	0.203 3.1156149799
Ctsd	7.7462789E-29	0.6480020986		0.633	0.511 4.2627277136
Or5v1b	6.8392815E-28	1.3307136733		0.188	0.077 1.792381601
Apbb2	4.2824473E-25	1.0714313926		0.266	0.149 2.2640849969
Ank	6.8899922E-24	1.3911664714		0.189	0.089 1.8387297233
Fcrls	8.9381274E-24	-0.7426110708		0.214	0.335 1.8644632237
Lrmda	1.1799982E-23	0.6331138659		0.454	0.327 3.324029238
Myo1e	3.4531425E-23	1.5303146723		0.146	0.057 1.3597742305
Cacna1a	8.3609048E-23	0.8733055788		0.301	0.184 2.4462225962
Tyrobp	1.1123019E-20	1.0621740327		0.208	0.11 1.8529789983
Cd9	4.2381315E-20	0.8331388413		0.294	0.184 2.4534089701
Ctnna3	1.3505932E-18	1.4626230408		0.18	0.094 2.2327805977
Acaca	1.5825249E-18	1.1226468962		0.167	0.083 1.3980318713
Serpine2	2.2855574E-18	0.8076462558		0.261	0.159 2.2106305559
Plxdc2	8.208937E-17	0.3785955639		0.72	0.641 4.522172046
Lgmn	8.0196498E-16	-0.4856036281		0.391	0.5 2.9026177172
Myo1f	1.1647859E-15	0.7114803776		0.312	0.216 2.5459796135
AU020206	5.4581708E-15	0.8967283496		0.199	0.118 1.7875682736
Asap1	6.5601453E-15	0.4853618881		0.438	0.337 3.0341321408
Cadm1	7.6472737E-15	0.5316776184		0.415	0.316 3.0433106343
Arhgap24	2.5927629E-14	1.0866752397		0.147	0.077 1.3321191472
Lyz2	4.1868956E-14	1.0275816527		0.101	0.043 0.6600611968
Ctsz	1.2961292E-13	0.7639764828		0.237	0.154 2.0819842124
H2-D1	1.6263657E-13	1.0383070416		0.141	0.075 1.1531669788
Calm2	3.2075283E-13	-0.5040239165		0.294	0.384 2.4072982902
Otulinl	4.3042341E-13	-0.5053544208		0.217	0.306 1.9069095296
Gm10790	6.6270204E-13	-0.5899800722		0.181	0.262 1.6151956429
H2-K1	9.8513169E-13	0.8789947615		0.155	0.087 1.2868988227
Trem2	2.0420146E-12	0.5235646617		0.318	0.231 2.543796599
Prkg1	2.5547541E-12	0.7160928911		0.234	0.158 2.0008218121
Tgfbr2	3.0460562E-12	0.6312462842		0.244	0.162 2.0434104582
Samsn1	3.7645928E-12	0.9801535187		0.13	0.069 1.0518125979
Myo5a	4.6983947E-12	0.8509636399		0.197	0.127 1.68232726
Vps13c	4.9742479E-12	0.7311434587		0.209	0.136 1.7306258978
Nrp1	6.831776E-12	0.8146107241		0.184	0.114 1.6177433641
Plekhm2	8.8664125E-12	1.0974764289		0.103	0.049 0.6210321867
Etl4	1.4509538E-11	0.5391525489		0.282	0.201 2.3039529051
Fnip2	1.5975577E-11	1.0182979287		0.122	0.065 0.9677134994
Tuba1a	1.6167486E-11	-0.7845118816		0.101	0.162 0.6080708281
Usp12	2.8069459E-11	0.9935748741		0.129	0.071 1.0220633478
Rasgrp3	3.7339255E-11	0.5590880372		0.25	0.171 2.1041496095
Soat1	5.63271E-11	0.9493077386		0.128	0.07 0.9413707906
Stab1	7.8055256E-11	-0.6536047201		0.085	0.141 0.5274394687
Elmo1	1.7416273E-10	-0.3137224562		0.505	0.586 3.4855196772
Ophn1	1.7559502E-10	-0.4140162769		0.313	0.396 2.5009584445
Cd63	2.6050454E-10	0.8947865913		0.133	0.077 1.084423918
Ly86	3.0551332E-10	0.4088349083		0.435	0.356 3.295289714
Plek	4.3401331E-10	1.0065340572		0.125	0.073 1.0134647565
Cd84	7.3133482E-10	0.5378488005		0.262	0.19 2.2178611482
Calm1	1.1327763E-09	-0.4057856392		0.383	0.457 2.9869018048
Selplg	1.1959036E-09	-0.4260072085		0.269	0.347 2.2588211238
Lyst	1.6954996E-09	0.6553008434		0.186	0.124 1.5455374917

Arhgap26	2.0799435E-09	0.993150983	0.119	0.069	0.8445755972
Fkbp5	2.5266663E-09	-0.6681179344	0.111	0.167	0.7251374571
Dock10	3.9086252E-09	-0.3913661185	0.34	0.415	2.6955202819
Cd68	5.9986227E-09	0.7722703162	0.166	0.111	1.4570009934
Dgkd	8.9288156E-09	0.6531745229	0.169	0.111	1.3728038862
Srgap2	1.0098842E-08	-0.264929445	0.527	0.6	3.5983585167
Ctsb	1.5751291E-08	0.404830011	0.378	0.312	2.8659932551
Ltc4s	1.7141693E-08	-0.6370261056	0.078	0.126	0.2982388527
Ifngr1	2.1547204E-08	-0.7019876697	0.084	0.131	0.3278149845
Abhd12	2.5218717E-08	0.3719003441	0.38	0.312	2.831148422
Atp5h	3.5207228E-08	-0.6768318738	0.078	0.124	0.2508583577
Csf1r	3.637341E-08	-0.337094873	0.345	0.419	2.7072990767
Csf3r	3.9096158E-08	0.4837724725	0.267	0.204	2.1971678699
Sparc	4.7903468E-08	-0.402282605	0.31	0.379	2.5476657115
Glul	5.7453662E-08	-0.5788144888	0.102	0.152	0.6119306817
Cacnb2	7.5324333E-08	-0.5485149837	0.145	0.201	1.1336690207
Snx24	7.5466554E-08	0.6207873774	0.167	0.114	1.3854419223
Abcd2	1.1749732E-07	0.7144995335	0.127	0.08	1.0072908342
Cpeb2	1.3143825E-07	0.8458712205	0.102	0.06	0.6381094149
Dpy19l4	1.624202E-07	0.6741152125	0.112	0.068	0.7241029746
Ptprc	1.838547E-07	0.3934385566	0.32	0.256	2.5421980705
Patl2	1.9422545E-07	0.9424801465	0.103	0.061	0.8869198164
Ywhah	2.1021849E-07	-0.5123692982	0.119	0.171	0.9135807698
Tmem119	2.2175656E-07	-0.6110219005	0.082	0.125	0.3483252085
Rin2	2.3442901E-07	0.7273740966	0.11	0.067	0.68688906
Agmo	2.7961788E-07	-0.4476811361	0.145	0.199	1.2215203914
Dleu2	3.5033789E-07	-0.3424861195	0.282	0.35	2.3496837127
Ckb	3.5825782E-07	-0.484580591	0.195	0.252	1.6090595063
Gpm6a	4.511737E-07	-0.398457423	0.22	0.28	1.7973817157
Frmd4a	6.5896218E-07	-0.2966258596	0.424	0.481	3.0292718088
Cacnb4	8.0870145E-07	0.6436555567	0.152	0.105	1.1490543997
Ivns1abp	9.1966731E-07	-0.364421304	0.273	0.335	2.2702593056
Irf8	1.0086737E-06	0.4584820624	0.207	0.151	1.7481015351
Apbb1ip	1.0406284E-06	0.2852465419	0.476	0.415	3.3589019853
Ctsl	1.3068777E-06	0.4379729539	0.234	0.178	1.9950118476
Acer3	1.4290048E-06	0.4309186529	0.215	0.162	1.7758513906
Sirpa	1.5283338E-06	0.2823267144	0.489	0.431	3.4227460841
Mitf	1.5943665E-06	0.4648763365	0.217	0.165	1.8583953763
Tmcc3	1.6191768E-06	0.3516214211	0.478	0.434	3.4639619048

avg_logExp.2	p_val_adj
2.0268637742	3.0483094E-27
3.6147256151	1.9965259E-24
0.4616679277	1.7627564E-23
1.1926536043	1.103758E-20
0.4475632519	1.7758266E-19
2.6070742945	2.303713E-19
2.6909153721	3.0413274E-19
-0.1705404418	8.9001295E-19
1.5729170173	2.1549396E-18
0.7908049657	2.8668469E-16
1.6202701288	1.092336E-15
0.7701575569	3.4810188E-14
0.2753849751	4.0787996E-14
1.4029843001	5.8907956E-14
4.1435764821	2.1157714E-12
3.3882213453	2.0669845E-11
1.8344992359	3.0021191E-11
0.890839924	1.4067889E-10
2.5487702527	1.6908119E-10
2.5116330159	1.9710083E-10
0.2454439075	6.682587E-10
-0.3675204559	1.0791305E-09
1.3180077296	3.3406434E-09
0.1148599371	4.1917949E-09
2.9113222066	8.2670835E-09
2.4122639504	1.1093733E-08
2.205175715	1.7080482E-08
0.4079040612	2.5390784E-08
2.0202319373	5.2630885E-08
1.2847289209	6.5846233E-08
1.412164174	7.8509053E-08
0.0716590793	9.7028614E-08
0.8313636201	1.2109642E-07
0.9994824391	1.2820626E-07
0.80313264	1.760822E-07
-0.4764442423	2.2852292E-07
1.7648003562	3.7396884E-07
-0.0505844294	4.1175451E-07
1.3925827097	4.1670078E-07
0.0284884737	7.2346222E-07
1.5450615724	9.6238195E-07
-0.007936948	1.4517747E-06
1.1810441888	2.0117962E-06
3.7992421334	4.4888703E-06
2.9149747215	4.5257861E-06
0.1896373266	6.7142439E-06
2.8864548057	7.8743003E-06
0.0069306993	1.1186259E-05
1.6800123477	1.8849424E-05
3.3926874441	2.9196175E-05
2.6848283322	3.082322E-05
0.8902366482	4.3699808E-05

-0.1485753858	5.3608463E-05
1.3932553915	6.5122296E-05
3.0868864004	0.0001007409
0.6847306772	0.0001546085
0.7196293633	0.0002301313
3.8632879617	0.0002602876
2.4611632441	0.0004059738
0.9352649583	0.00044181
1.0298026542	0.0005553576
2.4592480779	0.0006499872
0.9276902316	0.0009074311
3.0443939497	0.0009374883
1.7133953974	0.0010076644
2.9499483165	0.001234664
1.1907451705	0.0014808107
1.6821840044	0.0019414094
0.7646545448	0.001945075
0.2927913006	0.0030283759
-0.2077618057	0.0033876894
0.0499877621	0.0041862182
2.1487595139	0.0047386711
-0.0555603301	0.0050059667
1.4259500681	0.0054181713
0.959347109	0.0057155536
-0.0404850366	0.0060421732
1.6692015275	0.0072068713
2.6921698322	0.0090296087
2.0936400973	0.009233737
2.1958391388	0.011628551
3.3258976684	0.0169840913
0.505398843	0.0208434712
2.6346806096	0.0237035054
1.2896194727	0.0259975568
3.0736554435	0.026821157
1.5570388937	0.0336834663
1.3449327377	0.0368311697
3.1404193698	0.0393912756
1.3935190399	0.0410932016
3.1123404836	0.0417326637