

Role of 3 β -Hydroxysteroid- Δ 24 Reductase in Mediating Anti-Inflammatory Effects of High-Density Lipoproteins in Endothelial Cells

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ABSTRACT

Objective: To investigate the ability of high density lipoproteins (HDLs) to up-regulate genes with the potential to protect against inflammation in endothelial cells.

Methods and Results: Human coronary artery endothelial cells (HCAECs) were exposed to reconstituted HDLs (rHDLs) for 16 hours before being activated with tumor necrosis factor- α (TNF- α) for 5 hours. rHDLs decreased vascular cell adhesion molecule-1 (VCAM-1) promoter activity by 75% ($P<0.05$), via the nuclear factor-kappa B (NF- κ B) binding site. rHDLs suppressed the canonical NF- κ B pathway and decreased many NF- κ B target genes. Suppression of NF- κ B and VCAM-1 expression by rHDLs or native HDLs was dependent on an increase in 3 β -hydroxysteroid- Δ 24 reductase (DHCR24) levels ($P<0.05$). The effect of HDLs on DHCR24 is dependent on SR-BI but not ABCAI or ABCGI. Silencing DHCR24 expression increased NF- κ B (1.2-fold, $P<0.05$), VCAM-1 (30-fold, $P<0.05$) and NF- κ B p50 (4-fold, $P<0.05$) and p65 subunits (150-fold, $P<0.05$). TNF- α activation of siDHCR24-treated cells increased expression of VCAM-1 (550-fold, $P<0.001$) and NF- κ B (9-fold, $P<0.001$) that could no longer be suppressed by rHDLs.

Conclusions: Results suggest that anti-inflammatory effects of rHDLs are mediated partly through an up-regulation of DHCR24. These findings raise the possibility of considering DHCR24 as a target for therapeutic modulation.

Subject Codes: Atherosclerosis pathophysiology [134], Gene expression [142], Gene regulation [143], Lipid and lipoprotein metabolism [90]

Condensed Abstract

This study investigates the ability of high density lipoproteins (HDLs) to up-regulate genes with the potential to protect against inflammation in endothelial cells. The results suggest that the effects of rHDLs are mediated through an up-regulation of 3 β -hydroxysteroid- Δ 24 reductase (DHCR24) that functioned as a negative regulator of nuclear factor-kappa B.

Key Words

atherosclerosis, endothelial cell, inflammation, nuclear factor-kappa B, 3 β -
hydroxysteroid- Δ 24 reductase

High density lipoproteins (HDLs) have multiple cardio-protective properties. The best known relates to their ability to promote efflux of cholesterol from macrophages (1).

They also inhibit endothelial inflammation (2-5).

HDLs inhibit expression of vascular cell adhesion molecule-1 (VCAM-1), intercellular adhesion molecule-1 (ICAM-1) and E-selectin both *in vitro* (4-6) and *in vivo* (3,7,8) in a process that may be secondary to a suppression of NF- κ B activity (4,5,9). We now provide evidence that an HDL-mediated inhibition of VCAM-1 in activated endothelial cells is via blockade of signaling through the classical NF- κ B pathway.

Anti-inflammatory effects of HDLs are apparent with both native HDLs and discoidal reconstituted HDLs (rHDLs) that contain only apolipoprotein A-I (apoA-I) and phosphatidylcholine (6,10). Furthermore, the ability of rHDLs to inhibit VCAM-1 expression in TNF α -activated human umbilical vein endothelial cells (HUVECs) persists even if the rHDLs are removed from the culture medium several hours before the cells are activated by TNF α (11).

A similar phenomenon also occurs *in vivo*. Insertion of a non-occlusive collar around a carotid artery of normal-fed rabbits induces expression of VCAM-1 and ICAM-1 in the endothelium and the infiltration of neutrophils into the artery wall. Intravenous infusions of a small amount of rHDLs suppress both the infiltration of neutrophils and the expression of endothelial VCAM-1 and ICAM-1 (7). This anti-inflammatory effect of rHDLs persists even if rHDLs are given 24 hours before applying the inflammatory insult at which time virtually all of the injected rHDLs have been removed from the circulation (8).

On the basis of these findings, we speculated that exposure of endothelial cells to rHDLs induces expression of a protein with the potential to protect against a subsequent inflammatory insult. We now show that incubation of human coronary artery endothelial cells (HCAECs) with either rHDLs or native HDLs induces expression of the anti-oxidant protein, 3 β -hydroxysteroid- Δ 24 reductase (also known as 24-dehydrocholesterol reductase - DHCR24) in an SR-BI dependent manner. Furthermore, we show that silencing DHCR24 expression increases NF- κ B and VCAM-1 levels in both non-activated and TNF α -activated HCAECs with an associated loss of the anti-inflammatory effects of rHDLs.

METHODS

Preparation of reconstituted high density lipoproteins

ApoA-I was purified from human plasma by sequential ultracentrifugation (Beckman Coulter, Fullerton, CA, USA), delipidation and anion-exchange chromatography as previously described (12). Discoidal rHDLs containing apoA-I as their sole protein constituent and 1-palmitoyl-2-linoleoyl-sn-glycero-3-phosphatidylcholine (PLPC, Avanti Polar Lipids, Alabaster, AL, USA) as their sole lipid were prepared by the cholate dialysis method (13).

Preparation of high density lipoproteins from rabbit and human plasma

Twenty New Zealand White rabbits (Institute of Medical and Veterinary Sciences, Adelaide, South Australia) were randomly assigned to experimental groups.

Procedures were approved by the Sydney South West Area Health Services Animal Welfare Committee. Chronic arterial inflammation was induced by 6 weeks of feeding a diet containing 0.2% cholesterol-enriched chow. Animals were given intravenous infusions (1ml/min via a catheterized ear vein) of either saline or rHDL containing 25 mg of apoA-I (8mg/kg) on days 3 and 5 of the final week of the study. At the end of the 6-week study, blood was collected via cardiac puncture in tubes containing disodium EDTA and placed immediately on ice before animals were euthanized.

Human and rabbits HDLs were isolated by sequential ultracentrifugation (see Supplementary Methods).

Cell Culture

Human coronary artery endothelial cells (HCAECs, Cell Applications, San Diego, CA, USA) were cultured in HCAEC growth medium (Cell Applications). Unless otherwise stated, HCAEC were incubated for 16 hours with rHDLs, native human HDLs (1 mg/ml) or rabbit HDLs (32 μ mol/L final apoA-I concentration), or PBS (vehicle control), then stimulated with or without TNF α (0.1 ng/ml) for 5 hours at 37°C in a 5% CO₂ incubator. For the time course experiment, cells were seeded in a 12-well plate at a cell density of 1X10⁵ cells/ml (1 ml per well) and pre-incubated with rHDLs (apoA-I 16 μ mol/L) or PBS for 0, 1, 2, 4, 8, 12 or 16 hours. The media was then removed, cells washed twice with 500 μ l PBS and fresh media added. At 0, 4, 8, 24, 72 or 120 hours post rHDL exposure, total RNA was isolated using TRI reagent (Sigma-Aldrich).

Cells were also incubated with 0.5 μ M simvastatin (Sigma-Aldrich, Castle Hill, NSW, Australia) or 54 μ M cyclodextrin (Sigma-Aldrich) for 16 hours before isolating RNA.

Transient Cell Transfections and Luciferase Measurements

HCAECs (1X10⁵ cells/well of a 12-well plate) were transfected using Effectene (Qiagen, Hilden, Germany) with one of the following plasmids: I κ B α -EGFP reporter vector (Clontech Laboratories, Mountain View, CA, USA), NF- κ B-luciferase reporter vector (Promega Corporation, Madison, WI, USA) or VCAM-1 promoter-luciferase reporter vectors (14). Luciferase activity was assayed using the Dual-Luciferase Reporter System (Promega). I κ B α levels were measured by flow cytometry in a Cytomics FC 500 flow cytometer (Beckman Coulter) using CXP software (Beckman Coulter).

For silencing experiments, HCAECs were transfected with DHCR24 siRNA (Santa Cruz Biotechnology, Santa Cruz, CA, USA), siABCAI, siABCGI or SR-BI siRNAs (Qiagen). See Supplementary Methods.

I κ B Kinase (IKK) Assay

HCAECs (1×10^5 cells/12-well plate) were pre-treated with rHDLs or PBS for 16 hours, then stimulated with TNF α for 7.5 mins. IKK activity was measured using IKK substrate peptide (Millipore, Billerica, MA, USA) and Kinase-Glo reagent (50 μ l, Promega, Supplementary Methods).

Human NF- κ B Target Gene Array Analysis

The TransSignal NF- κ B Target Gene array was used to measure human NF κ B target gene expression (Panomics, Princeton, NJ, USA, see Supplementary Method).

Real-time PCR

Total RNA extracted from HCAECs using TRI reagent (Sigma-Aldrich) was normalized to a concentration of 100 ng/ μ l using the SYBR Green II assay (Molecular Probes, Invitrogen, Melbourne, Australia) and iSCRIPT/ iQ SYBR Green Supermix used to perform RT-PCR in a BioRad iQ5 thermocycler. Relative changes in mRNA levels were determined by the $\Delta\Delta$ CT method (15), using β 2-microglobulin and 18S levels as controls. Primer pair sequences are included in the Supplement Table I.

Affymetrix Human Genome Microarray

Total RNA (10 µg) was extracted using TRI reagent (Sigma-Aldrich). RNA integrity was determined using an Experion RNA analyzer (BioRad). Samples were then sent to the Australian Genome Research Facility (AGRF; Melbourne, Australia).

Microarray image acquisition and differentiated gene analysis were completed using Partek Genomics Suite software (Partek Incorporated, St Louis, Missouri, USA).

Western Blot Analysis

Protein extracts were subjected to Western blot analysis and probed with a goat polyclonal anti-human DHCR24 antibody (Santa Cruz Biotechnology; 1:1000 dilution) and the mouse monoclonal anti-human β -actin antibody (Chemicon, Temecula, CA, USA; 1:10 000 dilution). Direct chemiluminescence imaging of the blots was performed using the ChemiDoc XRS (BioRad) imaging system. Quantity One software (BioRad) was used to quantify band densities.

NF- κ B Nuclear Translocation Assay

Nuclear extracts were extracted from HCAECs using the NucBuster protein extraction kit (Merck & Co., Whitehouse Station, NJ, USA). The NF- κ B NoShift transcription factor assay kit was used to measure NF- κ B levels (Merck & Co.).

Statistical Analysis

Data are expressed as mean \pm SEM. Significant differences in treatments were determined by one-way ANOVA with Bonferroni's post-test analysis used to determine significance. Significance was set at $P < 0.05$.

RESULTS

Role of NF- κ B in the anti-inflammatory properties of rHDLs

To determine the role of NF- κ B in the rHDL-mediated suppression of VCAM-1 in activated HCAECs, we studied the VCAM-1 promoter that is controlled mainly by three nuclear factors, activator protein-1 (AP-1), GATA, and NF- κ B (16). Nuclear levels of AP-1 and NF- κ B both increase in response to TNF α (17) and both are involved in TNF α stimulation of VCAM-1 expression (18). To test the possibility that effects on AP-1 and NF- κ B may contribute to the ability of rHDLs to inhibit TNF α -induced VCAM-1 expression, a full-length VCAM-1 promoter DNA fragment (pFFLVCAM-1) and also a shorter fragment of the VCAM-1 promoter DNA that retained the NF- κ B sites but not the AP-1 binding site (pF2VCAM-1) were generated by PCR and sub-cloned into the pGL3-luciferase reporter vector (Figure 1A). Transfected HCAECs were exposed to rHDLs for 16 hours before being activated with TNF α . Promoter activity of both FFLVCAM-1 and F2VCAM-1 were significantly inhibited by rHDLs ($P < 0.005$) (Figure 1A) indicating that effects on the NF- κ B sites fully explain the ability of rHDLs to inhibit VCAM-1 expression in activated endothelial cells.

Effect of rHDLs on signalling through the IKK/I κ B α /NF- κ B pathway

Prior exposure of HCAECs to rHDLs suppressed the TNF α induced IKK activity ($P < 0.05$) (Figure 1B). To determine the effect on I κ B α levels and NF- κ B activity, HCAECs were transfected with an I κ B α -EGFP reporter vector or a NF- κ B-luciferase reporter vector. Exposure of the transfected cells to rHDLs increased I κ B α levels

(Figure 1C) and suppressed NF- κ B mediated DNA transcription as measured by a decrease in luciferase activity (Figure 1D).

Effect of rHDLs on TNF α -stimulated NF- κ B target gene expression in HCAECs

To investigate effects of rHDLs on the expression of all NF- κ B target genes, HCAECs were exposed to rHDLs or PBS for 16 hours before being activated with TNF α for 5 hours. Exposure to rHDLs suppressed a range of NF- κ B-regulated genes (as assessed by macroarray) (Figure 2A), including those belonging to the cell adhesion molecule (CAMs) and metalloproteinase families (Figure 2B), the cytokine and growth factor families (Figure 2C), genes involved in cell cycle regulation (Figure 2D) and AGER, DDH1, HMG14, PRG1 and LAMB2 (Figure 2E). Real-time PCR verified the findings for a selection of genes (Supplementary Table II).

Effect of rHDLs on DHCR24 expression in HCAECs

The above experiments suggest that preincubation of HCAECs with rHDLs induced changes in gene expression so as to make them resistant to subsequent inflammatory insult. To investigate this, HCAECs were incubated with rHDLs (apoA-I 16 μ mol/L) or PBS for 16 hours before measuring mRNA levels by Affymetrix human genome U133 Plus 2.0 arrays (54 675 probe sets). The relative expression levels of the differentially expressed genes are shown in the online supplement “Gene List” (Supplementary Table III) at <http://atvb.ahajournals.org>. The top differentially expressed genes are shown in Table 1. All of the differentially expressed genes were filtered by Ingenuity Pathway Analysis database (<http://www.ingenuity.com>). This analysis showed that regulated genes functioned in cholesterol metabolism, inflammation and/or oxidative stress (Supplementary Figure I) including 25

antioxidant proteins or regulators of antioxidant proteins (Supplementary Figure II). One gene, DHCR24, was highlighted in the top 10 gene list (3rd most up-regulated gene Table 1) and clustered in the cholesterol synthesis biosynthesis pathway (Supplementary Figure I). DHCR24 catalyses the final step in the cholesterol biosynthesis pathway, desmosterol to cholesterol. DHCR24 is also a potent H₂O₂ scavenger and has antioxidant (19) and anti-apoptotic effects in neuronal cells (20). Real-time PCR and Western blot analysis confirmed that rHDLs increased DHCR24 mRNA levels by 8-fold (Figure 3A) and protein levels by ~2-fold (Figure 3B). The difference in expression level measured for mRNA and protein most probably reflects the increased sensitivity of real-time PCR versus antibody-based chemiluminescence-dependent Western blot analysis. The rHDL-induced increase in DHCR24 mRNA levels persisted even in the presence of TNF α (Figure 3A).

We also demonstrated the ability of native HDLs isolated from both human and rabbit plasma (Figure 3C) to increase DHCR24 expression. In contrast, human LDLs had no effect on DHCR24 expression (Figure 3C).

rHDLs increased DHCR24 expression in a dose-dependent manner (Figure 3D), with effects apparent at apoA-I levels as low as 8 μ mol/L.

In previous studies, we reported that rHDLs inhibited VCAM-1 expression in activated endothelial cells even if the rHDLs had been removed before activation with TNF α (11). This was also true for DHCR24 expression. HCAECs required at least an 8 hour exposure to rHDLs to induce DHCR24 expression (Figure 3E). However, once induced, the effect persisted for at least 8 hours even after the rHDLs had been removed with DHCR24 expression returning to the un-induced state by 24 hours (Figure 3F).

Effects of DHCR24 on VCAM-1 expression and NF- κ B activity

To determine whether DHCR24 is involved in the ability of rHDLs to suppress inflammatory gene expression in HCAECs, cells were transfected with siRNA targeted against DHCR24. siRNA decreased DHCR24 mRNA levels by about 70% (data not shown) which was associated with a 30-fold increase in VCAM-1 expression ($P < 0.05$, Figure IIIA Supplementary). When DHCR24-silenced HCAECs were treated with TNF α , VCAM-1 expression was increased 550-fold compared with levels in non-activated cells. In contrast to the control cells, rHDLs did not significantly suppress VCAM-1 expression in TNF α activated DHCR24-silenced cells. DHCR24-silenced HCAECs also showed increased expression of the NF- κ B subunits, p50 (4-fold, $P < 0.05$, Figure IIIB Supplementary) and p65 (50-fold, $P < 0.05$, Supplementary Figure IIIC) and a 25% ($P < 0.05$) increase in NF- κ B activity, relative to controls (data not shown).

To determine whether these effects of HDLs on DHCR24 were related to cell cholesterol synthesis or efflux, we treated HCAECs with cyclodextrin to promote cholesterol efflux or simvastatin to block cholesterol synthesis. Cyclodextrin had no effect on DHCR24 or VCAM-1 expression (Figure 4A). Predictably, simvastatin decreased DHCR24 but this was not associated with an increase in VCAM-1 expression, suggesting that inhibition of cholesterol synthesis was not responsible for the elevated VCAM-1 expression in silenced-DHCR24 cells. In keeping with the cyclodextrin result, we found that lipid-free AI had no effect on DHCR24 or VCAM-1 expression (Figure 4B). Furthermore, silencing ABCAI also had no effect on DHCR24 expression or on the ability of rHDLs to increase DHCR24 expression. Similarly, silencing ABCGI had no effect on DHCR24 expression. Silencing SR-BI,

however, did reduce DHCR24 levels both in the presence and absence of rHDLs suggesting that SR-BI is involved in the ability of rHDLs to increase DHCR24 expression (Figure 4C). Together, this final series of experiments suggested that cholesterol synthesis/efflux is not involved in the regulation of DHCR24 by HDLs or in the effects of DHCR24 in HCAECs.

DISCUSSION

This study demonstrates that rHDL-mediated suppression of NF- κ B activity in activated endothelial cells (4,5,11) is achieved via the classical IKK/I κ B α /NF- κ B signaling pathway, with rHDLs suppressing IKK, increasing I κ B α levels, thereby suppressing NF- κ B nuclear translocation. Furthermore, suppression of NF- κ B activity by rHDLs explains the ability of rHDLs to inhibit VCAM-1 expression and monocyte adhesion to activated endothelial cells. The ability of rHDLs to inhibit many NF- κ B target genes may also explain both the known anti-inflammatory and anti-apoptotic properties of rHDLs.

The most striking finding of this study is the ability of both native and reconstituted HDLs to increase endothelial cell expression of DHCR24, an effect that persisted for at least 8 hours after the HDLs had been removed from the culture media. Together, these findings provide an insight into the previously unexplained observation that the response of endothelial cells to an inflammatory insult is markedly reduced by prior exposure to rHDLs even if the rHDLs are removed several hours prior to initiation of the inflammatory insult (11). It may also explain why rabbits injected intravenously with rHDLs 24 hours prior to inserting a non-occlusive silastic collar around the carotid artery remain protected against the resulting acute vascular inflammation, even though the injected rHDLs have long since been cleared from the plasma (9).

DHCR24 catalyses the final step in cholesterol biosynthesis, the conversion from desmosterol to cholesterol (21). However, in addition, DHCR24 is anti-apoptotic and has been shown to regulate cell growth and senescence via an interaction with p53 (20,22). The anti-apoptotic effects may relate to the ability of DHCR24 to scavenge

hydrogen peroxide (19). Since NF- κ B is redox sensitive, it is possible that these antioxidant properties suppress both endothelial cell NF- κ B activity and the downstream expression of VCAM-1. This possibility is supported by finding that NF- κ B activity and VCAM-1 expression were both increased in endothelial cells in which the gene for DHCR24 had been silenced (Supplementary Figure III). Since silencing DHCR24 may have reduced cell cholesterol synthesis and since incubation with rHDLs would have increased cholesterol efflux, it was necessary to determine whether any of the effects observed in these studies were secondary to changes in cellular cholesterol. This possibility was excluded by finding that neither simvastatin nor cyclodextrin had any effect on either DHCR24 or VCAM-1 (Supplementary Figure III). Rather, it was apparent that rHDLs increased the expression of a number of genes functionally associated with the oxidative stress response, including a number of antioxidant proteins, independent of cholesterol metabolism. Interestingly, the most down-regulated gene by HDLs in HCAECs was thioredoxin-interacting protein (TXNIP). TXNIP is an oxidative stress mediator that inhibits thioredoxin (a potent antioxidant) thus the downregulation of TXNIP is in keeping with an augmented antioxidant potential in HCAECs treated with HDLs.

Native as well as reconstituted HDLs increased DHCR24 expression. The observation that lipid-free AI had no effect raises the possibility that phospholipids (rather than apoA-I) may have been responsible for the effect, consistent with previous reports that phospholipid vesicles are as effective as rHDLs in suppressing TNF α -activation of VCAM-1 expression in human endothelial cells (23).

These studies provide a plausible mechanism to explain previous observations that rHDLs inhibit cytokine-induced cell adhesion molecule expression (4,6,24), metalloproteinase expression (25), apoptosis (26) and thrombus formation (27) in cell and animal models of inflammation. Specifically, we have shown that rHDLs suppress the cytokine-induced expression of many of the NF- κ B gene targets, possibly explaining an ability of HDLs to retard plaque progression and/or promote plaque stability. If a reduced expression of DHCR24 were to contribute to development of atherosclerosis, it is possible that an HDL-mediated increase in its expression may limit plaque growth and/or stabilize vulnerable atherosclerotic plaques and reduce their potential to rupture and cause clinical events.

In conclusion, rHDLs have been shown to inhibit VCAM-1 expression in activated endothelial cells via suppression of NF- κ B activity. We have also shown that the suppression of NF- κ B activity is achieved via blockade of the classical NF- κ B signaling pathway rather than through the down-regulation of individual subunit expression of NF- κ B per se. This effect of HDL then leads to decreased expression of many NF- κ B target genes. And finally, we have shown that rHDLs stimulate endothelial cell expression of DHCR24 in a process that may explain part of the anti-inflammatory properties of HDLs. This involvement of DHCR24 raises the possibility that it should be considered as a future target for therapeutic modulation.

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Disclosures

None

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FIGURE LEGENDS

Figure 1: rHDLs suppress TNF α -activated signalling through the canonical NF κ B pathway

(A) Full-length or truncated VCAM-1 promoter (GATA and NF κ B)(B) IKK activity (C) I κ B α levels (D) NF- κ B-driven luciferase activity. Treatment was rHDLs for 16 hours then TNF α exposure for 5 hours (except IKK TNF α exposure 7.5 mins). All results are mean \pm SEM, relative to control cells. *P<0.05 PBS+TNF α versus rHDLs+TNF α .

Figure 2: rHDLs suppress TNF α activated NF- κ B target gene expression

(A) HCAECs were exposed to rHDLs for 16 hours, then TNF α for 5 hours. Shown are macroarray images for PBS+TNF α (CTRL) and rHDLs+ TNF α (rHDL). (B)-(E) rHDLs decreased NF- κ B-regulated genes including (B) cell adhesion molecules (CAMs) and metalloproteinases (C) cytokines/growth factors (D) cell cycle regulators and (E) other genes.

Figure 3: DHCR24 levels are increased in endothelial cells in response to rHDLs

HCAECs were treated with (A) and (B) rHDLs or (C) native HDLs or native LDLs (D) Dose response rHDLs (E) Time course and memory effect rHDLs. *P<0.05 compared to PBS-treated cells, #P<0.05 compared to HDL isolated from saline-treated rabbits.

Figure 4: rHDLs regulate DHCR24 expression via a mechanism that involves SR-BI but not ABCAI-mediated cholesterol efflux

(A) Effect of rHDLs, cyclodextrin (54 μ M), simvastatin (0.5 μ M) or PBS. (B) Effect of lipid-free apolipoprotein A-I (LFAI, 16 μ mol/L) or PBS. (C) Effect of silencing RNA targeting ABCAI, ABCGI or SRBI. *P<0.05 compared to PBS-treated controls

(siControl). **P<0.05 compared to PBS-treated siABCAI #P<0.05 compared to PBS-treated siABCG1.

Table 1: Top regulated genes in HCAECs exposed to rHDLs

Gene Assignment	p-value	Fold change	Function
SC4MOL // sterol-C4-methyl oxidase-like	0.00058	5.58	Endoplasmic reticulum (ER) protein, cholesterol biosynthesis
HMGCS1 // 3-hydroxy-3-methylglutaryl-Coenzyme A synthase 1	0.0028	4.2	Condenses acetyl-CoA with acetoacetyl-CoA to form HMG-CoA, the substrate for HMG-CoA reductase
DHCR24 // 24-dehydrocholesterol reductase	0.00080	3.68	ER protein, oxidoreductase, cholesterol biosynthesis, antioxidant activities
HMGCR // 3-hydroxy-3-methylglutaryl-Coenzyme A reductase	0.0053	3.60	Multi-pass membrane protein including ER location, rate-limiting enzyme for cholesterol biosynthesis.
ACAT2 // acetyl-Coenzyme A acetyltransferase 2	0.00021	3.49	Multi-pass membrane location including ER, lipid metabolism
FDFT1 // farnesyl-diphosphate farnesyltransferase 1	0.0023	3.34	ER protein, first specific enzyme in cholesterol biosynthesis
SQLE // squalene epoxidase	0.0031	3.33	Multi-pass membrane protein including ER location, catalyses the first oxygenation step in sterol biosynthesis-one of rate-limiting enzymes in pathway
INSIG1 // insulin induced gene 1	0.0035	3.1	ER protein, critical role in regulating cellular cholesterol concentrations
FADS2 // fatty acid desaturase 2	0.00085	2.94	ER protein, catalyzes biosynthesis of HUFA from PUFA, LA and ALA.
DHCR7 // 7-dehydrocholesterol reductase	0.0055	2.73	ER protein, cholesterol biosynthesis
TXNIP // thioredoxin interacting protein	0.0068	-2.84	May act as oxidative stress mediator by inhibiting thioredoxin activity

* ER, endoplasmic reticulum; HUFA, highly unsaturated fatty acids; PUFA, polyunsaturated fatty acids; LA, linoleic acid; ALA, alpha-linolenic

Figure 1

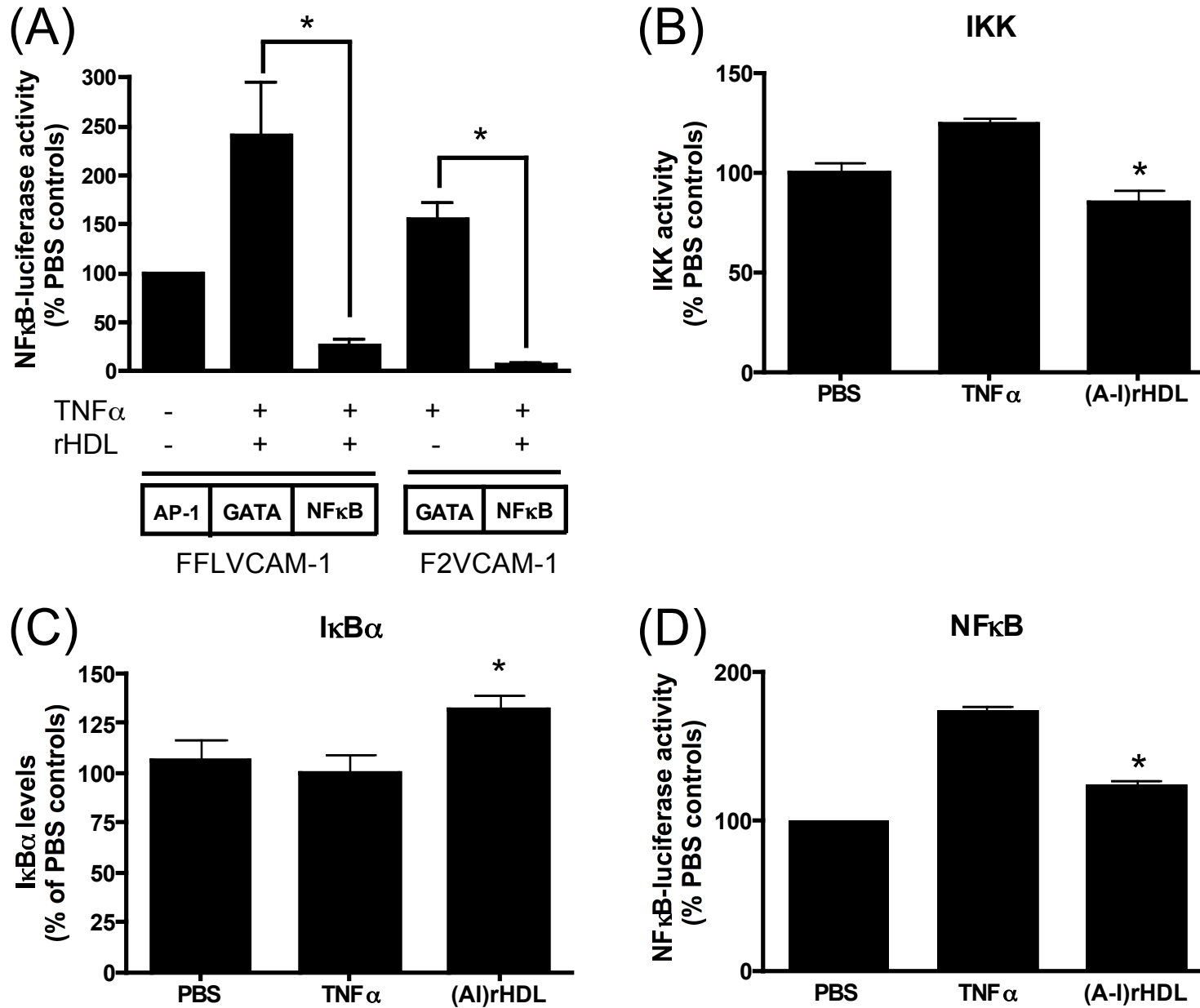
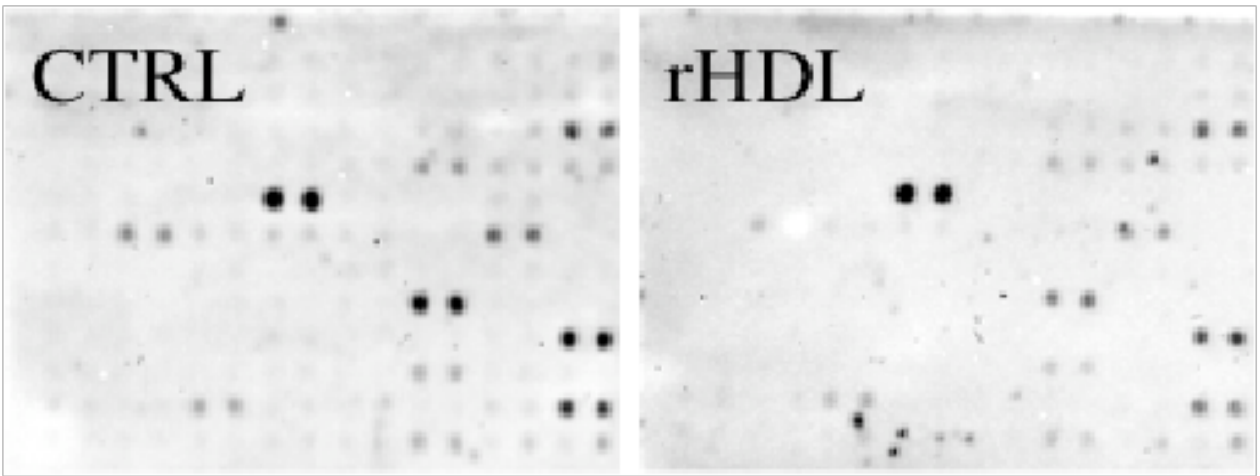
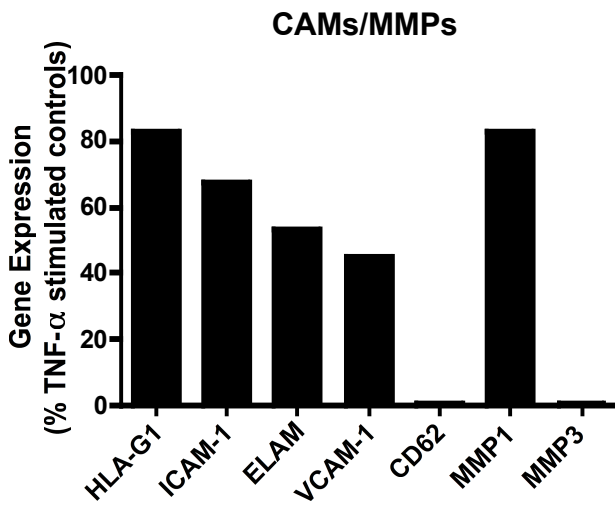


Figure 2

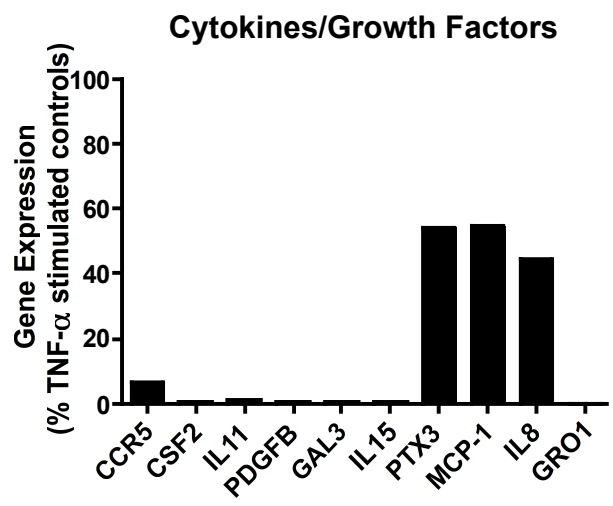
(A)



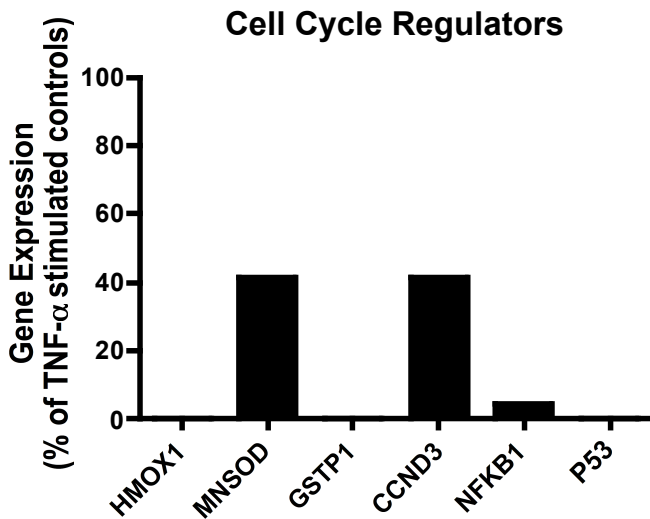
(B)



(C)



(D)



(E)

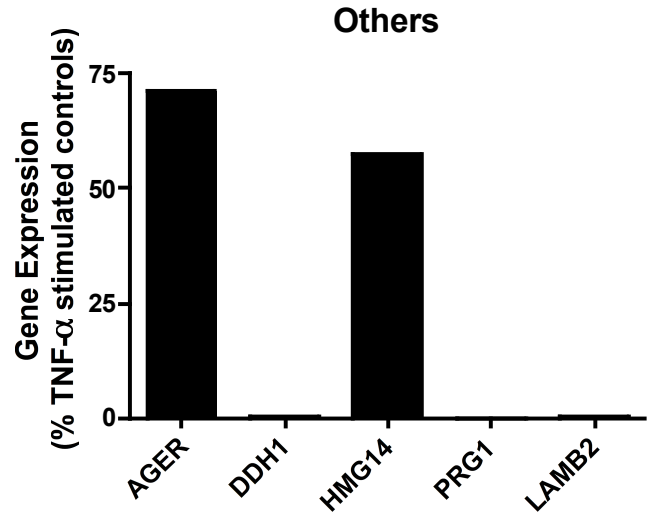


Figure 3

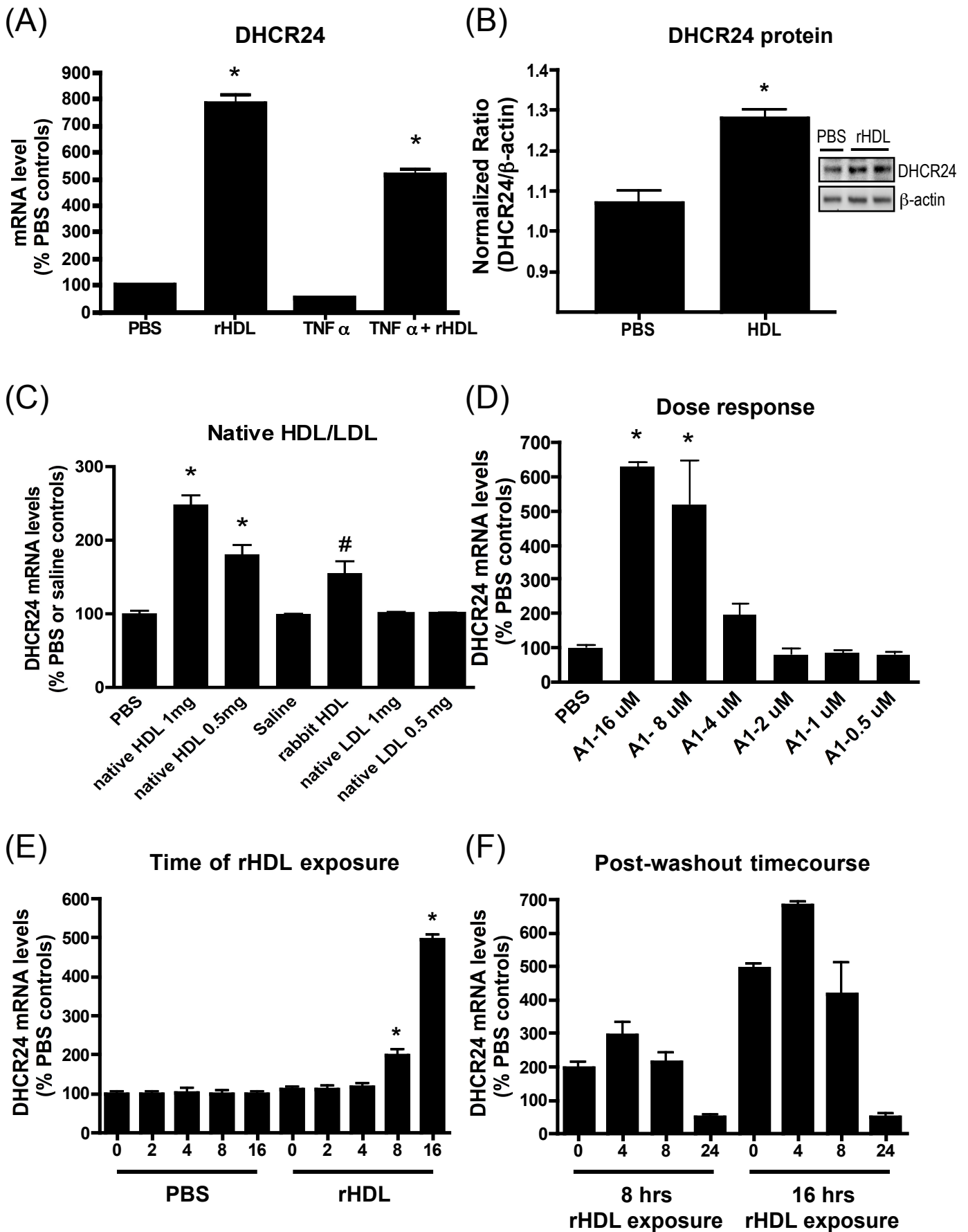
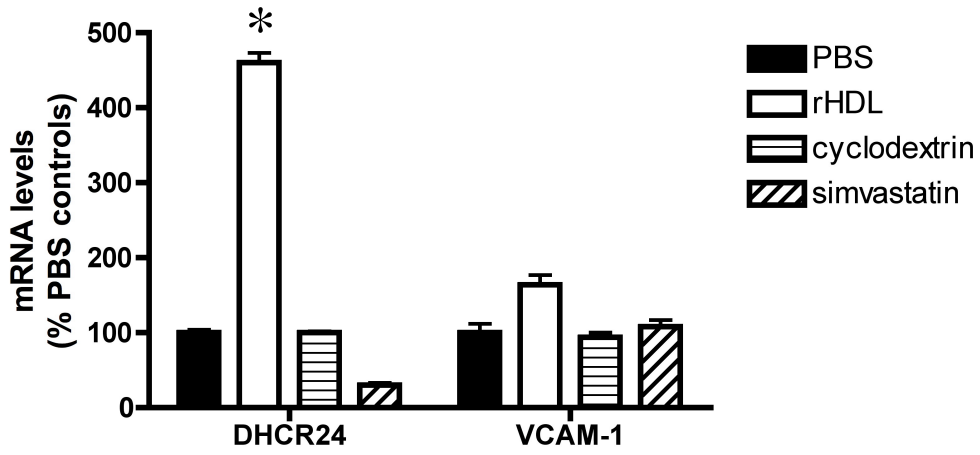
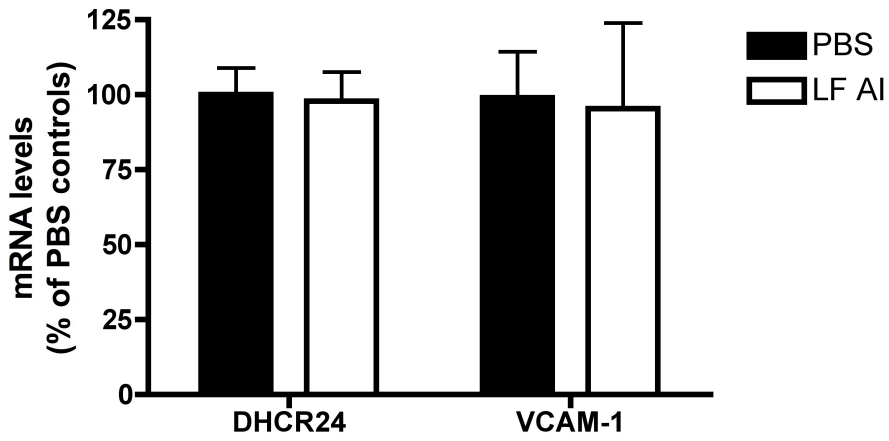


Figure 4

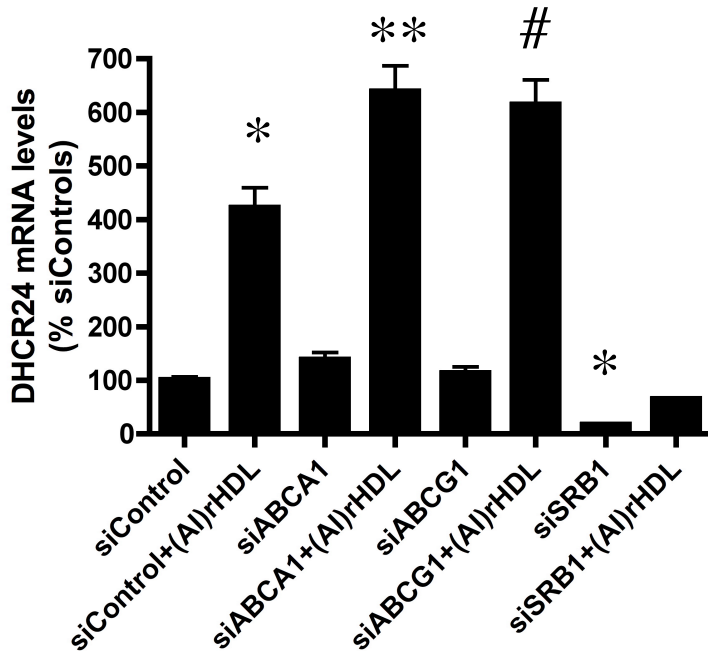
(A)



(B)



(C)



Supplementary Experimental Methods

Preparation of high density lipoproteins from rabbit and human plasma

After collection of blood from rabbits, plasma was isolated by centrifugation at 4°C. The HDL fraction (1.063-1.21g/ml) was isolated by sequential ultracentrifugation and dialysed against phosphate buffered saline (PBS) (1). ApoA-I concentration of the isolated HDLs was determined by immunoturbidometric assay (2). HDLs were added to incubations of endothelial cells at an apoA-I concentration of 32 µmols/L.

HDLs and LDLs were isolated from fresh human plasma containing EDTA by sequential isopycnic ultracentrifugation at the lower and upper density limits of the specified density range. Density adjustments are performed with solid KBr. HDLs and LDLs were washed by centrifugation at the upper density limit to ensure removal of higher density proteins. HDL and LDL are filtered through a 0.45 µm filter and protein concentration quantitated using the BCA assay.

IKK Kinase (IKK) Assay

HCAECs (1×10^5 cells/12-well plate) were pre-treated with rHDLs or PBS for 16 hours, then stimulated with TNF α for 7.5 mins. Cell protein was extracted with buffer containing 1% nonidet P-40, 0.1% sodium dodecyl sulfate (SDS), 0.5% deoxycholate, 150 mM NaCl, 50 mM Tris, pH 8.0 and a protease inhibitor cocktail (Sigma-Aldrich, Castle Hill, NSW, Australia). Protein lysate (10 µg) was incubated with 2 mM ATP and 10 µg IKK substrate peptide (Millipore, Billerica, MA, USA) in reaction buffer (8 mM MOPS, pH 7.0, 0.2 mM EDTA-Na₂) at room temperature for 90 mins. Kinase-Glo

reagent (50 μ l, Promega Corporation, Madison, WI, USA) was added to the reaction mixture, incubated at room temperature for 10 mins and luminescent signal measured on a Fluoroskan Ascent FL (Thermo Labsystems, Waltham, MA, USA).

Human NF- κ B Target Gene Array Analysis

Total RNA was isolated from HCAECs using TRI reagent according to the manufacturer's protocol (Sigma-Aldrich). Biotin-labelled cDNA probes were prepared from 10 μ g of total RNA from each sample using AMV reverse transcriptase (Promega) and biotin dUTP. The cDNA probes were hybridized to the TranSignal NF- κ B Target Gene array following the recommended protocol (Panomics, Princeton, NJ, USA). Direct chemiluminescence imaging of the membrane was performed using the ChemiDoc XRS (BioRad, Regents Park, NSW, Australia) imaging system. Quantity One software (BioRad) was used for pairwise comparative gene expression after signal intensities were converted to a ratio adjusted for background and housekeeping gene expression. The array reproducibility was evaluated by completing the experiment twice and expression of selected transcripts of interest were confirmed by real-time PCR.

Silencing RNA experiments

To silence DHCR24 expression, HCAECs (1×10^5 cells/12-well plate) were transfected with DHCR24 siRNA (27 pmols, Santa Cruz Biotechnology, Santa Cruz, CA, USA) or Control siRNA-A (27 pmols, Santa Cruz Biotechnology) in siRNA Transfection medium and siRNA Transfection Reagent (Santa Cruz Biotechnology). To silence ABCAI, ABCGI, or SR-BI, HCAECs (1×10^5 cells/12-well plate) were transfected with 100 nM ABCAI, ABCGI, SR-BI siRNA or AllStars negative control (Qiagen, Hilden, Germany)

in a mixture of Opti-MEM (50 μ L, Invitrogen, Melbourne, Australia) and HiPerfect (9 μ L, Qiagen). After a 7-hour incubation, cells were washed with PBS, before adding fresh medium for a further 24 hours. Transfected cells were then incubated with rHDLs or PBS for 16 hours before total RNA was harvested. DHCR24 mRNA levels measured 40 hours after transfection were decreased by up to 70% ($P < 0.05$, data not shown). Control siRNA-A had no effect on DHCR24 mRNA levels. ABCAI, ABCGI, SR-BI mRNA levels were decreased by up to 80% ($P < 0.0001$, data not shown), 85% ($P < 0.0001$, data not shown) and 90% ($P < 0.0001$, data not shown), respectively.

References

1. Hatch FT. Practical methods for plasma lipoprotein analysis. *Adv Lipid Res.* 1968;6:1-68.
2. Clay MA, KA Rye, Barter PJ. Evidence in vitro that hepatic lipase reduces the concentration of apolipoprotein A-I in rabbit high-density lipoproteins. *Biochim Biophys Acta.* 1990;1044:50-6.

Table I: PCR primers sequences

Gene	Sequence	Tm (°C)
VCAM1-L	ATG TAG TGT CAT GGG CTG TG	60
VCAM1-R	GGA ATG AGT AGA GCT CCA CC	
ICAM1-L	CCA TCT ACA GCT TTC CGG CGC	60
ICAM1-R	CTC TGG GGT GGC CTT CAG CA	
PECAM1-L	CAA TGT GCT GTG AAT GAA GGA T	58
PECAM1-L	CGT GGT TGG CTC TGT TGA A	
IL13RA1-L	CCT GGT GTT CTT CCT GAT ACT T	58
IL13RA1-R	CTG CGA CGA TGA CTG GAA C	
CTGF-L	GGC TTA CCG ACT GGA AGA C	60
CTGF-R	GGA GGC GTT GTC ATT GGT	
NCOA1-L	CGA GCG TCT ACA GCA TAC T	60
NCOA1-R	CGT CGT GTT GCC TCT TGA	
CAV1-L	CTG AGC GAG AAG CAA GTG T	60
CAV1-R	ACA GTG AAG GTG GTG AAG C	
CAV2-L	GGC TCA ACT CGC ATC TCA A	58
CAV2-R	GGA ACA CCG TCA GGA ACT TG	
TCP1-L	TGT ATC GCT GCC GTC AAG	60
TCP1-R	TGT TCT ACC TCC AGT AAC TTC A	
ANXA2-L	TGC TCC AGA ACC AAC CAG	58
ANXA2-R	TGC GGA AGT CAC CAG ATG	
MCP1-L	CAA TCA ATG CCC CAG TCA C	58
MCP1-R	GAT TCT TGG GTT GTG GGA GTG	
P53-L	CCA TCT ACA AGC AGT CAC AGC	55
P53-R	TCC ACA CGC AAA TTT CCT TCC	

Supplementary Table II

	GenBank	Normalized gene amount relative to PBS $2^{-\Delta\Delta CT}$				Fold difference
		PBS	HDL	TNF α	TNF α +HDL	TNF α +HDL/TNF α
VCAM1	NM_001078	1.00±0.03	2.05±0.11	366.03±18.10	279.74±13.00	0.76±0.04*
ICAM1	NM_000201	1.00±0.03	2.08±0.07	139.27±9.44	88.33±7.28	0.63±0.05*
RANTES	NM_002985	1.00±0.04	1.79±0.19	79.34±3.11	51.93±2.70	0.65±0.03*
PECAM1	NM_000442	1.00±0.03	1.34±0.06	1.12±0.08	0.79±0.03	0.71±0.03*
IL13RA1	NM_001560	1.00±0.02	1.36±0.04	1.37±0.06	1.01±0.05	0.74±0.04*
CTGF	NM_001901	1.00±0.03	1.42±0.05	0.82±0.03	0.57±0.04	0.69±0.05*
NCOA4	NM_005437	1.00±0.05	1.17±0.06	0.83±0.02	0.71±0.03	0.86±0.04
CAV1	NM_001753	1.00±0.05	1.35±0.05	0.91±0.08	0.88±0.06	0.96±0.06
CAV2	NM_001233	1.00±0.06	1.43±0.06	0.76±0.05	0.62±0.02	0.81±0.03
TCP1	NM_030752	1.00±0.05	1.18±0.04	1.41±0.03	1.12±0.04	0.75±0.03*
ANXA2	NM_001002858	1.00±0.06	2.04±0.12	3.45±0.47	2.69±0.20	0.78±0.06*
MCP1	NM_002982	1.00±0.04	1.61±0.09	76.34±4.02	58.89±3.41	0.77±0.04*
p53	NM_000546	1.00±0.05	1.18±0.04	1.41±0.03	1.12±0.04	0.79±0.03*

Relative mRNA levels for selected genes were determined by real-time PCR as described in “Materials and Methods”. Primers used to amplify the selected genes were designed using the sequence obtained from the respective gene identifier number listed under the GenBank column. Values are expressed as mean \pm SEM relative to PBS controls. Fold difference was determined by the ratio of TNF α +HDL over TNF α . * $P < 0.05$: TNF α +HDL vs TNF α , $n = 3$.

Column #	Probeset ID	D	transcript_cluster_id	p-value(Experiment)	GFoldChan
1342	7893862	---	7893862	0.0355734	5.75161
24180	8098195	NM_006745 // SC4MOL // sterol-C4-methyl oxidase-like // 4q32-q34 // 6307 // NM_7894287	8098195	0.00058833	5.57826
1759	7894287	---	7894287	0.0073967	4.74462
25595	8111941	NM_001098272 // HMGCS1 // 3-hydroxy-3-methylglutaryl-Coenzyme A synthase 1 (solu	8111941	0.0029791	4.2339
6038	7916432	NM_014762 // DHCR24 // 24-dehydrocholesterol reductase // 1p33-p31.1 // 1718 //	7916432	0.000804304	3.68162
25045	8106280	NM_000859 // HMGCR // 3-hydroxy-3-methylglutaryl-Coenzyme A reductase // 5q13.3-	8106280	0.005293	3.59583
26813	8123137	NM_005891 // ACAT2 // acetyl-Coenzyme A acetyltransferase 2 // 6q25.3 // 39 //	8123137	0.000209016	3.49017
29078	8144669	NM_004462 // DFDT1 // farnesyl-diphosphate farnesyltransferase 1 // 8p23.1-p22 //	8144669	0.00234658	3.33683
29445	8148280	NM_003129 // SQLE // squalene epoxidase // 8q24.1 // 6713 // ENST00000265896 //	8148280	0.00313191	3.32975
28290	8137526	NM_198336 // INSIG1 // insulin induced gene 1 // 7q36 // 3638 // NM_005542 // I	8137526	0.00354703	3.10391
8482	7940565	NM_004265 // FADS2 // fatty acid desaturase 2 // 11q12-q13.1 // 9415 // ENST000	7940565	0.000851255	2.93535
777	7893286	---	7893286	0.0236322	2.73877
9492	7950067	NM_001360 // DHCR7 // 7-dehydrocholesterol reductase // 11q13.2-q13.5 // 1717 //	7950067	0.00550527	2.73282
7554	7931754	NM_004508 // IDI1 // isopentenyl-diphosphate delta isomerase 1 // 10p15.3 // 342	7931754	0.00559743	2.69084
16944	8025828	NM_000527 // LDLR // low density lipoprotein receptor // 19p13.3 // 3949 // ENS	8025828	0.00044409	2.67727
7388	7929816	NM_005063 // SCD // stearoyl-CoA desaturase (delta-9-desaturase) // 10q24.31 //	7929816	0.00320161	2.6196
28673	8140864	NM_000786 // CYP51A1 // cytochrome P450, family 51, subfamily A, polypeptide 1 /	8140864	0.00916726	2.58857
6701	7922976	NM_000963 // PTGS2 // prostaglandin-endoperoxide synthase 2 (prostaglandin G/H s	7922976	0.00141669	2.22669
5143	7906904	NM_016371 // HSD17B7 // hydroxysteroid (17-beta) dehydrogenase 7 // 1q23 // 5147	7906904	0.0407073	2.18989
2998	7895549	---	7895549	0.0153836	2.16176
8877	7944656	NM_006918 // SC5DL // sterol-C5-desaturase (ERG3 delta-5-desaturase homolog, S.	7944656	0.00648256	2.14336
860	7893372	---	7893372	0.0446366	2.12398
5503	7910948	---	7910948	0.00740409	2.12216
1582	7894105	---	7894105	0.00280957	2.11004
1943	7894473	---	7894473	0.0265101	2.08909
6633	7922337	NM_005092 // TNFSF18 // tumor necrosis factor (ligand) superfamily, member 18 //	7922337	0.00536166	2.01075
21479	8070961	NM_002340 // LSS // lanosterol synthase (2,3-oxidosqualene-lanosterol cyclase) /	8070961	0.00199429	2.01023
1081	7893595	---	7893595	0.037553	2.00165
813	7893323	---	7893323	0.0159968	1.9778
3468	7896032	---	7896032	0.0294085	1.97246
21741	8073522	NM_004599 // SREBF2 // sterol regulatory element binding transcription factor 2	8073522	0.00178799	1.96824
3959	7896532	---	7896532	0.00844265	1.96032
13921	7994824	---	7994824	0.0220789	1.88331
31894	8170590	NM_015922 // NSDHL // NAD(P) dependent steroid dehydrogenase-like // Xq28 // 508	8170590	0.00211756	1.87837
32379	8175016	NM_017413 // APLN // apelin // Xq25-q26.3 // 8862 // BC021104 // APLN // apelin	8175016	0.00440165	1.87693
16909	8025402	NM_139314 // ANGPTL4 // angiopoietin-like 4 // 19p13.3 // 51129 // NM_001039667	8025402	0.00195821	1.83807
14740	8003332	NM_002461 // MVD // mevalonate (diphospho) decarboxylase // 16q24.3 // 4597 //	8003332	0.00811679	1.83711
246	7892744	---	7892744	0.00697683	1.8131
10345	7958565	NM_000431 // MVK // mevalonate kinase // 12q24 // 4598 // NM_001114185 // MVK /	7958565	0.000737678	1.78877
2329	7894870	---	7894870	0.0223009	1.78156
2721	7895270	---	7895270	0.019263	1.77256
30128	8154233	NM_014143 // CD274 // CD274 molecule // 9p24 // 29126 // ENST00000381577 // CD2	8154233	0.0134638	1.77036
15053	8006433	NM_002982 // CCL2 // chemokine (C-C motif) ligand 2 // 17q11.2-q12 // 6347 // E	8006433	0.0197668	1.76113
1456	7893978	---	7893978	0.0374464	1.74043
25792	8113491	NM_139164 // STARD4 // StAR-related lipid transfer (START) domain containing 4 /	8113491	0.018132	1.73378
16624	8022531	NM_000271 // NPC1 // Niemann-Pick disease, type C1 // 18q11-q12 // 4864 // ENST	8022531	0.0213412	1.72124
7115	7927082	NR_003086 // HSD17B7P2 // hydroxysteroid (17-beta) dehydrogenase 7 pseudogene 2	7927082	0.0224212	1.7145
1979	7894510	---	7894510	0.036352	1.71416
12495	7980309	AF134159 // C14orf1 // chromosome 14 open reading frame 1 // 14q24.3 // 11161 //	7980309	0.00340984	1.69842
1467	7893990	---	7893990	0.00921735	1.69655
19197	8047459	---	8047459	0.0426462	1.69634
7822	7934297	---	7934297	0.0197414	1.67878
10974	7965322	NM_000899 // KITLG // KIT ligand // 12q22 // 4254 // NM_003994 // KITLG // KIT	7965322	0.0203254	1.67548
26781	8122816	---	8122816	0.00228262	1.66487
24713	8103226	NM_152680 // TMEM154 // transmembrane protein 154 // 4q31.3 // 201799 // ENST00	8103226	0.0153709	1.66221
3146	7895700	---	7895700	0.0394827	1.65473
14997	8005839	NM_014573 // TMEM97 // transmembrane protein 97 // 17q11.2 // 27346 // ENST0000	8005839	0.0135141	1.646
15722	8013567	NM_001076680 // LOC201229 // hypothetical protein LOC201229 // 17q11.2 // 201229	8013567	0.0495174	1.6424
31483	8167305	NM_006579 // EBP // emopamil binding protein (sterol isomerase) // Xp11.23-p11.2	8167305	0.0288299	1.63839
9344	7948612	NM_013402 // FADS1 // fatty acid desaturase 1 // 11q12.2-q13.1 // 3992 // ENST0	7948612	0.000854523	1.63646
30110	8154135	NM_004170 // SLC1A1 // solute carrier family 1 (neuronal/epithelial high affinity	8154135	0.00489771	1.62572
16272	8019392	NM_004104 // FASN // fatty acid synthase // 17q25 // 2194 // ENST00000306749 //	8019392	0.0017001	1.61822
22566	8081951	---	8081951	0.0350767	1.60836
1790	7894318	---	7894318	0.0428014	1.60155
27969	8134403	---	8134403	0.0220503	1.59978
3446	7896010	---	7896010	0.012051	1.59903
10232	7957298	NM_014903 // NAV3 // neuron navigator 3 // 12q14.3 // 89795 // ENST00000397909	7957298	0.0113036	1.5955
13743	7992861	---	7992861	0.000296462	1.58615
1359	7893879	---	7893879	0.0386912	1.5859
2802	7895351	---	7895351	0.0142458	1.5784
19998	8055596	---	8055596	0.049049	1.57776
31545	8167871	ENST00000334118 // LOC100129876 // similar to XAGE-5 protein // Xp11.21 // 10012	8167871	0.0357066	1.57478
29097	8144786	NM_003046 // SLC7A2 // solute carrier family 7 (cationic amino acid transporter,	8144786	0.00876154	1.56867
16473	8021169	NM_006033 // LIPG // lipase, endothelial // 18q21.1 // 9388 // ENST000002261292	8021169	0.0125109	1.56818
30737	8160297	NM_001122 // ADFP // adipose differentiation-related protein // 9p22.1 // 123 //	8160297	0.00683243	1.56193
20201	8058342	---	8058342	0.0427462	1.56187
23912	8095680	NM_000584 // IL8 // interleukin 8 // 4q13-q21 // 3576 // ENST00000307407 // IL8	8095680	0.00910804	1.55777
3785	7896354	---	7896354	0.029779	1.55069
15790	8014233	NM_001104587 // SLFN11 // schlafen family member 11 // 17q12 // 91607 // NM_001	8014233	0.0187163	1.54067
2973	7895524	---	7895524	0.00532282	1.5392
28039	8135211	AK298753 // MGC35361 // hypothetical MGC35361 // 7q22.1 // 222234 // AK297455 /	8135211	0.0488496	1.53743
6634	7922343	NM_003326 // TNFSF4 // tumor necrosis factor (ligand) superfamily, member 4 // 1	7922343	0.0199708	1.52831
2090	7894625	---	7894625	0.0428488	1.52247
2943	7895494	---	7895494	0.017318	1.521
23066	8087224	NM_000387 // SLC25A20 // solute carrier family 25 (carnitine/acylcarnitine trans	8087224	0.00397016	1.51964
14311	7998929	---	7998929	0.0107579	1.51629
6617	7922229	NM_000450 // SELE // selectin E // 1q22-q25 // 6401 // ENST00000333360 // SELE	7922229	0.0356562	1.51383
24951	8105302	NM_006350 // FST // follistatin // 5q11.2 // 10468 // NM_013409 // FST // folli	8105302	0.0210223	1.51339
27662	8131666	NM_002214 // ITGB8 // integrin, beta 8 // 7p15.3 // 3696 // ENST00000222573 //	8131666	0.00322037	1.51136
19809	8053834	NM_025190 // ANKRD36B // ankyrin repeat domain 36B // 2q11.2 // 57730 // NM_198	8053834	0.0156146	1.50904
11271	7968637	NM_003914 // CCNA1 // cyclin A1 // 13q12.3-q13 // 8900 // NM_001111045 // CCNA1	7968637	0.0103557	1.50352
1406	7893927	---	7893927	0.0288749	1.50297
24581	8101952	NM_145244 // DDIT4L // DNA-damage-inducible transcript 4-like // 4q23 // 115265	8101952	0.011613	1.50041
24819	8104035	NM_021069 // SORBS2 // sorbin and SH3 domain containing 2 // 4q35.1 // 8470 //	8104035	0.0238588	1.49788
1561	7894084	---	7894084	0.0083521	1.49779

23455	8091402	NM_138786 // TM4SF18 // transmembrane 4 L six family member 18 // 3q25.1 // 1164	8091402	0.0212948	1.496
5126	7906757	NM_021642 // FCGR2A // Fc fragment of IgG, low affinity IIa, receptor (CD32) //	7906757	0.0494922	1.49586
10715	7962479	---	7962479	0.0426609	1.4955
26780	8122807	NM_005100 // AKAP12 // A kinase (PRKA) anchor protein 12 // 6q24-q25 // 9590 ///	8122807	0.00394718	1.49446
19038	8045802	---	8045802	0.0320481	1.48991
20232	8058552	NM_005896 // IDH1 // isocitrate dehydrogenase 1 (NADP+), soluble // 2q33.3 // 34	8058552	0.0220193	1.48562
22255	8078688	---	8078688	0.0155487	1.48488
1121	7893637	---	7893637	0.00178396	1.48058
520	7893027	---	7893027	0.016564	1.47143
4671	7902452	NM_174858 // AK5 // adenylate kinase 5 // 1p31 // 26289 /// NM_012093 // AK5 //	7902452	0.00208067	1.47089
18445	8040340	NM_145693 // LPIN1 // lipin 1 // 2p25.1 // 23175 /// ENST00000256720 // LPIN1 //	8040340	0.00971244	1.46771
3362	7895921	---	7895921	0.026796	1.46434
1382	7893902	---	7893902	0.00519983	1.46321
2952	7895503	---	7895503	0.0334918	1.46279
11625	7971922	NM_203487 // PCDH9 // protocadherin 9 // 13q14.3-q21.1 // 5101 /// NM_020403 //	7971922	0.0208799	1.46105
24669	8102800	NM_014331 // SLC7A11 // solute carrier family 7, (cationic amino acid transporte	8102800	0.0432184	1.45649
24020	8096777	---	8096777	0.0124785	1.45629
3056	7895607	---	7895607	0.0249887	1.45318
10412	7959267	NM_002560 // P2RX4 // purinergic receptor P2X, ligand-gated ion channel, 4 // 12	7959267	0.00523875	1.44574
5046	7905986	NM_002004 // FDPS // farnesyl diphosphate synthase (farnesyl pyrophosphate synth	7905986	0.0195104	1.44567
2762	7895311	---	7895311	0.0494493	1.44549
1053	7893567	---	7893567	0.00125337	1.43652
28693	8141094	NM_002612 // PDK4 // pyruvate dehydrogenase kinase, isozyme 4 // 7q21.3 // 5166	8141094	0.0301175	1.43578
12479	7980113	---	7980113	0.0406079	1.43329
24491	8101011	---	8101011	0.00735365	1.43041
1896	7894426	---	7894426	0.0108733	1.4253
2695	7895244	---	7895244	0.0394736	1.42522
9106	7946504	NM_015012 // TMEM41B // transmembrane protein 41B // 11p15.4 // 440026 /// ENST0	7946504	0.0339505	1.42353
3734	7896303	---	7896303	0.0159587	1.42294
32394	8175193	---	8175193	0.00279376	1.4229
7218	7928046	NM_012339 // TSPAN15 // tetraspanin 15 // 10q21.3 // 23555 /// ENST00000373290 /	7928046	0.0173374	1.4205
4016	7896593	---	7896593	0.0325997	1.41925
15915	8015460	NM_001096 // ACLY // ATP citrate lyase // 17q12-q21 // 47 /// NM_198830 // ACLY	8015460	0.00511735	1.4178
2908	7895459	---	7895459	0.0157253	1.41726
32883	8179238	NM_000247 // MICA // MHC class I polypeptide-related sequence A // 6p21.3 // 427	8179238	0.00767011	1.41564
20165	8057898	NM_020760 // HECW2 // HECT, C2 and WW domain containing E3 ubiquitin protein lig	8057898	0.0280017	1.41521
25906	8114572	NM_001945 // HBEGF // heparin-binding EGF-like growth factor // 5q23 // 1839 ///	8114572	0.0291781	1.41329
23913	8095688	NM_002993 // CXCL6 // chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic	8095688	0.00944926	1.41235
27780	8132843	NM_017645 // FAM29A // family with sequence similarity 29, member A // 9p22.1 //	8132843	0.00498145	1.41052
22513	8081386	NM_031419 // NFKBIZ // nuclear factor of kappa light polypeptide gene enhancer i	8081386	0.0252833	1.40937
4733	7903090	---	7903090	0.026375	1.40541
1618	7894143	---	7894143	0.0329494	1.40361
28848	8142687	NM_005302 // GPR37 // G protein-coupled receptor 37 (endothelin receptor type B-	8142687	0.0469637	1.40251
15128	8007139	---	8007139	0.0342181	1.39804
2585	7895132	---	7895132	0.010596	1.3978
27303	8127854	NM_002395 // ME1 // malic enzyme 1, NADP(+)-dependent, cytosolic // 6q12 // 4199	8127854	0.0374044	1.39459
346	7892847	---	7892847	0.0359074	1.39037
26878	8123800	---	8123800	0.0479317	1.38831
3279	7895836	---	7895836	0.0377211	1.38711
1615	7894140	---	7894140	0.0404262	1.38687
7557	7931810	NM_001300 // KLF6 // Kruppel-like factor 6 // 10p15 // 1316 /// ENST00000173785	7931810	0.00321469	1.38612
7765	7933723	NM_152230 // IPMK // inositol polyphosphate multikinase // 10q21.1 // 253430 ///	7933723	0.0265137	1.38579
14736	8003298	NM_003486 // SLC7A5 // solute carrier family 7 (cationic amino acid transporter,	8003298	0.00338531	1.38207
9479	7949971	NM_001876 // CPT1A // carnitine palmitoyltransferase 1A (liver) // 11q13.1-q13.2	7949971	0.0154254	1.38163
24015	8096733	NM_152621 // SGMS2 // sphingomyelin synthase 2 // 4q25 // 166929 /// ENST00000039	8096733	0.0467003	1.37936
19029	8045688	NM_007115 // TNFAIP6 // tumor necrosis factor, alpha-induced protein 6 // 2q23.3	8045688	0.0253359	1.37613
2778	7895327	---	7895327	0.00692258	1.36657
9277	7948135	---	7948135	0.0254496	1.36507
30389	8156521	---	8156521	0.0465754	1.36496
29148	8145470	NM_001386 // DPYSL2 // dihydropyrimidinase-like 2 // 8p22-p21 // 1808 /// ENST00	8145470	0.0215507	1.36489
4204	7897774	NM_001286 // CLCN6 // chloride channel 6 // 1p36 // 1185 /// NM_021736 // CLCN6	7897774	0.000817611	1.3612
22053	8076382	---	8076382	0.0217941	1.35882
27501	8130071	BC111000 // C15orf29 // chromosome 15 open reading frame 29 // 15q14 // 79768 //	8130071	0.0118837	1.3574
16261	8019280	NM_002861 // PCYT2 // phosphate cytidylyltransferase 2, ethanolamine // 17q25.3	8019280	0.0463738	1.35717
18005	8036389	NM_152279 // ZNF585B // zinc finger protein 585B // 19q13.12 // 92285 /// ENST00	8036389	0.0314212	1.35393
1324	7893843	---	7893843	0.0045276	1.35183
10573	7961069	NM_172004 // CLECL1 // C-type lectin-like 1 // 12p13.31 // 160365 /// ENST0000003	7961069	0.029661	1.34399
22723	8083594	NM_002852 // PTX3 // pentraxin-related gene, rapidly induced by IL-1 beta // 3q2	8083594	0.00218363	1.34355
2106	7894641	---	7894641	0.030406	1.34319
10449	7959786	NM_023928 // AACS // acetoacetyl-CoA synthetase // 12q24.31 // 65985 /// ENST000	7959786	0.00148192	1.34286
26017	8115681	NM_024594 // PANK3 // pantothenate kinase 3 // 5q34 // 79646 /// ENST00000239231	8115681	0.0422977	1.34213
25611	8112045	NM_007036 // ESM1 // endothelial cell-specific molecule 1 // 5q11.2 // 11082 ///	8112045	0.0115402	1.33945
15789	8014230	NM_152462 // AMAC1 // acyl-malonyl condensing enzyme 1 // 17q12 // 146861 /// EN	8014230	0.0487355	1.33824
24960	8105348	NM_001008397 // GPX8 // glutathione peroxidase 8 // 5q11.2 // 493869 /// ENST000	8105348	0.0372072	1.33591
19318	8048733	NM_004457 // ACSL3 // acyl-CoA synthetase long-chain family member 3 // 2q34-q35	8048733	0.0304249	1.33496
8182	7938063	ENST00000316698 // OR52E5 // olfactory receptor, family 52, subfamily E, member	7938063	0.0122742	1.3348
19163	8047161	NM_001031716 // OBFC2A // oligonucleotide/oligosaccharide-binding fold containin	8047161	0.0121435	1.33356
20584	8062347	BC017557 // RBL1 // retinoblastoma-like 1 (p107) // 20q11.2 // 5933	8062347	0.0463451	1.3334
27767	8132710	NM_025031 // FLJ21075 // hypothetical protein FLJ21075 // 7p12.3 // 80099 /// EN	8132710	0.0468227	1.33025
2286	7894825	---	7894825	0.0411932	1.32849
22505	8081341	AK127584 // FAM172B // family with sequence similarity 172, member B pseudogene	8081341	0.0228237	1.32788
8882	7944722	NM_032873 // UBASH3B // ubiquitin associated and SH3 domain containing, B // 11q	7944722	0.0375406	1.32709
20559	8062041	NM_018677 // ACSS2 // acyl-CoA synthetase short-chain family member 2 // 20q11.2	8062041	0.021479	1.32324
26315	8118100	NM_000247 // MICA // MHC class I polypeptide-related sequence A // 6p21.3 // 427	8118100	0.00858294	1.32268
9812	7953021	NM_024551 // ADIPOR2 // adiponectin receptor 2 // 12p13.31 // 79602 /// ENST00000	7953021	0.0188225	1.32196
5355	7909400	NM_002389 // CD46 // CD46 molecule, complement regulatory protein // 1q32 // 417	7909400	0.0316364	1.32145
3536	7896102	---	7896102	0.00655115	1.32106
661	7893170	---	7893170	0.00230972	1.31464
22609	8082406	---	8082406	0.0492527	1.31318
857	7893369	---	7893369	0.0392338	1.31216
24035	8096955	---	8096955	0.00847924	1.30919
32465	8175609	DQ160194 // FLJ44451 // hypothetical protein FLJ44451 // Xq28 // 100101122 /// A	8175609	0.0348026	1.30858
11765	7973084	NM_001145 // ANG // angiogenin, ribonuclease, RNase A family, 5 // 14q11.1-q11.2	7973084	0.0227611	1.30726
23487	8091648	NM_007107 // SSR3 // signal sequence receptor, gamma (translocon-associated prot	8091648	0.0298923	1.30717
241	7892739	---	7892739	0.0245332	1.30596
11652	7972217	NM_005842 // SPRY2 // sprouty homolog 2 (Drosophila) // 13q31.1 // 10253 /// ENS	7972217	0.0340189	1.30516

28879	8142981	NM_001018111 // PODXL // podocalyxin-like // 7q32-q33 // 5420 // NM_005397 // P	8142981	0.0030476	1.30497
13200	7986675	NM_144599 // NIPA1 // non imprinted in Prader-Willi/Angelman syndrome 1 // 15q11	7986675	0.000389798	1.30471
9436	7949577	NM_020470 // YIF1A // Yip1 interacting factor homolog A (S. cerevisiae) // 11q13	7949577	0.00970958	1.30421
31981	8171359	NM_001001995 // GPM6B // glycoprotein M6B // Xp22.2 // 2824 // NM_001001996 //	8171359	0.0340553	1.29896
31663	8168727	---	8168727	0.00173502	1.29875
8502	7940717	NM_001012661 // SLC3A2 // solute carrier family 3 (activators of dibasic and neu	7940717	0.0213135	1.29858
28823	8142452	NM_012252 // TFEC // transcription factor EC // 7q31.2 // 22797 // NM_001018058	8142452	0.0217851	1.29518
2733	7895282	---	7895282	0.0435177	1.29505
24820	8104066	AF090937 // SORBS2 // sorbin and SH3 domain containing 2 // 4q35.1 // 8470	8104066	0.0180511	1.29504
6098	7917002	---	7917002	0.0288142	1.29434
29462	8148448	NM_006558 // KHDRBS3 // KH domain containing, RNA binding, signal transduction a	8148448	0.0271891	1.29268
13267	7987439	NM_007223 // GPR176 // G protein-coupled receptor 176 // 15q14-q15.1 // 11245 //	7987439	0.0283271	1.28988
8620	7942123	NM_053056 // CCND1 // cyclin D1 // 11q13 // 595 // ENST00000227507 // CCND1 //	7942123	0.0399662	1.28632
8272	7938816	NM_019028 // ZDHHC13 // zinc finger, DHHC-type containing 13 // 11p15.1 // 54503	7938816	0.0396161	1.28596
7079	7926715	NM_020752 // GPR158 // G protein-coupled receptor 158 // 10p12.1 // 57512 // EN	7926715	0.0399644	1.28493
27001	8124648	NM_052967 // MAS1L // MAS1 oncogene-like // 6p21 // 116511 // ENST00000377127 //	8124648	0.0288856	1.28354
32787	8178293	NM_052967 // MAS1L // MAS1 oncogene-like // 6p21 // 116511 // ENST00000377127 //	8178293	0.0288856	1.28354
32920	8179593	NM_052967 // MAS1L // MAS1 oncogene-like // 6p21 // 116511 // ENST00000377127 //	8179593	0.0288856	1.28354
24614	8102342	NM_024090 // ELOVL6 // ELOVL family member 6, elongation of long chain fatty aci	8102342	0.025629	1.28285
29125	8145122	NM_001128431 // SLC39A14 // solute carrier family 39 (zinc transporter), member	8145122	0.00128708	1.2824
19830	8054064	NM_025190 // ANKRD36B // ankyrin repeat domain 36B // 2q11.2 // 57730 // ENST00	8054064	0.019756	1.28135
10720	7962516	NM_030674 // SLC38A1 // solute carrier family 38, member 1 // 12q13.11 // 81539	7962516	0.0452344	1.28089
22247	8078569	NM_002078 // GOLGA4 // golgi autoantigen, golgin subfamily a, 4 // 3p22-p21.3 //	8078569	0.0488671	1.28086
21024	8066559	NM_147198 // WFDC9 // WAP four-disulfide core domain 9 // 20q12-q13.1 // 259240	8066559	0.013122	1.27898
19173	8047241	---	8047241	0.0168683	1.27609
21742	8073544	---	8073544	0.0201182	1.27535
7255	7928471	NM_006721 // ADK // adenosine kinase // 10q22 10q11-q24 // 132 // NM_001123 //	7928471	0.036778	1.27452
31671	8168779	ENST00000332270 // RP1-19N1.1 // novel protein similar to chondroitin sulfate Ga	8168779	0.0377393	1.2733
15500	8011193	NM_032895 // C17orf91 // chromosome 17 open reading frame 91 // 17p13.3 // 84981	8011193	0.0319774	1.27306
19808	8053801	NM_025190 // ANKRD36B // ankyrin repeat domain 36B // 2q11.2 // 57730 // ENST00	8053801	0.019454	1.27277
26725	8122222	NM_018945 // PDE7B // phosphodiesterase 7B // 6q23-q24 // 27115 // ENST00000308	8122222	0.02417	1.27259
21184	8068105	NM_001011545 // BACH1 // BTB and CNC homology 1, basic leucine zipper transcript	8068105	0.0381541	1.27177
3867	7896440	---	7896440	0.0260953	1.27003
26317	8118116	NM_005931 // MICB // MHC class I polypeptide-related sequence B // 6p21.3 // 427	8118116	0.000831043	1.26908
25120	8107100	NM_001012761 // RGM8 // RGM domain family, member B // 5q21.1 // 285704 // NM_1	8107100	0.0480698	1.26861
18883	8044572	---	8044572	0.0419647	1.2686
9943	7954293	NM_000921 // PDE3A // phosphodiesterase 3A, cGMP-inhibited // 12p12 // 5139 //	7954293	0.00920096	1.26853
27862	8133225	---	8133225	0.0289568	1.26826
29339	8147206	NM_003821 // RIPK2 // receptor-interacting serine-threonine kinase 2 // 8q21 //	8147206	0.00567739	1.26742
16963	8025984	BC125186 // ZNF844 // zinc finger protein 844 // 19p13.2 // 284391 // AK299732	8025984	0.0134165	1.26709
25645	8112342	NM_197941 // ADAMTS6 // ADAM metalloproteinase with thrombospondin type 1 motif,	8112342	0.0465514	1.26628
11510	7970924	NM_178006 // STARD13 // STAR-related lipid transfer (START) domain containing 13	7970924	0.00567166	1.2662
19245	8047926	NM_002374 // MAP2 // microtubule-associated protein 2 // 2q34-q35 // 4133 // NM	8047926	0.0166596	1.26529
22275	8078956	---	8078956	0.0214209	1.26495
34	7892528	---	7892528	0.0413451	1.26409
3107	7895660	---	7895660	0.00644706	1.26229
21427	8070557	NM_001098402 // ZNF295 // zinc finger protein 295 // 21q22.3 // 49854 // NM_020	8070557	0.0315029	1.26217
1447	7893969	---	7893969	0.0387171	1.26169
29171	8145736	NM_013961 // NRG1 // neuregulin 1 // 8p12 // 3084 // NM_013958 // NRG1 // neure	8145736	0.00592207	1.26159
13371	7988921	NM_000259 // MYO5A // myosin VA (heavy chain 12, myosin) // 15q21 // 4644 // EN	7988921	0.0400929	1.25975
19867	8054479	NM_005434 // MALL // mal, T-cell differentiation protein-like // 2q13 // 7851 //	8054479	0.0341628	1.25926
32562	8176482	---	8176482	0.0212988	1.25801
10416	7959298	NM_001080825 // TMEM120B // transmembrane protein 120B // 12q24.31 // 144404 //	7959298	0.0439913	1.25625
17308	8029437	NM_006505 // PVR // poliovirus receptor // 19q13.2 // 5817 // ENST00000187830 //	8029437	0.0163581	1.25477
23307	8089759	NM_018266 // TMEM39A // transmembrane protein 39A // 3q13.33 // 55254 // ENST00	8089759	0.0216201	1.25444
24630	8102482	NM_014822 // SEC24D // SEC24 related gene family, member D (S. cerevisiae) // 4q	8102482	0.0437726	1.25408
24972	8105487	NM_138453 // RAB3C // RAB3C, member RAS oncogene family // 5q13 // 115827 // EN	8105487	0.0435966	1.25386
26513	8120300	NM_138569 // C6orf142 // chromosome 6 open reading frame 142 // 6p12.1 // 90523	8120300	0.0235616	1.2534
16642	8022674	NM_001792 // CDH2 // cadherin 2, type 1, N-cadherin (neuronal) // 18q11.2 // 100	8022674	0.0439516	1.2533
16818	8024358	NM_001319 // CSNK1G2 // casein kinase 1, gamma 2 // 19p13.3 // 1455 // ENST0000	8024358	0.0345855	1.25298
26137	8116827	BC028580 // MGC26597 // PIP5K1A pseudogene // 6p24.3 // 206426	8116827	0.035741	1.25264
12308	7978492	NM_015473 // HEATR5A // HEAT repeat containing 5A // 14q12 // 25938 // ENST0000	7978492	0.0335094	1.25028
12785	7982390	---	7982390	0.0329777	1.24894
30144	8154379	---	8154379	0.0325218	1.24884
18572	8041745	NM_024766 // C2orf34 // chromosome 2 open reading frame 34 // 2p21 // 79823 //	8041745	0.00450611	1.24875
7791	7934068	---	7934068	0.0458035	1.24766
22029	8076195	NM_002608 // PDGFB // platelet-derived growth factor beta polypeptide (simian sa	8076195	0.0309655	1.24759
10173	7956658	NM_004731 // SLC16A7 // solute carrier family 16, member 7 (monocarboxylic acid	7956658	0.0386457	1.24755
30618	8158987	NR_001275 // CELP // carboxyl ester lipase pseudogene // 9q34.3 // 1057 // L148	8158987	0.0232872	1.24644
13980	7995379	---	7995379	0.00151724	1.2458
5041	7905938	NM_018845 // RAG1AP1 // recombination activating gene 1 activating protein 1 //	7905938	0.0305024	1.2446
18183	8038048	NM_144577 // CCDC114 // coiled-coil domain containing 114 // 19q13.32 // 93233 //	8038048	0.00597299	1.24355
22301	8079163	---	8079163	0.0337589	1.24335
13083	7985493	NM_023003 // TM6SF1 // transmembrane 6 superfamily member 1 // 15q24-q26 // 5334	7985493	0.0298146	1.24241
27960	8134339	NM_015068 // PEG10 // paternally expressed 10 // 7q21 // 23089 // NM_001040152	8134339	0.0433223	1.24219
26168	8117054	NM_006366 // CAP2 // CAP, adenylate cyclase-associated protein, 2 (yeast) // 6p2	8117054	0.0329207	1.24112
5447	7910383	---	7910383	0.0414174	1.241
11289	7968835	NM_016248 // AKAP11 // A kinase (PRKA) anchor protein 11 // 13q14.11 // 11215 //	7968835	0.022226	1.24014
31119	8163775	NM_001080497 // MEGF9 // multiple EGF-like-domains 9 // 9q32-q33.3 // 1955 // E	8163775	0.00678267	1.23922
23998	8096568	BC074759 // C4orf17 // chromosome 4 open reading frame 17 // 4q23 // 84103 // C	8096568	0.0169633	1.23886
31506	8167575	NM_001127345 // GAGE12B // G antigen 12B // Xp11.23 // 729428 // NM_001098408 //	8167575	0.0159872	1.23885
17535	8031615	---	8031615	0.0344955	1.23868
12061	7976080	NM_003608 // GPR65 // G protein-coupled receptor 65 // 14q31-q32.1 // 8477 // E	7976080	0.0485976	1.23849
15638	8012896	NM_000304 // PMP22 // peripheral myelin protein 22 // 17p12-p11.2 // 5376 // NM	8012896	0.0330486	1.23787
16093	8017212	NM_032582 // USP32 // ubiquitin specific peptidase 32 // 17q23.2 // 84669 // EN	8017212	0.024918	1.23732
11174	7967544	NM_005505 // SCARB1 // scavenger receptor class B, member 1 // 12q24.31 // 949 //	7967544	0.034666	1.23625
7951	7935776	AF132203 // SCD // stearoyl-CoA desaturase (delta-9-desaturase) // 10q24.31 // 6	7935776	0.0175513	1.23576
30937	8161892	NM_004297 // GNA14 // guanine nucleotide binding protein (G protein), alpha 14 //	8161892	0.00897944	1.23582
11890	7974249	NM_001663 // ARF6 // ADP-ribosylation factor 6 // 14q21.3 // 382 // ENST0000029	7974249	0.0300485	1.23581
14661	8002444	AK128439 // VAC14 // Vac14 homolog (S. cerevisiae) // 16q22.1 // 55697	8002444	0.0215583	1.23527
8083	7937275	NM_021932 // RIC8A // resistance to inhibitors of cholinesterase 8 homolog A (C.	7937275	0.00817985	1.23507
14700	8002941	NM_199355 // ADAMTS18 // ADAM metalloproteinase with thrombospondin type 1 motif,	8002941	0.0238819	1.23487
6857	7924636	NM_014698 // TMEM63A // transmembrane protein 63A // 1q42.12 // 9725 // ENST000	7924636	0.037514	1.23418
11293	7968883	NM_153218 // C13orf31 // chromosome 13 open reading frame 31 // 13q14.11 // 1448	7968883	0.0175728	1.23381
7741	7933469	NM_021226 // ARHGAP22 // Rho GTPase activating protein 22 // 10q11.22 // 58504 //	7933469	0.0334608	1.23203
2980	7895531	---	7895531	0.0269878	1.23186

3487	7896053	---	7896053	0.0335984	1.22942
29086	8144705	NM_020844 // C8orf79 // chromosome 8 open reading frame 79 // 8p22 // 57604 //	8144705	0.0110268	1.22888
4710	7902874	NM_032270 // LRRRC8 // leucine rich repeat containing 8 family, member C // 1p22	7902874	0.041724	1.2285
15724	8013572	---	8013572	0.0476875	1.22779
30966	8162183	BC027471 // LOC440173 // LOC440173 // 14q12 // 440173 // ENST00000359720 // LOC	8162183	0.00691946	1.22777
10961	7965150	---	7965150	0.0130546	1.22711
12367	7979085	NM_002863 // PYGL // phosphorylase, glycogen, liver // 14q21-q22 // 5836 // ENS	7979085	0.0120378	1.22706
10393	7959102	NM_014365 // HSPB8 // heat shock 22kDa protein 8 // 12q24.23 // 26353 // ENST00	7959102	0.00953567	1.22524
11001	7965573	NM_021229 // NTN4 // netrin 4 // 12q22.12q22-q23 // 59277 // ENST00000343702 //	7965573	0.0172219	1.2249
11912	7974425	NM_015589 // SAMD4A // sterile alpha motif domain containing 4A // 14q22.2 // 23	7974425	0.029819	1.22462
22617	8082478	NM_016128 // COPG // coatmer protein complex, subunit gamma // 3q21.3 // 22820	8082478	0.0348698	1.22455
20827	8064866	BC117492 // LOC149837 // hypothetical LOC149837 // 20p12.3 // 149837 // BC11749	8064866	0.0259279	1.22402
9579	7950933	NM_016931 // NOX4 // NADPH oxidase 4 // 11q14.2-q21 // 50507 // ENST00000263317	7950933	0.00657444	1.22355
369	7892870	---	7892870	0.0210813	1.22335
30546	8158059	NM_003165 // STXBP1 // syntaxin binding protein 1 // 9q34.1 // 6812 // NM_00103	8158059	0.022861	1.22331
19033	8045768	NM_152522 // ARL6IP6 // ADP-ribosylation-like factor 6 interacting protein 6 //	8045768	0.00257228	1.22311
30157	8154512	NM_001040272 // ADAMTSL1 // ADAMTS-like 1 // 9p22.2-p22.1 // 92949 // ENST00000	8154512	8.69E-05	1.22254
28136	8136181	BC017587 // C7orf45 // chromosome 7 open reading frame 45 // 7q32.2 // 136263 //	8136181	0.0120711	1.22159
14520	8001064	BC107073 // VN1R3 // vomeronasal 1 receptor 3 // 16p11.2 // 317702	8001064	0.0330113	1.2197
24	7892517	---	7892517	0.0173343	1.21937
10091	7955863	---	7955863	0.00623985	1.21908
962	7893476	---	7893476	0.0389993	1.21904
22719	8083569	NM_015508 // TIPARP // TCDD-inducible poly(ADP-ribose) polymerase // 3q25.31 //	8083569	0.0448987	1.21868
27245	8127346	NM_016277 // RAB23 // RAB23, member RAS oncogene family // 6p11 // 51715 // NM_	8127346	0.0390786	1.2186
25076	8106626	AY358256 // FAM151B // family with sequence similarity 151, member B // 5q14.1 //	8106626	0.0359948	1.21782
26745	8122426	NM_014721 // PHACTR2 // phosphatase and actin regulator 2 // 6q24.2 // 9749 //	8122426	0.0224371	1.21777
4581	7901479	NM_024646 // ZYG11B // zyg-11 homolog B (C. elegans) // 1p32.3 // 79699 // ENST	7901479	0.0210955	1.21711
20063	8056343	NM_014900 // COBLL1 // COBL-like 1 // 2q24.3 // 22837 // ENST00000194871 // COB	8056343	0.0373715	1.21645
12938	7984112	NM_016530 // RAB8B // RAB8B, member RAS oncogene family // 15q22.2 // 51762 //	7984112	0.0165219	1.21602
22462	8081073	BC024188 // C3orf38 // chromosome 3 open reading frame 38 // 3p11.2 // 285237 //	8081073	0.037888	1.21585
24600	8102200	NM_014421 // DKF2 // dickkopf homolog 2 (Xenopus laevis) // 4q25 // 27123 // EN	8102200	0.0202509	1.21507
10690	7962212	NM_004572 // PKP2 // plakophilin 2 // 12p11 // 5318 // NM_001005242 // PKP2 //	7962212	0.00744925	1.21499
14833	8004266	NM_201566 // SLC16A13 // solute carrier family 16, member 13 (monocarboxylic aci	8004266	0.0300623	1.214
15339	8009301	NM_002737 // PRKCA // protein kinase C, alpha // 17q22-q23.2 // 5578 // ENST000	8009301	0.000701228	1.21333
2865	7895415	---	7895415	0.0178613	1.21327
4694	7902687	NM_001554 // CYR61 // cysteine-rich, angiogenic inducer, 61 // 1p31-p22 // 3491	7902687	0.0170015	1.21241
19070	8046078	NM_020981 // B3GALT1 // UDP-Gal:betaGlcNAc beta 1,3-galactosyltransferase, polyp	8046078	0.019283	1.21135
24305	8099362	---	8099362	0.0224178	1.21109
1092	7893606	---	7893606	0.0399667	1.21107
23247	8089112	NM_182909 // FILIP1L // filamin A interacting protein 1-like // 3q12.1 // 11259	8089112	0.0166469	1.20985
3700	7896269	---	7896269	0.000748335	1.20955
29993	8152703	NM_058229 // FBXO32 // F-box protein 32 // 8q24.13 // 114907 // NM_148177 // FB	8152703	0.035545	1.20939
24915	8104838	NM_194283 // DNAJC21 // DnaJ (Hsp40) homolog, subfamily C, member 21 // 5p13.2 //	8104838	0.0347337	1.20883
24279	8099099	NM_032927 // TMEM128 // transmembrane protein 128 // 4p16.2 // 85013 // ENST000	8099099	0.0105816	1.20878
9265	7948111	NM_001005491 // OR10AG1 // olfactory receptor, family 10, subfamily AG, member 1	7948111	0.0384964	1.20767
16903	8025347	NM_025061 // LRRRC8E // leucine rich repeat containing 8 family, member E // 19p1	8025347	0.0195215	1.20695
26892	8123936	NM_006403 // NEDD9 // neural precursor cell expressed, developmentally down-regu	8123936	0.0341266	1.20568
32747	8177955	NM_005931 // MICB // MHC class I polypeptide-related sequence B // 6p21.3 // 427	8177955	0.00724406	1.20433
10575	7961083	NM_005127 // CLEC2B // C-type lectin domain family 2, member B // 12p13-p12 // 9	7961083	0.0105009	1.20401
8713	7942964	NM_022918 // TMEM135 // transmembrane protein 135 // 11q14.2 // 65084 // ENST00	7942964	0.00402094	1.20389
20129	8057439	---	8057439	0.0116132	1.20292
14451	8000482	NM_015171 // XPO6 // exportin 6 // 16p11.2 // 23214 // ENST00000304658 // XPO6	8000482	0.0198224	1.20225
6943	7925480	NM_000143 // FH // fumarate hydratase // 1q42.1 // 2271 // ENST00000366560 // F	7925480	0.0346595	1.20162
31485	8167322	NM_017883 // WDR13 // WD repeat domain 13 // Xp11.23 // 64743 // ENST0000021805	8167322	0.0164057	1.20156
14890	8005064	NM_014859 // RICH2 // Rho-type GTPase-activating protein RICH2 // 17p12 // 9912	8005064	0.000309705	1.20075
18293	8039044	NM_018355 // ZNF415 // zinc finger protein 415 // 19q13.41 // 55786 // ENST0000	8039044	0.0173495	1.20055
4046	7896623	---	7896623	0.0136667	1.2005
19236	8047784	NM_020923 // ZDBF2 // zinc finger, DBF-type containing 2 // 2q33.3 // 57683 //	8047784	0.0403691	1.20005
27160	8126369	---	8126369	0.0352146	1.19983
18393	8039892	NM_014513 // KIR2DS5 // killer cell immunoglobulin-like receptor, two domains, s	8039892	0.0278229	1.19875
6862	7924701	NM_022735 // ACBD3 // acyl-Coenzyme A binding domain containing 3 // 1q42.12 //	7924701	0.00338245	1.19831
25752	8113202	NM_031952 // SPATA9 // spermatogenesis associated 9 // 5q15 // 83890 // ENST000	8113202	0.00943459	1.19635
12336	7978718	NM_006364 // SEC23A // Sec23 homolog A (S. cerevisiae) // 14q21.1 // 10484 // E	7978718	0.0494503	1.19543
18781	8043489	---	8043489	0.0250911	1.19531
28490	8139299	NM_001127218 // POLD2 // polymerase (DNA directed), delta 2, regulatory subunit	8139299	0.0395802	1.19498
7749	7933561	NM_003631 // PARG // poly (ADP-ribose) glycohydrolase // 10q11.23 // 8505 // EN	7933561	0.0105219	1.1943
17852	8034920	NM_006844 // ILVBL // ilvB (bacterial acetolactate synthase)-like // 19p13.1 //	8034920	0.0183291	1.19386
31419	8166665	BC035026 // FAM47B // family with sequence similarity 47, member B // Xp21.1 //	8166665	0.0423152	1.19384
14030	7995895	NM_014685 // HERPUD1 // homocysteine-inducible, endoplasmic reticulum stress-ind	7995895	0.0118442	1.19377
31223	8164883	NM_033161 // SURF4 // surfait 4 // 9q34.2 // 6836 // ENST00000371989 // SURF4 //	8164883	0.0200593	1.19371
18519	8041048	NM_005253 // FOSL2 // FOS-like antigen 2 // 2p23.3 // 2355 // ENST00000264716 //	8041048	0.0466422	1.19361
21552	8071559	NM_022044 // SDF2L1 // stromal cell-derived factor 2-like 1 // 22q11.21 // 23753	8071559	0.0126027	1.19289
9923	7954090	NM_001423 // EMP1 // epithelial membrane protein 1 // 12p12.3 // 2012 // ENST00	7954090	0.0411164	1.19206
27936	8133961	NM_138290 // RUNDC3B // RUN domain containing 3B // 7q21.12 // 154661 // ENST00	8133961	0.0029388	1.19205
16524	8021635	NM_002575 // SERPINB2 // serpin peptidase inhibitor, clade B (ovalbumin), member	8021635	0.0458043	1.19158
20480	8061224	NM_178483 // C20orf79 // chromosome 20 open reading frame 79 // 20p11.23 // 1408	8061224	0.0365704	1.19081
6255	7918747	BC063894 // DENND2C // DENN/MADD domain containing 2C // 1p13.2 // 163259	7918747	0.0239976	1.18882
28508	8139486	NR_002990 // SNORA5B // small nucleolar RNA, H/ACA box 5B // 7p13 // 677795 //	8139486	0.00691829	1.18596
14476	8000706	NM_006319 // CDIPT // CDP-diacylglycerol-inositol 3-phosphatidyltransferase (ph	8000706	0.0359243	1.18592
28079	8135587	NM_001233 // CAV2 // caveolin 2 // 7q31.1 // 858 // NM_198212 // CAV2 // caveol	8135587	0.0115937	1.18542
29364	8147483	NM_178812 // MTDH // metadherin // 8q22.1 // 92140 // ENST00000336273 // MTDH //	8147483	0.0445745	1.18504
9934	7954196	NM_145792 // MGST1 // microsomal glutathione S-transferase 1 // 12p12.3-p12.1 //	7954196	0.00718549	1.18478
10135	7956166	NM_015292 // FAM62A // family with sequence similarity 62 (C2 domain containing)	7956166	0.0455582	1.18433
307	7892807	---	7892807	0.0352274	1.18395
6138	7917482	NM_001008661 // CCBL2 // cysteine conjugate-beta lyase 2 // 1p22.2 // 56267 //	7917482	0.0413695	1.18373
2786	7895335	---	7895335	0.0137752	1.18339
7900	7935011	NM_014912 // CPEB3 // cytoplasmic polyadenylation element binding protein 3 // 1	7935011	0.0467022	1.18329
9620	7951259	NM_002425 // MMP10 // matrix metalloproteinase 10 (stromelysin 2) // 11q22.3 // 4	7951259	0.0197246	1.18254
19555	8051413	NM_015475 // FAM98A // family with sequence similarity 98, member A // 2p22.3 //	8051413	0.0389923	1.18249
14037	7996027	NM_002996 // CX3CL1 // chemokine (C-X3-C motif) ligand 1 // 16q13 // 6376 // EN	7996027	0.0412446	1.18242
18400	8039937	NM_001029885 // GLTPD1 // glycolipid transfer protein domain containing 1 // 1p3	8039937	0.0326618	1.18176
30361	8156253	AK302448 // LOC645961 // similar to chromosome 9 open reading frame 36 // 9q22.1	8156253	0.0250296	1.18051
26520	8120362	NM_152731 // C6orf65 // chromosome 6 open reading frame 65 // 6p12.1 // 221336 //	8120362	0.024999	1.18002
22458	8081055	NM_014043 // CHMP2B // chromatin modifying protein 2B // 3p11.2 // 25978 // ENS	8081055	0.0156947	1.17946
21961	8075529	NM_014338 // PISD // phosphatidylserine decarboxylase // 2q11.2 // 23761 // EN	8075529	0.0382722	1.17857
26021	8115732	AY358216 // UNQ9374 // VCEW9374 // 5q35.1 // 100133106	8115732	0.0465879	1.17665

27703	8132070	NM_002047 // GARS // glycyl-tRNA synthetase // 7p15 // 2617 // ENST00000389266	8132070	0.0138703	1.17628
23004	8086372	NM_017886 // ULK4 // unc-51-like kinase 4 (C. elegans) // 3p22.1 // 54986 // EN	8086372	0.0114518	1.17582
4192	7897648	NM_004565 // PEX14 // peroxisomal biogenesis factor 14 // 1p36.22 // 5195 // EN	7897648	0.0259108	1.17565
31374	8166314	NM_006240 // PPEF1 // protein phosphatase, EF-hand calcium binding domain 1 // X	8166314	0.0206492	1.17478
30709	8159981	NM_006911 // RLN1 // relaxin 1 // 9p24.1 // 6013 // ENST0000023862 // RLN1 //	8159981	0.0337882	1.17467
25029	8106098	NM_005909 // MAP1B // microtubule-associated protein 1B // 5q13 // 4131 // ENST	8106098	0.00680465	1.17455
20517	8061542	NM_178580 // HM13 // histocompatibility (minor) 13 // 20q11.21 // 81502 // NM_1	8061542	0.010512	1.17357
21925	8075182	NM_005080 // XBP1 // X-box binding protein 1 // 22q12.1 22q12 // 7494 // NM_001	8075182	0.0117204	1.17316
10956	7965094	NM_203394 // E2F7 // E2F transcription factor 7 // 12q21.2 // 144455 // ENST000	7965094	0.0477537	1.17243
10437	7959604	NM_020936 // DDX55 // DEAD (Asp-Glu-Ala-Asp) box polypeptide 55 // 12q24.31 // 5	7959604	0.0172336	1.17183
31952	8171161	NM_000047 // ARSE // arylsulfatase E (chondrodysplasia punctata 1) // Xp22.3 //	8171161	0.0352485	1.17178
22529	8081537	NM_016388 // TRAT1 // T cell receptor associated transmembrane adaptor 1 // 3q13	8081537	0.0239106	1.17088
18721	8043098	---	8043098	0.0237541	1.17019
21394	8070171	---	8070171	0.00980768	1.1697
30099	8154012	NM_153186 // KANK1 // KN motif and ankyrin repeat domains 1 // 9p24.3 // 23189 //	8154012	0.0489324	1.16968
32516	8176133	NM_000402 // G6PD // glucose-6-phosphate dehydrogenase // Xq28 // 2539 // NM_00	8176133	0.0138068	1.16931
15712	8013517	---	8013517	0.0121303	1.16916
24360	8099860	NM_002913 // RFC1 // replication factor C (activator 1) 1, 145kDa // 4p14-p13 //	8099860	0.0431263	1.16894
30353	8156167	NM_024635 // MAK10 // MAK10 homolog, amino-acid N-acetyltransferase subunit (S.	8156167	0.0196775	1.16893
22572	8082003	NM_018456 // EAF2 // ELL associated factor 2 // 3q13.33 // 55840 // ENST0000027	8082003	0.00218611	1.16876
12099	7976506	NR_015340 // SERPINA13 // serpin peptidase inhibitor, clade A (alpha-1) antiprote	7976506	0.0362038	1.16867
29602	8149356	NM_201402 // DUB3 // deubiquitinating enzyme 3 // 8p23.1 // 377630 // NM_201402	8149356	0.049721	1.16829
25306	8108949	NM_002700 // POU4F3 // POU class 4 homeobox 3 // 5q31 // 5459 // ENST0000023073	8108949	0.0315793	1.16817
15302	8008870	NM_030938 // TMEM49 // transmembrane protein 49 // 17q23.1 // 81671 // ENST00000	8008870	0.0389703	1.16774
10153	7956401	NM_005412 // SHMT2 // serine hydroxymethyltransferase 2 (mitochondrial) // 12q11	7956401	0.00142211	1.16726
22274	8078933	NM_015460 // MYRIP // myosin VIIA and Rab interacting protein // 3p22.1 // 25924	8078933	0.00264921	1.16662
32447	8175531	NM_004065 // CDR1 // cerebellar degeneration-related protein 1, 34kDa // Xq27.1-	8175531	0.0399446	1.16635
30699	8159945	NM_016282 // AK3 // adenylate kinase 3 // 9p24.1-p24.3 // 50808 // ENST00000381	8159945	0.0406108	1.16602
2137	7894672	---	7894672	0.0263069	1.16599
18546	8041447	NM_016441 // CRIM1 // cysteine rich transmembrane BMP regulator 1 (chordin-like)	8041447	0.00418197	1.16596
29473	8148548	NM_005672 // PSCA // prostate stem cell antigen // 8q24.2 // 8000 // ENST0000003	8148548	0.00748071	1.16571
15409	8010061	NM_182965 // SPHK1 // sphingosine kinase 1 // 17q25.2 // 8877 // NM_021972 // S	8010061	0.0220806	1.16565
31871	8170400	AK131413 // LOC642980 // hypothetical LOC642980 // Xq28 // 642980	8170400	0.00592979	1.16498
29024	8144395	NM_201402 // DUB3 // deubiquitinating enzyme 3 // 8p23.1 // 377630 // NM_201402	8144395	0.0465018	1.16475
25842	8113981	NM_004199 // P4HA2 // procollagen-proline, 2-oxoglutarate 2-dioxygenase (proline	8113981	0.049088	1.1647
11457	7970455	NM_015974 // CRYL1 // crystallin, lambda 1 // 13q12.11 // 51084 // ENST00000298	7970455	0.00764566	1.16466
19721	8053158	NM_006302 // GCS1 // glucosidase 1 // 2p13-p12 // 7841 // ENST00000233616 // GC	8053158	0.0146895	1.16458
6093	7916969	NM_005455 // ZRANB2 // zinc finger, RAN-binding domain containing 2 // 1p31 // 9	7916969	0.033247	1.1643
28478	8139207	NM_002192 // INHBA // inhibin, beta A // 7p15-p13 // 3624 // ENST00000242208 //	8139207	0.00347209	1.16385
30666	8159554	NM_207309 // UAP1L1 // UDP-N-acetylglucosamine pyrophosphorylase 1-like 1 // 9q3	8159554	0.0115007	1.1634
7069	7926638	NM_173081 // ARMC3 // armadillo repeat containing 3 // 10p12.31 // 219681 // EN	7926638	0.0450404	1.16299
32113	8172660	NM_003886 // AKAP4 // A kinase (PRKA) anchor protein 4 // Xp11.2 // 8852 // NM_	8172660	0.0257391	1.16238
27498	8130027	---	8130027	0.0168626	1.1621
27443	8129418	NM_002844 // PTPRK // protein tyrosine phosphatase, receptor type, K // 6q22.2-q	8129418	0.0163614	1.16207
11007	7965652	NM_002595 // PCK2 // PCTAIRE protein kinase 2 // 12q23.1 // 5128 // ENST0000002	7965652	0.0212819	1.16169
15838	8014794	NM_199247 // CACNB1 // calcium channel, voltage-dependent, beta 1 subunit // 17q	8014794	0.00188468	1.1615
30265	8155451	---	8155451	0.0249838	1.16129
30898	8161556	---	8161556	0.0249838	1.16129
25495	8110803	NM_030782 // CLPTM1L // CLPTM1-like // 5pter-p15.3 // 81037 // ENST00000320895	8110803	0.0219002	1.1612
13691	7992271	NM_016111 // TELO2 // TEL2, telomere maintenance 2, homolog (S. cerevisiae) // 1	7992271	0.00224011	1.16107
22359	8079772	NM_001640 // APEH // N-acylaminoacyl-peptide hydrolase // 3p21.31 // 327 // ENS	8079772	0.0380166	1.16074
29244	8146391	XM_001714497 // LOC644334 // similar to hCG2040198 // 8q11.21 // 644334	8146391	0.00444543	1.16
24273	8099051	NM_003703 // NOL14 // nucleolar protein 14 // 4p16.3 // 8602 // ENST00000314262	8099051	0.0410532	1.15991
12394	7979398	---	7979398	0.00810413	1.15976
12492	7980296	NM_006827 // TMED10 // transmembrane emp24-like trafficking protein 10 (yeast) /	7980296	0.039533	1.15958
8508	7940781	NM_201428 // RTN3 // reticulin 3 // 11q13 // 10313 // NM_201429 // RTN3 // reti	7940781	0.0176677	1.15957
155	7892652	---	7892652	0.0275946	1.15889
24813	8103979	NM_020827 // KIAA1430 // KIAA1430 // 4q35.1 // 57587 // BC030535 // KIAA1430 //	8103979	0.045821	1.15872
3954	7896527	---	7896527	0.045269	1.15859
24839	8104180	NM_020731 // AHRR // aryl-hydrocarbon receptor repressor // 5p15.3 // 57491 //	8104180	0.0355337	1.15853
25616	8112107	NM_003711 // PPAP2A // phosphatidic acid phosphatase type 2A // 5q11 // 8611 //	8112107	0.014568	1.15826
25040	8106210	NM_001080479 // RGNF // Rho-guanine nucleotide exchange factor // 5q13.2 // 642	8106210	0.0310671	1.15742
17403	8030383	NM_020650 // RCN3 // reticulocalbin 3, EF-hand calcium binding domain // 19q13.3	8030383	0.0210626	1.15679
21876	8074853	NM_080740 // ZNF280A // zinc finger protein 280A // 22q11.22 // 129025 // ENST0	8074853	0.033701	1.15661
28688	8141035	NM_001099401 // SGCE // sarcoglycan, epsilon // 7q21-q22 // 8910 // NM_003919 //	8141035	0.0431557	1.15584
9604	7951133	NM_032427 // MAML2 // mastermind-like 2 (Drosophila) // 11q21 // 84441 // ENST0	7951133	0.0171405	1.15548
51319	7906863	NM_003115 // UAP1 // UDP-N-acetylglucosamine pyrophosphorylase 1 // 1q23.3 // 66	7906863	0.0181299	1.15412
8203	7938183	NM_013250 // ZNF215 // zinc finger protein 215 // 11p15.4 // 7762 // ENST000002	7938183	0.0180365	1.15406
7384	7929768	NM_015960 // CUTC // cutC copper transporter homolog (E. coli) // 10q24.2 // 510	7929768	0.0352906	1.15288
20374	8060196	NM_182501 // MTERFD2 // MTERF domain containing 2 // 2q37.3 // 130916 // ENST00	8060196	0.0156158	1.15274
5146	7906948	---	7906948	0.0122132	1.15241
22075	8076515	NM_014570 // ARFGAP3 // ADP-ribosylation factor GTPase activating protein 3 // 2	8076515	0.0149553	1.15196
15182	8007620	NM_002087 // GRN // granulin // 17q21.32 // 2896 // ENST00000053867 // GRN // g	8007620	0.0345548	1.15153
13363	7988763	NM_207381 // TNFAIP8L3 // tumor necrosis factor, alpha-induced protein 8-like 3	7988763	0.016171	1.15136
11497	7970810	NM_003045 // SLC7A1 // solute carrier family 7 (cationic amino acid transporter,	7970810	0.047186	1.15076
27227	8127072	NM_145740 // GSTA1 // glutathione S-transferase A1 // 6p12.1 // 2938 // ENST000	8127072	0.0142872	1.15037
11235	7968199	NM_001260 // CDK8 // cyclin-dependent kinase 8 // 13q12 // 1024 // ENST00000381	7968199	0.0373327	1.15026
25304	8108912	NM_152550 // SH3RF2 // SH3 domain containing ring finger 2 // 5q32 // 153769 //	8108912	0.0355085	1.1498
6365	7919598	AK125737 // LOC440570 // LOC440570 // 1p36.13 // 440570	7919598	0.0188452	1.1496
173	7892670	---	7892670	0.0344793	1.14934
21251	8068660	---	8068660	0.0427696	1.14913
7345	7929373	NM_005097 // LGI1 // leucine-rich, glioma inactivated 1 // 10q24 // 9211 // ENS	7929373	0.042245	1.1491
31067	8163116	NM_019114 // EPB41L4B // erythrocyte membrane protein band 4.1 like 4B // 9q31-q	8163116	0.036575	1.14909
28660	8140730	NM_024315 // C7orf23 // chromosome 7 open reading frame 23 // 7q21.1-q21.2 // 79	8140730	0.043686	1.149
6759	7923596	NM_018208 // TENK2 // ethanolamine kinase 2 // 1q32.1 // 55224 // ENST000003672	7923596	0.0111703	1.14889
19488	8050619	NM_000384 // APOB // apolipoprotein B (including Ag(x) antigen) // 2p24-p23 // 3	8050619	0.0170781	1.14873
19321	8048761	---	8048761	0.0462282	1.14856
9728	7952309	NM_001001786 // BLID // BH3-like motif containing, cell death inducer // 11q24.1	7952309	0.00286663	1.14773
23061	8087119	NM_002291 // SLC26A6 // solute carrier family 26, member 6 // 3p21.3 // 65010 //	8087119	0.0428668	1.14734
25703	8112841	NM_004272 // HOMER1 // homer homolog 1 (Drosophila) // 5q14.2 // 9456 // ENST00	8112841	0.00773183	1.14723
9105	7946478	NM_015213 // DENND5A // DENN/MADD domain containing 5A // 11p15.4 // 23258 // E	7946478	0.039398	1.14711
25497	8110841	NM_024830 // LPCAT1 // lysophosphatidylcholine acyltransferase 1 // 5p15.33 // 7	8110841	0.0100642	1.14704
21662	8072678	NM_002133 // HMOX1 // heme oxygenase (decycling) 1 // 22q12 22q13.1 // 3162 //	8072678	0.0321987	1.14674
24112	8097655	---	8097655	0.00483453	1.14619
26678	8121749	NM_000165 // GJA1 // gap junction protein, alpha 1, 43kDa // 6q21-q23.2 // 2697	8121749	0.0180263	1.1461
9713	7952145	NM_006389 // HYOU1 // hypoxia up-regulated 1 // 11q23.1-q23.3 // 10525 // ENST0	7952145	0.0312603	1.14606

17556	8031732	NM_173631 // ZNF547 // zinc finger protein 547 // 19q13.43 // 284306 /// NR_0021	8031732	0.0173309	1.14576
7789	7934050	NM_152707 // SLC25A16 // solute carrier family 25 (mitochondrial carrier; Graves	7934050	0.0404922	1.14482
30062	8153474	NM_003313 // TSTA3 // tissue specific transplantation antigen P35B // 8q24.3 //	8153474	0.0460029	1.14436
5863	7914557	NM_030786 // SYNC1 // syncoilin, intermediate filament 1 // 1p34.3-p33 // 81493	7914557	0.0330169	1.14418
16526	8021653	NM_026640 // SERPINB8 // serpin peptidase inhibitor, clade B (ovalbumin), member	8021653	0.0300174	1.14381
28820	8142446	---	8142446	0.0256209	1.14298
31189	8164535	NM_000755 // CRAT // carnitine acetyltransferase // 9q34.1 // 1384 /// NM_004003	8164535	0.0492177	1.1428
6665	7922598	NM_004673 // ANGPTL1 // angiopoietin-like 1 // 1q25.2 // 9068 /// ENST0000023481	7922598	0.0047659	1.14253
5015	7905629	---	7905629	0.0426635	1.14188
9736	7952341	NM_024769 // ASAM // adipocyte-specific adhesion molecule // 11q24.1 // 79827 //	7952341	0.00411474	1.14148
1657	7894183	---	7894183	0.0186225	1.14111
4130	7896908	NM_153339 // PUSL1 // pseudouridylylase synthase-like 1 // 1p36.33 // 126789 /// E	7896908	0.0151607	1.14011
23169	8088474	---	8088474	0.0391406	1.13922
15480	8010924	NM_001128159 // VPS53 // vacuolar protein sorting 53 homolog (S. cerevisiae) //	8010924	0.0133314	1.13889
26894	8123951	BC007011 // C6orf105 // chromosome 6 open reading frame 105 // 6p24.1 // 84830 /	8123951	0.00265681	1.13853
15194	8007750	NM_144608 // HEXIM2 // hexamethylene bis-acetamide inducible 2 // 17q21.31 // 124	8007750	0.0455353	1.1384
27493	8129985	NM_006718 // PLAGL1 // pleiomorphic adenoma gene-like 1 // 6q24-q25 // 5325 ///	8129985	0.0300669	1.13832
23056	8086961	NM_004567 // PFKFB4 // 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase 4 //	8086961	0.0268033	1.13783
14293	7998784	NM_001089 // ABCA3 // ATP-binding cassette, sub-family A (ABC1), member 3 // 16p	7998784	0.00404315	1.13779
11867	7974029	NM_001007795 // TTC6 // tetratricopeptide repeat domain 6 // 14q21.1 // 115669 /	7974029	0.0332963	1.13707
13494	7990429	NM_020447 // C15orf17 // chromosome 15 open reading frame 17 // 15q24.1 // 57184	7990429	0.00934061	1.13633
26818	8123230	NR_003288 // LOC729603 // calcium binding protein P22 pseudogene // 6q25.3 // 72	8123230	0.0357958	1.13603
16170	8018209	NM_015654 // NAT9 // N-acetyltransferase 9 // 17q25.1 // 26151 /// ENST000003578	8018209	0.0342409	1.13593
13717	7992639	NM_020705 // TBC1D24 // TBC1 domain family, member 24 // 16p13.3 // 57465 /// EN	7992639	0.0275922	1.13511
16895	8025255	NM_006949 // STXBP2 // syntaxin binding protein 2 // 19p13.3-p13.2 // 6813 /// N	8025255	0.0463059	1.13461
2976	7895527	---	7895527	0.0318203	1.13447
30782	8160661	---	8160661	0.0235191	1.13413
8527	7940996	NM_012094 // PRDX5 // peroxiredoxin 5 // 11q13 // 25824 /// NM_181651 // PRDX5 /	7940996	0.0057689	1.13404
16625	8022557	---	8022557	0.0320311	1.13386
26340	8118322	NR_002742 // SNORD52 // small nucleolar RNA, C/D box 52 // 6p21.32 // 26797 ///	8118322	0.0488388	1.13374
26879	8123802	NM_022085 // TXNDC5 // thioredoxin domain containing 5 // 6p24.3 // 81567 /// NM	8123802	0.0262666	1.13328
22863	8084927	---	8084927	0.00618335	1.13304
28512	8139592	NM_004507 // HUS1 // HUS1 checkpoint homolog (S. pombe) // 7p13-p12 // 3364 ///	8139592	0.00172577	1.1329
27365	8128620	BC131628 // KIAA1553 // KIAA1553 // 6q21 // 57673 /// NM_001080450 // KIAA1553 /	8128620	0.04033	1.13285
14078	7996468	NM_024712 // ELMO3 // engulfment and cell motility 3 // 16q22.1 // 79767 /// ENS	7996468	0.023906	1.13282
26292	8117849	NM_033229 // TRIM15 // tripartite motif-containing 15 // 6p21.3 // 89870 /// ENS	8117849	0.0453041	1.13267
32731	8177760	NM_033229 // TRIM15 // tripartite motif-containing 15 // 6p21.3 // 89870 /// ENS	8177760	0.0453041	1.13267
32867	8179070	NM_033229 // TRIM15 // tripartite motif-containing 15 // 6p21.3 // 89870 /// ENS	8179070	0.0453041	1.13267
5666	7912385	NM_001001998 // EXOSC10 // exosome component 10 // 1p36.22 // 5394 /// NM_002685	7912385	0.0278899	1.13245
19457	8050240	NM_002539 // ODC1 // ornithine decarboxylase 1 // 2p25 // 4953 /// ENST000002341	8050240	0.0384571	1.13238
27527	8130422	NM_173515 // CNKSR3 // CNKSR family member 3 // 6q25.2 // 154043 /// ENST0000036	8130422	0.0460432	1.13225
5196	7907439	NM_004905 // PRDX6 // peroxiredoxin 6 // 1q25.1 // 9588 /// ENST00000340385 // P	7907439	0.0186742	1.13223
12146	7976842	---	7976842	0.0189232	1.1321
8646	7942409	NM_176796 // P2RY6 // pyrimidnergic receptor P2Y, G-protein coupled, 6 // 11q13	7942409	0.0178564	1.13204
18557	8041568	---	8041568	0.0221104	1.1316
24097	8097507	NM_031296 // RAB33B // RAB33B, member RAS oncogene family // 4q28 // 83452 /// E	8097507	0.0366705	1.13149
11862	7973974	NM_006194 // PAX9 // paired box 9 // 14q12-q13 // 5083 /// ENST00000402703 // PA	7973974	0.023864	1.13145
16330	8019796	NM_002359 // MAFG // v-maf musculoaponeurotic fibrosarcoma oncogene homolog G (a	8019796	0.00331547	1.13144
5806	7913978	NM_018066 // GPN2 // GPN-loop GTPase 2 // 1p36.11 // 54707 /// ENST00000374135 /	7913978	0.000234166	1.13139
16602	8022404	NM_001098801 // C18orf19 // chromosome 18 open reading frame 19 // 18p11.21 // 1	8022404	0.0240791	1.13122
718	7893227	---	7893227	0.0185539	1.13119
9509	7950282	---	7950282	0.0294221	1.13112
9911	7954008	---	7954008	0.00854163	1.13097
11189	7967700	AK058065 // LOC100128840 // hypothetical protein LOC100128840 // 12q24.33 // 100	7967700	0.0146996	1.13081
11968	7975121	NM_002028 // FNTB // farnesyltransferase, CAAX box, beta // 14q23-q24 // 2342 //	7975121	0.0197674	1.13052
17002	8026363	---	8026363	0.0429742	1.13001
12962	7984319	NM_002755 // MAP2K1 // mitogen-activated protein kinase kinase 1 // 15q22.1-q22.	7984319	0.0415446	1.13
28505	8139468	NM_004749 // TBRG4 // transforming growth factor beta regulator 4 // 7p14-p13 //	8139468	0.0235687	1.12953
15647	8012953	NM_006470 // TRIM16 // tripartite motif-containing 16 // 17p11.2 // 10626 /// EN	8012953	0.0283368	1.12903
7310	7928944	NM_004670 // PAPSS2 // 3'-phosphoadenosine 5'-phosphosulfate synthase 2 // 10q23	7928944	0.0336763	1.12891
27453	8129562	NM_001901 // CTGF // connective tissue growth factor // 6q23.1 // 1490 /// ENST0	8129562	0.0113849	1.12877
7173	7927639	---	7927639	0.000110549	1.12769
23980	8096413	---	8096413	0.0193856	1.12766
6056	7916609	NM_002228 // JUN // jun oncogene // 1p32-p31 // 3725 /// ENST00000371222 // JUN	7916609	0.0093866	1.12737
19209	8047555	---	8047555	0	1.12728
8105	7937508	NM_004357 // CD151 // CD151 molecule (Raph blood group) // 11p15.5 // 977 /// NM	7937508	0.0455207	1.12723
18821	8043861	NM_015904 // EIF5B // eukaryotic translation initiation factor 5B // 2q11.2 // 9	8043861	0.0492095	1.12718
24019	8096771	NM_021227 // DC2 // DC2 protein // 4q25 // 58505 /// ENST00000361564 // DC2 // D	8096771	0.0147804	1.12714
29474	8148553	NM_017527 // LY6K // lymphocyte antigen 6 complex, locus K // 8q24.3 // 54742 //	8148553	0.0390167	1.12713
29644	8149762	NM_003844 // TNFRSF10A // tumor necrosis factor receptor superfamily, member 10a	8149762	0.011172	1.12697
31321	8165833	NM_001011719 // ARSH // arylsulfatase family, member H // Xp22.33 // 347527 ///	8165833	0.0439216	1.12697
16781	8023968	NM_004359 // CDC34 // cell division cycle 34 homolog (S. cerevisiae) // 19p13.3	8023968	0.0021428	1.12659
27684	8131925	---	8131925	0.0214276	1.12596
4972	7905365	NM_003557 // PIP5K1A // phosphatidylinositol-4-phosphate 5-kinase, type I, alpha	7905365	0.00947556	1.12584
20278	8059139	NM_001077198 // ATG9A // ATG9 autophagy related 9 homolog A (S. cerevisiae) // 2	8059139	0.0370707	1.12541
17995	8036309	NM_133466 // ZFP82 // zinc finger protein 82 homolog (mouse) // 19q13.12 // 2844	8036309	0.00946308	1.12537
21618	8072242	NM_016418 // NF2 // neurofibromin 2 (merlin) // 22q12.2 // 4771 /// NM_181832 //	8072242	0.0305677	1.12527
29392	8147748	---	8147748	0.0276828	1.12524
17265	8029006	NM_021913 // AXL // AXL receptor tyrosine kinase // 19q13.1 // 558 /// NM_001699	8029006	0.00959755	1.12487
32008	8171684	NM_031892 // SH3KBP1 // SH3-domain kinase binding protein 1 // Xp22.1-p21.3 // 3	8171684	0.0130068	1.1245
22141	8077441	NM_003670 // BHLHB2 // basic helix-loop-helix domain containing, class B, 2 // 3	8077441	0.0247888	1.12395
13233	7987048	NM_017762 // MTMR10 // myotubularin related protein 10 // 15q13.3 // 54893 /// B	7987048	0.0363377	1.1235
24375	8100015	NM_207406 // CCDC4 // coiled-coil domain containing 4 // 4p13 // 389206 /// ENST	8100015	0.0194591	1.12345
27423	8129193	NM_001042475 // C6orf204 // chromosome 6 open reading frame 204 // 6q22 // 38711	8129193	0.041042	1.12322
6651	7922432	NM_172071 // RC3H1 // ring finger and CCHC-type zinc finger domains 1 // 1q25.1	7922432	0.0289034	1.12303
22401	8080487	NM_006254 // PRKCD // protein kinase C, delta // 3p21.31 // 5580 /// NM_212539 /	8080487	0.0450872	1.12301
15461	8010747	NM_212492 // GPS1 // G protein pathway suppressor 1 // 17q25.3 // 2873 /// NM_00	8010747	0.00418847	1.1227
22065	8076455	ENST00000323013 // RRP7A // ribosomal RNA processing 7 homolog A (S. cerevisiae)	8076455	0.0385851	1.12267
25265	8108558	NM_080670 // SLC35A4 // solute carrier family 35, member A4 // 5q31.3 // 113829	8108558	0.0448054	1.12252
19677	8052731	ENST0000037965 // WDR92 // WD repeat domain 92 // 2p14 // 116143	8052731	0.0131784	1.12239
7745	7933501	NM_001080520 // DRGX // dorsal root ganglia homeobox // 10q11.23 // 644168 /// E	7933501	0.00353489	1.12233
28407	8138689	NM_003930 // SKAP2 // src kinase associated phosphoprotein 2 // 7p21-p15 // 8935	8138689	0.0268431	1.12231
4355	7899167	NM_024674 // LIN28 // lin-28 homolog (C. elegans) // 1p36.11 // 79727 /// ENST00	7899167	0.0350878	1.12217
15654	8013035	NM_020787 // ZNF624 // zinc finger protein 624 // 17p11.2 // 57547 /// ENST00000	8013035	0.00962724	1.12173
19604	8051998	NM_139279 // MCFD2 // multiple coagulation factor deficiency 2 // 2p21 // 90411	8051998	0.0162224	1.12171
14610	8001971	NM_012163 // LRRFC29 // leucine rich repeat containing 29 // 16q22.1 // 26231 ///	8001971	0.0451988	1.12155

32470	8175638	AK131413 // LOC642980 // hypothetical LOC642980 // Xq28 // 642980	8175638	0.0321639	1.12116
6561	7921571	NM_002857 // PEX19 // peroxisomal biogenesis factor 19 // 1q23.2 // 5824 // ENS	7921571	0.0108347	1.12055
4045	7896622	---	7896622	0.03677	1.12048
5751	7913242	NM_024544 // MUL1 // mitochondrial ubiquitin ligase activator of NFKB 1 // 1p36.	7913242	0.0172026	1.1204
15633	8012856	NM_018127 // ELAC2 // elacC homolog 2 (E. coli) // 17p11.2 // 60528 // ENST000000	8012856	0.00407501	1.11998
21563	8071662	NM_199127 // GGTLC2 // gamma-glutamyltransferase light chain 2 // 22q11.22 // 91	8071662	0.0234326	1.11978
15490	8011027	NM_001080779 // MYO1C // myosin IC // 17p13 // 4641 // NM_001080950 // MYO1C //	8011027	0.00150766	1.11976
2228	7894767	---	7894767	0.0306559	1.11943
17172	8027908	NM_024321 // RBM42 // RNA binding motif protein 42 // 19q13.12 // 79171 // ENST	8027908	0.0334614	1.11914
24343	8099721	NM_015187 // KIAA0746 // KIAA0746 protein // 4p15.2 // 23231 // BC060867 // KIA	8099721	0.0227989	1.1191
14194	7997740	NM_022818 // MAP1LC3B // microtubule-associated protein 1 light chain 3 beta //	7997740	0.02873	1.11883
29098	8144802	NM_006207 // PDGFRL // platelet-derived growth factor receptor-like // 8p22-p21.	8144802	0.0190104	1.11881
25832	8113790	NM_178450 // MARCH3 // membrane-associated ring finger (C3HC4) 3 // 5q23.2 // 11	8113790	0.0392258	1.11869
15419	8010139	NM_003003 // SEC14L1 // SEC14-like 1 (S. cerevisiae) // 17q25.1-q25.2 // 6397 //	8010139	0.026314	1.11864
5376	7909624	BC035007 // FAM71A // family with sequence similarity 71, member A // 1q32.3 //	7909624	0.0329105	1.11862
25510	8110930	---	8110930	0.0132693	1.11842
21643	8072482	---	8072482	0.025004	1.11717
14889	8005048	NM_153604 // MYOCD // myocardin // 17p11.2 // 93649 // ENST00000343344 // MYOCD	8005048	0.00638138	1.11693
12280	7978166	NM_006405 // TMSF1 // transmembrane 9 superfamily member 1 // 14q11.2 // 10548	7978166	0.00809444	1.11683
23873	8095362	ENST00000245185 // MT2A // metallothionein 2A // 16q13 // 4502 // BT007315 // M	8095362	0.0497033	1.11682
8147	7937944	NM_001004137 // OR52M1 // olfactory receptor, family 52, subfamily M, member 1 //	7937944	0.0292603	1.11615
4338	7899023	NM_015627 // LDLRAP1 // low density lipoprotein receptor adaptor protein 1 // 1p	7899023	0.0181789	1.11612
5744	7913187	NM_181719 // TMC04 // transmembrane and coiled-coil domains 4 // 1p36.13 // 2551	7913187	0.00543177	1.11559
12490	7980265	NM_203488 // ACYP1 // acylphosphatase 1, erythrocyte (common) type // 14q24.3 //	7980265	0.00841701	1.11543
8064	7937079	NM_004052 // BNIIP3 // BCL2/adenovirus E1B 19kDa interacting protein 3 // 10q26.3	7937079	0.00990887	1.11487
28885	8143040	NM_032826 // SLC35B4 // solute carrier family 35, member B4 // 7q33 // 84912 //	8143040	0.0125683	1.11485
9817	7953100	NM_002014 // FKBP4 // FK506 binding protein 4, 59kDa // 12p13.33 // 2288 // ENS	7953100	0.0145761	1.11423
12050	7976037	NM_000369 // TSHR // thyroid stimulating hormone receptor // 14q31 // 7253 // N	7976037	0.0268848	1.11403
20871	8065248	ENST00000319682 // LOC100130264 // similar to hCG2038397 // 20p11.23 // 10013026	8065248	0.041287	1.11372
26342	8118345	NM_001710 // CFB // complement factor B // 6p21.3 // 629 // ENST00000375443 //	8118345	0.015184	1.11352
2493	7895038	---	7895038	0.0425157	1.11335
9780	7952675	---	7952675	0.0479249	1.11334
28756	8141688	NM_001084 // PLOD3 // procollagen-lysine, 2-oxoglutarate 5-dioxygenase 3 // 7q22	8141688	0.00616121	1.11288
27126	8126066	NM_014341 // MTC1 // mitochondrial carrier homolog 1 (C. elegans) // 6pter-p24.	8126066	0.0147746	1.11286
4965	7905299	NM_001222 // PRUNE // prune homolog (Drosophila) // 1q21 // 58497 // ENST0000002	7905299	0.034149	1.11231
6802	7924058	NM_006147 // IRF6 // interferon regulatory factor 6 // 1q32.3-q41 // 3664 // EN	7924058	0.00606269	1.11212
26136	8116818	NM_001718 // BMP6 // bone morphogenetic protein 6 // 6p24-p23 // 654 // ENST000	8116818	0.0436379	1.11207
19244	8047910	NM_005048 // PTH2R // parathyroid hormone 2 receptor // 2q33 // 5746 // ENST000	8047910	0.00177904	1.11191
9821	7953135	NM_003324 // TULP3 // tubby like protein 3 // 12p13.3 // 7289 // ENST0000022824	7953135	0.0423486	1.11171
17143	8027621	NM_000175 // GPI // glucose phosphate isomerase // 19q13.1 // 2821 // ENST000000	8027621	0.0128459	1.11149
31521	8167656	NM_001005333 // MAGED1 // melanoma antigen family D, 1 // Xp11.23 // 9500 // NM	8167656	0.0373979	1.11131
15826	8014679	NM_025248 // SNIP // SNAP25-interacting protein // 17q12 // 80725 // ENST000002	8014679	0.00803598	1.11129
18209	8038309	NM_031886 // KCNA7 // potassium voltage-gated channel, shaker-related subfamily,	8038309	0.00857946	1.11119
17304	8029399	NM_001032372 // ZNF226 // zinc finger protein 226 // 19q13.2 // 7769 // NM_0010	8029399	0.0185473	1.11113
4358	7899192	NM_002953 // RPS6KA1 // ribosomal protein S6 kinase, 90kDa, polypeptide 1 // 1p	7899192	0.0231991	1.11074
27754	8132580	NM_006555 // YKT6 // YKT6 v-SNARE homolog (S. cerevisiae) // 7p15.1 // 10652 //	8132580	0.043152	1.11069
16258	8019250	NM_000918 // P4HB // procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline	8019250	0.0182196	1.1106
17700	8033190	NM_024103 // SLC25A23 // solute carrier family 25 (mitochondrial carrier; phosph	8033190	0.0223631	1.11047
27036	8124955	NM_147130 // NCR3 // natural cytotoxicity triggering receptor 3 // 6p21.3 // 259	8124955	0.00165237	1.11037
32812	8178517	NM_147130 // NCR3 // natural cytotoxicity triggering receptor 3 // 6p21.3 // 259	8178517	0.00165237	1.11037
32939	8179773	NM_147130 // NCR3 // natural cytotoxicity triggering receptor 3 // 6p21.3 // 259	8179773	0.00165237	1.11037
27379	8128737	NM_022765 // MICAL1 // microtubule associated monoxygenase, calponin and LIM dom	8128737	0.0129577	1.11026
29197	8145912	---	8145912	0.00190356	1.11025
3186	7895742	---	7895742	0.0151383	1.11004
13890	7994487	NM_001770 // CD19 // CD19 molecule // 16p11.2 // 930 // ENST00000324662 // CD19	7994487	0.0428381	1.10936
7057	7926531	NM_178815 // ARL5B // ADP-ribosylation factor-like 5B // 10p12.33 // 221079 //	7926531	0.0363104	1.10924
24418	8100426	---	8100426	0.0393951	1.10924
26715	8122146	BC101702 // LOC285735 // hypothetical protein LOC285735 // 6q23.2 // 285735 //	8122146	0.0450709	1.10903
21200	8068202	NM_058187 // C21orf63 // chromosome 21 open reading frame 63 // 21q22.11 // 5927	8068202	0.0172062	1.10884
5325	7909011	NM_002393 // MDM4 // Mdm4 p53 binding protein homolog (mouse) // 1q32 // 4194 //	7909011	0.00321772	1.10873
13060	7985268	NM_000137 // FAH // fumarylacetoacetate hydrolase (fumarylacetoacetase) // 15q23	7985268	0.00434363	1.10828
24603	8102214	NM_005443 // PAPSS1 // 3'-phosphoadenosine 5'-phosphosulfate synthase 1 // 4q24	8102214	0.0453197	1.10819
27667	8131709	NM_003112 // SP4 // Sp4 transcription factor // 7p15.3 // 6671 // ENST000002225	8131709	0.0119824	1.10806
4793	7903717	---	7903717	0.0471975	1.10732
9201	7947526	---	7947526	0.00492152	1.10711
30293	8155572	---	8155572	0.0298633	1.10701
4451	7900144	---	7900144	0.000199551	1.10684
11520	7971015	NM_001127217 // SMAD9 // SMAD family member 9 // 13q12-q14 // 4093 // NM_005905	7971015	0.0262878	1.10632
15561	8011968	NM_016060 // MED31 // mediator complex subunit 31 // 17p13.2 // 51003 // ENST00	8011968	0.0163697	1.10603
31249	8165258	NM_006412 // AGPAT2 // 1-acylglycerol-3-phosphate O-acyltransferase 2 (lysophosp	8165258	0.0483477	1.10565
7188	7927732	NM_032199 // ARID5B // AT rich interactive domain 5B (MRF1-like) // 10q21.2 // 8	7927732	0.0430872	1.10482
653	7893162	---	7893162	0.0145683	1.10454
25895	8114476	NM_001037633 // SIL1 // SIL1 homolog, endoplasmic reticulum chaperone (S. cerevi	8114476	0.0314051	1.10451
15117	8007071	NM_001254 // CDC6 // cell division cycle 6 homolog (S. cerevisiae) // 17q21.3 //	8007071	0.0153159	1.10419
8841	7944271	NM_001080441 // TTC36 // tetratricopeptide repeat domain 36 // 11q23.3 // 143941	7944271	0.0223349	1.10393
18255	8038770	NM_022046 // KLK14 // kallikrein-related peptidase 14 // 19q13.3-q13.4 // 43847	8038770	0.0490307	1.1038
28080	8135594	NM_001753 // CAV1 // caveolin 1, caveolae protein, 22kDa // 7q31.1 // 857 // EN	8135594	0.0424873	1.10333
24985	8105603	---	8105603	0.0278338	1.10297
9483	7950012	AK294004 // ORAOV1 // oral cancer overexpressed 1 // 11q13.2 // 220064 // ENST0	7950012	0.0119164	1.10284
16982	8026163	NM_004907 // IER2 // immediate early response 2 // 19p13.13 // 9592 // ENST0000	8026163	0.0175679	1.1028
16607	8022424	---	8022424	0.0461752	1.10275
21148	8067862	---	8067862	0.0461752	1.10275
25764	8113303	---	8113303	0.0467181	1.10231
19518	8051012	NM_013388 // PREB // prolactin regulatory element binding // 2p23.3 // 10113 //	8051012	0.0405734	1.10216
22647	8082869	NM_002718 // PPP2R3A // protein phosphatase 2 (formerly 2A), regulatory subunit	8082869	0.0462957	1.10203
19392	8049552	NM_001080504 // RBM44 // RNA binding motif protein 44 // 2q37.3 // 375316 // EN	8049552	0.0155189	1.10171
7034	7926239	NM_001008211 // OPTN // optineurin // 10p13 // 10133 // NM_001008213 // OPTN	7926239	0.00758518	1.1016
30065	8153497	NM_182706 // SCRIB // scribbled homolog (Drosophila) // 8q24.3 // 23513 // NM_0	8153497	0.0477675	1.10153
11200	7967810	NM_005895 // GOLGA3 // golgi autoantigen, golgin subfamily a, 3 // 12q24.33 // 2	7967810	0.029431	1.10139
6181	7917885	NM_001839 // CNN3 // calponin 3, acidic // 1p22-p21 // 1266 // ENST00000394202	7917885	0.0368766	1.10128
19557	8051427	NM_005102 // FEZ2 // fasciculation and elongation protein zeta 2 (zyglin II) // 3	8051427	0.0495141	1.10118
30676	8159654	NM_015456 // COBRA1 // cofactor of BRCA1 // 9q34 // 25920 // ENST00000343053 //	8159654	0.0213041	1.10114
14224	7998033	NM_014972 // TCF25 // transcription factor 25 (basic helix-loop-helix) // 16q24.	7998033	0.0159728	1.10063
5708	7912706	NM_004431 // EPHA2 // EPH receptor A2 // 1p36 // 1969 // ENST00000407976 // EPH	7912706	0.0266554	1.10023
21478	8070953	AK304535 // C21orf56 // chromosome 21 open reading frame 56 // 21q22.3 // 84221	8070953	0.0174221	1.10013
23102	8087685	NM_007024 // TMEM115 // transmembrane protein 115 // 3p21.3 // 11070 // ENST000	8087685	0.00932876	1.1

22665	8083063	NM_001104647 // SLC25A36 // solute carrier family 25, member 36 // 3q23 // 55186	8083063	0.0423455	1.09993
25733	8113023	NM_153354 // TMEM161B // transmembrane protein 161B // 5q14.3 // 153396 // ENST	8113023	0.018332	1.09941
31414	8166632	NM_001128127 // GK // glycerol kinase // Xp21.3 // 2710 // NM_203391 // GK // g	8166632	0.00699515	1.0987
29890	8151743	---	8151743	0.0147352	1.09834
14753	8003503	NM_000135 // FANCA // Fanconi anemia, complementation group A // 16q24.3 // 2175	8003503	0.0482928	1.0981
23071	8087254	NM_000884 // IMPDH2 // IMP (inosine monophosphate) dehydrogenase 2 // 3p21.2 //	8087254	0.0370061	1.09756
13761	7992973	NM_005147 // DNAJA3 // DnaJ (Hsp40) homolog, subfamily A, member 3 // 16p13.3 //	7992973	0.0192161	1.09732
29310	8146921	NM_172037 // RDH10 // retinol dehydrogenase 10 (all-trans) // 8q21.11 // 157506	8146921	0.046553	1.09752
11594	7971661	---	7971661	0.00883814	1.09738
28444	8138956	---	8138956	0.0362773	1.09712
7154	7927474	NM_199459 // C10orf71 // chromosome 10 open reading frame 71 // 10q11.23 // 1184	7927474	0.0294381	1.09678
32631	8177011	NM_004192 // ASMTL // acetylserotonin O-methyltransferase-like // Xp22.3; Yp11.3	8177011	0.0095994	1.09677
6166	7917728	NM_001006605 // FAM69A // family with sequence similarity 69, member A // 1p22.1	7917728	0.000923634	1.09648
6580	7921834	NM_001643 // APOA2 // apolipoprotein A-II // 1q21-q23 // 336 // ENST000000367990	7921834	0.0198097	1.09639
7973	7936028	NM_005736 // ACTR1A // ARP1 actin-related protein 1 homolog A, contractin alpha	7936028	0.0327403	1.09599
13459	7989975	NM_017882 // CLN6 // ceroid-lipofuscinosis, neuronal 6, late infantile, variant	7989975	0.0488502	1.09587
9929	7954132	NM_175874 // C12orf60 // chromosome 12 open reading frame 60 // 12p12.3 // 14460	7954132	0.0393625	1.09519
14153	7997332	NM_001105663 // NUDT7 // nudix (nucleoside diphosphate linked moiety X)-type mot	7997332	0.0408355	1.09519
1761	7894289	---	7894289	0.0464018	1.09482
23354	8090351	NM_025112 // ZXDC // ZXD family zinc finger C // 3q21.2 // 79364 // NM_00104065	8090351	0.0151055	1.09391
15299	8008825	NM_024612 // DHX40 // DEAH (Asp-Glu-Ala-His) box polypeptide 40 // 17q23.1 // 79	8008825	0.00193676	1.09345
31497	8167449	NM_002668 // PLP2 // proteolipid protein 2 (colonic epithelium-enriched) // Xp11	8167449	0.0116346	1.09342
5706	7912692	NM_014424 // HSPB7 // heat shock 27kDa protein family, member 7 (cardiovascular)	7912692	0.00623841	1.09336
8314	7939341	NM_000610 // CD44 // CD44 molecule (Indian blood group) // 11p13 // 960 // NM_0	7939341	0.0234585	1.0933
22111	8076962	NM_002969 // MAPK12 // mitogen-activated protein kinase 12 // 22q13.33 // 6300 /	8076962	0.0141192	1.09296
10406	7959212	NM_001080533 // UNC119B // unc-119 homolog B (C. elegans) // 12q24.31 // 84747 /	7959212	0.019253	1.09285
24759	8103524	NM_001100389 // TMEM192 // transmembrane protein 192 // 4q32.3 // 201931 // ENS	8103524	0.0147462	1.09269
27620	8131292	NM_021163 // RBAK // RB-associated KRAB zinc finger // 7p22.1 // 57786 // ENSTO	8131292	0.044912	1.09262
12540	7980833	NM_032560 // SMEK1 // SMEK homolog 1, suppressor of mek1 (Dictyostelium) // 14q3	7980833	0.0404931	1.09246
28507	8139484	NR_002991 // SNORA5C // small nucleolar RNA, H/ACA box 5C // 7p13 // 677796	8139484	0.0408721	1.0918
22178	8077899	NM_138712 // PPARG // peroxisome proliferator-activated receptor gamma // 3p25 //	8077899	0.00616643	1.09177
32034	8171885	NM_001017930 // WDR42B // WD repeat domain 42B // Xp21.3 // 139425 // ENST000000	8171885	0.0240413	1.09163
9448	7949679	NM_006946 // SPTBN2 // spectrin, beta, non-erythrocytic 2 // 11q13 // 6712 // E	7949679	0.027645	1.09107
28493	8139330	NM_001220 // CAMK2B // calcium/calmodulin-dependent protein kinase (CaM kinase)	8139330	0.0067621	1.09092
5760	7913380	XM_001720054 // LOC100133459 // hypothetical protein LOC100133459 // --- // 1001	7913380	0.017382	1.09023
13258	8165345	NM_001606 // ABCA2 // ATP-binding cassette, sub-family A (ABC1), member 2 // 9q3	8165345	0.0486678	1.0902
30077	8153727	NM_013291 // CPSF1 // cleavage and polyadenylation specific factor 1, 160kDa //	8153727	0.0493231	1.09016
23504	8091780	NM_001038628 // B3GALNT1 // beta-1,3-N-acetylgalactosaminyltransferase 1 (globos	8091780	0.0216659	1.09005
17244	8028744	BC128606 // LOC400696 // eosinophil lysophospholipase-like // 19q13.2 // 400696	8028744	0.0249304	1.08927
17145	8027650	NM_005495 // UBA2 // ubiquitin-like modifier activating enzyme 2 // 19q12 // 100	8027650	0.0315414	1.08916
13996	7995552	NM_015247 // CYLD // cylindromatosis (turban tumor syndrome) // 16q12.1 // 1540	7995552	0.0171068	1.08898
24674	8102848	NM_030648 // SETD7 // SET domain containing (lysine methyltransferase) 7 // 4q28	8102848	0.0169721	1.08894
12082	7976263	NM_153646 // SLC24A4 // solute carrier family 24 (sodium/potassium/calcium excha	7976263	0.0232149	1.08885
8928	7945086	NM_001039661 // TIRAP // toll-interleukin 1 receptor (TIR) domain containing ada	7945086	0.020721	1.08805
12805	7982597	NM_003246 // THBS1 // thrombospondin 1 // 15q15 // 7057 // ENST00000260356 // T	7982597	0.0490031	1.08802
24554	8101716	---	8101716	0.0459198	1.08758
22691	8083301	NM_004617 // TM4SF4 // transmembrane 4 L six family member 4 // 3q25 // 7104 //	8083301	0.0229537	1.08734
27333	8128247	NM_021813 // BACH2 // BTB and CNC homology 1, basic leucine zipper transcription	8128247	0.0492283	1.08729
7816	7934244	NM_001002762 // DNAJB12 // DnaJ (Hsp40) homolog, subfamily B, member 12 // 10q22	7934244	0.00183111	1.08716
15744	8013788	NM_004475 // FLOT2 // flotillin 2 // 17q11-q12 // 2319 // ENST00000394908 // FL	8013788	0.0212121	1.08687
11658	7972239	NM_032229 // SLITRK6 // SLIT and NTRK-like family, member 6 // 13q31.1 // 84189	7972239	0.0221354	1.08677
24181	8098204	NM_001873 // CPE // carboxypeptidase E // 4q32.3 // 1363 // ENST00000261510 //	8098204	0.0155033	1.08676
24286	8099144	NM_147127 // EVC2 // Ellis van Creveld syndrome 2 // 4p16.2-p16.1 // 132884 //	8099144	0.0345685	1.0866
27492	8129974	NM_032020 // FUCA2 // fucosidase, alpha-L-2, plasma // 6q24 // 2519 // ENST000	8129974	0.000248728	1.08659
8641	7942342	NM_001567 // INPPL1 // inositol polyphosphate phosphatase-like 1 // 11q23 // 363	7942342	0.00485962	1.08646
14022	7995820	NM_005947 // MT1B // metallothionein 1B // 16q13 // 4490 // ENST00000334346 //	7995820	0.005109	1.08639
15378	8009693	NM_017728 // TMEM104 // transmembrane protein 104 // 17q25.1 // 54868 // ENST00	8009693	0.0236665	1.08625
21516	8071289	NM_000754 // COMT // catechol-O-methyltransferase // 22q11.21-q11.23//22q11.21 //	8071289	0.00127571	1.0862
25930	8114814	NM_000176 // NR3C1 // nuclear receptor subfamily 3, group C, member 1 (glucocort	8114814	0.0350268	1.08616
17668	8032782	NM_144615 // TMIGD2 // transmembrane and immunoglobulin domain containing 2 // 1	8032782	0.0235677	1.086
22052	8076374	NM_005008 // NHP2L1 // NHP2 non-histone chromosome protein 2-like 1 (S. cerevisi	8076374	0.0319054	1.08586
24256	8098880	NM_001012614 // CTBP1 // C-terminal binding protein 1 // 4p16 // 1487 // NM_001	8098880	0.0462519	1.08537
27178	8126486	NM_014780 // CUL7 // cullin 7 // 6p21.1 // 9820 // ENST00000265348 // CUL7 // c	8126486	0.0154247	1.08504
27422	8129181	NM_020399 // GOPC // golgi associated PDZ and coiled-coil motif containing // 6q	8129181	0.0279585	1.08458
23225	8088979	NM_016206 // VGLL3 // vestigial like 3 (Drosophila) // 3p12.1 // 389136 // ENST	8088979	0.0328064	1.08458
7099	7926914	---	7926914	0.0332695	1.08452
27905	8133690	NM_005918 // MDH2 // malate dehydrogenase 2, NAD (mitochondrial) // 7cen-q22 //	8133690	0.00689207	1.08412
31948	8171119	NM_004192 // ASMTL // acetylserotonin O-methyltransferase-like // Xp22.3; Yp11.3	8171119	0.0279458	1.08371
8817	7943984	NM_006006 // ZBTB16 // zinc finger and BTB domain containing 16 // 11q23.1 // 77	7943984	0.0466861	1.08367
20936	8065730	NM_003908 // EIF2S2 // eukaryotic translation initiation factor 2, subunit 2 bet	8065730	0.0049427	1.08362
24349	8099797	NM_001085399 // RELL1 // RELT-like 1 // 4p14 // 768211 // NM_001085400 // RELL1	8099797	0.011882	1.0836
14323	7999023	---	7999023	0.0372811	1.08306
16263	8019308	NM_032711 // MAFG // v-maf musculoaponeurotic fibrosarcoma oncogene homolog G (a	8019308	0.0119439	1.08303
17321	8029560	NM_001294 // CLPTM1 // cleft lip and palate associated transmembrane protein 1 /	8029560	0.0409335	1.0829
22542	8081686	NM_033254 // BOC // Boc homolog (mouse) // 3q13.2 // 91653 // ENST00000355385 /	8081686	0.00598071	1.08287
4761	7903389	---	7903389	0.0469347	1.08251
27865	8133231	---	8133231	0.0298486	1.08241
7248	7928369	NM_004922 // SEC24C // SEC24 related gene family, member C (S. cerevisiae) // 10	7928369	0.0311051	1.0823
17510	8031387	NM_004829 // NCR1 // natural cytotoxicity triggering receptor 1 // 19q13.42 // 9	8031387	0.0473797	1.08193
9294	7948229	NM_014096 // SLC43A3 // solute carrier family 43, member 3 // 11q11 // 29015 //	7948229	0.0069899	1.0819
8827	7944082	NM_001001522 // TAGLN // transgelin // 11q23.2 // 6876 // NM_003186 // TAGLN //	7944082	0.00220882	1.08188
8870	7944537	NM_014352 // POU2F3 // POU class 2 homeobox 3 // 11q23.3 // 25833 // ENST000002	7944537	0.0029902	1.08166
22808	8084382	AK293885 // VWA5B2 // von Willebrand factor A domain containing 5B2 // 3q27.1 //	8084382	0.0446628	1.08159
10145	7956271	NM_003725 // HSD17B6 // hydroxysteroid (17-beta) dehydrogenase 6 homolog (mouse)	7956271	0.0396999	1.08134
25319	8109093	NM_014945 // ABLIM3 // actin binding LIM protein family, member 3 // 5q33.1 // 2	8109093	0.0436985	1.0813
17038	8026638	NM_004145 // MYO9B // myosin IXB // 19p13.1 // 4650 // ENST00000319396 // MYO9B	8026638	0.00420852	1.08101
28644	8140478	NM_017439 // PION // pigeon homolog (Drosophila) // 7q11.23 // 54103 // ENST000	8140478	0.0432924	1.08083
6980	7925741	NM_001004695 // OR2T33 // olfactory receptor, family 2, subfamily T, member 33 /	7925741	0.00271853	1.08078
20193	8058238	NM_152525 // ALS2CR11 // amyotrophic lateral sclerosis 2 (juvenile) chromosome r	8058238	0.00679529	1.0805
7313	7928982	NM_004190 // LIPF // lipase, gastric // 10q23.31 // 8513 // ENST00000238983 //	7928982	0.00895969	1.08018
15298	8008819	NM_001005404 // YPEL2 // yippepe-like 2 (Drosophila) // 17q22 // 388403 // ENSTO	8008819	0.0333724	1.08006
27759	8132646	NM_031443 // CCM2 // cerebral cavernous malformation 2 // 7p13 // 83605 // NM_0	8132646	0.0107019	1.08005
5598	7911600	NM_023018 // NADK // NAD kinase // 1p36.33-p36.21 // 65220 // ENST00000341426 /	7911600	0.0263825	1.08002
15243	8008208	NM_007225 // NXPH3 // neurexophilin 3 // 17q21.33 // 11248 // ENST00000328741 /	8008208	0.0415767	1.07983
9715	7952185	NM_001382 // DPAGT1 // dolichyl-phosphate (UDP-N-acetylglucosamine) N-acetylgluc	7952185	0.000875654	1.0794
4540	7901140	NM_015112 // MAST2 // microtubule associated serine/threonine kinase 2 // 1p34.1	7901140	0.00250717	1.07901

10285	7957759	NM_181861 // APAF1 // apoptotic peptidase activating factor 1 // 12q23 // 317 //	7957759	0.0442267	1.07884
26010	8115651	NM_021911 // GABRB2 // gamma-aminobutyric acid (GABA) A receptor, beta 2 // 5q34	8115651	0.0207765	1.07861
15569	8012043	NM_001671 // ASGR1 // asialoglycoprotein receptor 1 // 17p13.2 // 432 // ENST00	8012043	0.0260146	1.07848
23729	8094122	NM_001105662 // USP17 // ubiquitin specific peptidase 17 // 4p15 // 391627 // N	8094122	0.00625872	1.07839
31911	8170794	NM_000054 // AVPR2 // arginine vasopressin receptor 2 // 2q28 // 554 // ENST000	8170794	0.0289533	1.07830
7244	7928354	NM_173348 // FAM149B1 // family with sequence similarity 149, member B1 // 10q22	7928354	0.0262816	1.07828
10329	7958352	NM_001018072 // BTBD11 // BTB (POZ) domain containing 11 // 12q23.3 // 121551 //	7958352	0.0382764	1.0781
1192	7893711	---	7893711	0.0472004	1.07798
27569	8130768	NM_003730 // RNASET2 // ribonuclease T2 // 6q27 // 8635 // ENST0000028008 // R	8130768	0.0481753	1.07759
26306	8118007	NM_001517 // GTF2H4 // general transcription factor IIH, polypeptide 4, 52kDa //	8118007	0.0155037	1.07693
32741	8177885	NM_001517 // GTF2H4 // general transcription factor IIH, polypeptide 4, 52kDa //	8177885	0.0155037	1.07693
32878	8179205	NM_001517 // GTF2H4 // general transcription factor IIH, polypeptide 4, 52kDa //	8179205	0.0155037	1.07693
22289	8079074	NM_016305 // SS18L2 // synovial sarcoma translocation gene on chromosome 18-like	8079074	0.0387536	1.07691
166	7892663	---	7892663	0.00539132	1.07689
29707	8150249	NM_000025 // ADRB3 // adrenergic, beta-3-, receptor // 8p12-p11.2 // 155 // ENS	8150249	0.04611	1.07689
10758	7963054	NM_006009 // TUBA1A // tubulin, alpha 1a // 12q12-q14.3 // 7846 // ENST00000301	7963054	0.0379286	1.07623
20440	8060850	NM_001200 // BMP2 // bone morphogenetic protein 2 // 20p12 // 650 // ENST0000003	8060850	0.00315919	1.07611
20737	8063857	NM_015666 // GTPBP5 // GTP binding protein 5 (putative) // 20q13.33 // 26164 //	8063857	0.0475404	1.07568
11361	7969428	NM_006002 // UCHL3 // ubiquitin carboxyl-terminal esterase L3 (ubiquitin thiole	7969428	0.0230817	1.07565
13595	7991335	NM_001150 // ANPEP // alanyl (membrane) aminopeptidase // 15q25-q26 // 290 // E	7991335	0.0465409	1.07529
11944	7974781	NM_021003 // PPM1A // protein phosphatase 1A (formerly 2C), magnesium-dependent,	7974781	0.000673581	1.07501
13929	7994961	NM_001330 // CTF1 // cardiotrophin 1 // 16p11.2-p11.1 // 1489 // ENST0000027980	7994961	0.0284557	1.07449
13914	7994737	NM_000034 // ALDOA // aldolase A, fructose-bisphosphate // 16p11.2 // 226 // NM	7994737	0.0215083	1.07446
13688	7992219	NM_003933 // BAIAP3 // BAI1-associated protein 3 // 16p13.3 // 8938 // ENST0000	7992219	0.0332549	1.07425
1970	7894501	---	7894501	0.0140032	1.07417
10951	7965040	NM_007350 // PHLDA1 // pleckstrin homology-like domain, family A, member 1 // 12	7965040	0.000471829	1.07382
13563	7991080	NM_001717 // BNC1 // basonuclin 1 // 15q25.2 // 646 // ENST00000345382 // BNC1	7991080	0.00783988	1.07377
27017	8124828	NM_005803 // FLOT1 // flotillin 1 // 6p21.3 // 10211 // ENST00000376389 // FLOT	8124828	0.0469543	1.07377
32800	8178419	NM_005803 // FLOT1 // flotillin 1 // 6p21.3 // 10211 // ENST00000376389 // FLOT	8178419	0.0469543	1.07377
32928	8179688	NM_005803 // FLOT1 // flotillin 1 // 6p21.3 // 10211 // ENST00000376389 // FLOT	8179688	0.0469543	1.07377
20722	8063650	NM_024663 // NPEPL1 // aminopeptidase-like 1 // 20q13.32 // 79716 // ENST0000003	8063650	0.0287732	1.07364
27850	8133167	NM_153033 // KCTD7 // potassium channel tetramerisation domain containing 7 // 7	8133167	0.0442318	1.0734
31010	8162586	NM_007001 // SLC35D2 // solute carrier family 35, member D2 // 9q22.32 // 11046	8162586	0.0224486	1.07339
25223	8108099	NM_021982 // SEC24A // SEC24 related gene family, member A (S. cerevisiae) // 5q	8108099	0.0356426	1.07338
12618	7981523	---	7981523	0.0282185	1.07313
28055	8135323	NM_021930 // RINT1 // RAD50 interactor 1 // 7q22.2 // 60561 // ENST00000257700	8135323	0.0112042	1.07294
29660	8149898	NM_030795 // STMN4 // stathmin-like 4 // 8p21.2 // 81551 // ENST00000350889 //	8149898	0.0227368	1.07284
6779	7923812	NM_003929 // RAB7L1 // RAB7, member RAS oncogene family-like 1 // 1q32 // 8934 /	7923812	0.0238599	1.07274
23843	8095148	NM_018475 // TMEM165 // transmembrane protein 165 // 4q12 // 55858 // ENST00000	8095148	0.0483708	1.07257
18797	8043597	NM_178495 // ITPRIPL1 // inositol 1,4,5-triphosphate receptor interacting protei	8043597	0.000337066	1.07212
16003	8016390	NM_016429 // COPZ2 // coatomer protein complex, subunit zeta 2 // 17q21.32 // 51	8016390	0.0230666	1.07207
12484	7980152	NM_000428 // LTBP2 // latent transforming growth factor beta binding protein 2 //	7980152	0.000323991	1.07186
22050	8076355	NM_002676 // PMM1 // phosphomannomutase 1 // 22q13.2 // 5372 // ENST00000216259	8076355	0.00586648	1.07124
11971	7975167	NM_020806 // GPHN // gephyrin // 14q23.3 // 10243 // NM_001024218 // GPHN // g	7975167	0.0372141	1.07123
9634	7951351	NM_025208 // PDGFD // platelet derived growth factor D // 11q22.3 // 80310 // N	7951351	0.0116425	1.07122
20945	8065817	NM_000178 // GSS // glutathione synthetase // 20q11.2 // 2937 // ENST0000021695	8065817	0.0163533	1.07119
30274	8155501	---	8155501	0.0338799	1.07055
10511	7960464	NM_000552 // VWF // von Willebrand factor // 12p13.3 // 7450 // ENST00000261405	7960464	0.0455937	1.07049
25143	8107259	NM_138773 // SLC25A46 // solute carrier family 25, member 46 // 5q22.1 // 91137	8107259	0.0254626	1.07043
206	7892704	---	7892704	0.0132083	1.0702
14099	7996761	NM_0012320 // LYPLA3 // lysophospholipase 3 (lysosomal phospholipase A2) // 16q22	7996761	0.0152872	1.07015
4206	7897803	NM_000302 // PLOD1 // procollagen-lysine 1, 2-oxoglutarate 5-dioxygenase 1 // 1p	7897803	0.023923	1.06998
10284	7957746	NM_213611 // SLC25A3 // solute carrier family 25 (mitochondrial carrier; phospho	7957746	0.0422516	1.06996
26300	8117929	NM_001025091 // ABCF1 // ATP-binding cassette, sub-family F (GCN20), member 1 //	8117929	0.0128391	1.06994
32735	8177797	NM_001025091 // ABCF1 // ATP-binding cassette, sub-family F (GCN20), member 1 //	8177797	0.0128391	1.06994
32872	8179112	NM_001025091 // ABCF1 // ATP-binding cassette, sub-family F (GCN20), member 1 //	8179112	0.0128391	1.06994
19417	8049847	NM_014808 // FARP2 // FERM, RhoGEF and pleckstrin domain protein 2 // 2q37.3 //	8049847	0.0302102	1.06976
17343	8029814	NM_006247 // PPP5C // protein phosphatase 5, catalytic subunit // 19q13.3 // 553	8029814	0.00704097	1.06902
11164	7967412	NM_004642 // CDK2AP1 // CDK2-associated protein 1 // 12q24.31 // 8099 // ENST00	7967412	0.0498073	1.06892
26839	8123407	NM_001040001 // MLLT4 // myeloid/lymphoid or mixed-lineage leukemia (trithorax h	8123407	0.00724048	1.06891
5433	7910198	BC007286 // MGC15634 // hypothetical protein MGC15634 // 1q42.13 // 84841	7910198	0.0245503	1.06886
29498	8148737	NM_032272 // MAF1 // MAF1 homolog (S. cerevisiae) // 8q24.3 // 84232 // ENST000	8148737	0.0684217	1.06882
29192	8145854	NM_007198 // PROSC // proline synthetase co-transcribed homolog (bacterial) // 8	8145854	0.0113857	1.0687
11665	7972269	NM_014305 // TGDS // TDP-glucose 4,6-dehydratase // 13q32.1 // 23483 // ENST000	7972269	0.0321635	1.0681
5070	7962605	NM_021948 // BCAN // brevicin // 1q31 // 63827 // NM_198427 // BCAN // brevicin	7962605	0.0438823	1.06806
11591	7971644	NM_020456 // C13orf1 // chromosome 13 open reading frame 1 // 13q14 // 57213 //	7971644	0.0120838	1.06798
80013	8005994	NM_005702 // ERAL1 // Era G-protein-like 1 (E. coli) // 17q11.2 // 26284 // ENS	8005994	0.0493661	1.0679
23369	8090490	NM_002950 // RPN1 // ribophorin 1 // 3q21.3 // 6184 // ENST00000296255 // RPN1	8090490	0.00858639	1.0678
9121	7946661	NM_015881 // DKK3 // dickkopf homolog 3 (Xenopus laevis) // 11p15.2 // 27122 //	7946661	0.0385966	1.06761
7123	7927120	NM_020975 // RET // ret proto-oncogene // 10q11.2 // 5979 // NM_020630 // RET //	7927120	0.00517637	1.06745
13874	7994269	NM_024773 // JMJD5 // jumonji domain containing 5 // 16p12.1 // 79831 // ENST00	7994269	0.0401398	1.06712
4449	7900119	NM_005119 // THRAP3 // thyroid hormone receptor associated protein 3 // 1p34.3 //	7900119	0.0499504	1.06696
28130	8136140	NM_005011 // NRF1 // nuclear respiratory factor 1 // 7q32 // 4899 // NM_0010401	8136140	0.0217313	1.0667
4537	7901110	NM_006066 // AKR1A1 // aldo-keto reductase family 1, member A1 (aldehyde reducta	7901110	0.0487606	1.06667
5086	7906370	ENST00000361688 // OR10R3P // olfactory receptor, family 10, subfamily R, member	7906370	0.0491579	1.06635
23339	8090162	NM_002213 // ITGB5 // integrin, beta 5 // 3q21.2 // 3693 // ENST00000296181 //	8090162	0.018453	1.0659
15054	8006440	NM_006273 // CCL7 // chemokine (C-C motif) ligand 7 // 17q11.2-q12 // 6354 // E	8006440	0.0485495	1.06576
13349	7988581	BC033001 // KIAA0256 // KIAA0256 gene product // 15q21.1 // 9728 // ENST0000026	7988581	0.0282672	1.06575
12443	7979824	NM_001102 // ACTN1 // actinin, alpha 1 // 14q24.1-q24.2 // 14q24.1-q24.2 // 87 //	7979824	0.046931	1.06563
12842	7983143	ENST00000300167 // STARD9 // StAR-related lipid transfer (START) domain containi	7983143	0.0147283	1.06507
19627	8052204	NM_020532 // RTN4 // reticulon 4 // 2p16.3 // 57142 // NM_207520 // RTN4 // ret	8052204	0.0109567	1.0646
29096	8144774	NM_152415 // VPS37A // vacuolar protein sorting 37 homolog A (S. cerevisiae) //	8144774	0.0115484	1.06413
30067	8153550	NM_178564 // NRBP2 // nuclear receptor binding protein 2 // 8q24.3 // 340371 //	8153550	0.00616157	1.0639
27053	8125172	NM_006709 // EHMT2 // euchromatic histone-lysine N-methyltransferase 2 // 6p21.3	8125172	0.00282602	1.0634
32950	8179884	NM_006709 // EHMT2 // euchromatic histone-lysine N-methyltransferase 2 // 6p21.3	8179884	0.00282602	1.0634
26381	8118833	NM_017754 // UHRF1BP1 // UHRF1 binding protein 1 // 6p21 // 54887 // ENST000001	8118833	0.00618218	1.06337
17676	8032871	NM_139159 // DPP9 // dipeptidyl-peptidase 9 // 19p13.3 // 91039 // ENST00000357	8032871	0.000378575	1.06314
8597	7941797	NM_001619 // ADRBK1 // adrenergic, beta, receptor kinase 1 // 11q13.1 // 156 //	7941797	0.0359746	1.06313
31855	8170294	---	8170294	0.0358741	1.06293
16257	8019243	NM_001007533 // DYSFIP1 // dysferlin interacting protein 1 // 17q25.3 // 116729	8019243	0.0410005	1.06273
4136	7896961	NM_031921 // ATAD3B // ATPase family, AAA domain containing 3B // 1p36.33 // 838	7896961	0.0109607	1.0625
28092	8135772	---	8135772	0.0416043	1.06226
17076	8027100	NM_019070 // DDX49 // DEAD (Asp-Glu-Ala-Asp) box polypeptide 49 // 19p12 // 5455	8027100	0.0215587	1.06176
8618	7942091	NM_139075 // TPCN2 // two pore segment channel 2 // 11q13.2 // 219931 // ENST00	7942091	0.0266859	1.06166
13251	7987230	NM_153613 // LPCAT4 // lysophosphatidylcholine acyltransferase 4 // 15q14 // 254	7987230	0.0454217	1.06151
27672	8131813	---	8131813	0.0149977	1.06138

14900	8005141	NM_017775 // TTC19 // tetratricopeptide repeat domain 19 // 17p12 // 54902 // E	8005141	0.028395	1.06131
28584	8139919	---	8139919	0.00295728	1.06078
26559	8120880	NM_006670 // TPBG // trophoblast glycoprotein // 6q14-q15 // 7162 // ENST0000003	8120880	0.0169632	1.05972
20062	8056327	NM_004490 // GRB14 // growth factor receptor-bound protein 14 // 2q22-q24 // 288	8056327	0.0453151	1.0597
14611	8001981	NM_013241 // FHOD1 // formin homology 2 domain containing 1 // 16q22.1 // 29109	8001981	0.0158405	1.05948
8930	7945110	NM_006278 // ST3GAL4 // ST3 beta-galactoside alpha-2,3-sialyltransferase 4 // 11	7945110	0.0029206	1.05934
19156	8047069	NM_001128928 // INPP1 // inositol polyphosphate-1-phosphatase // 2q32 // 3628 //	8047069	0.00371198	1.05881
22555	8081838	NM_020754 // CDGAP // Cdc42 GTPase-activating protein // 3q13.32-q13.33 // 57514	8081838	0.0279856	1.05855
30285	8155537	---	8155537	0.0249286	1.05778
23886	8095451	NM_214711 // C4orf40 // chromosome 4 open reading frame 40 // 4q13.3 // 401137 /	8095451	0.00216996	1.05737
31542	8167854	NM_014481 // APEX2 // APEX nuclease (apurinic/aprimidinic endonuclease) 2 // Xp	8167854	0.0368048	1.05725
26681	8121768	NM_181794 // PKIB // protein kinase (cAMP-dependent, catalytic) inhibitor beta //	8121768	0.0392474	1.0569
14838	8004331	NM_001002914 // KCTD11 // potassium channel tetramerisation domain containing 11	8004331	0.0218738	1.05661
10322	7958253	BC0113920 // OCC-1 // overexpressed in colon carcinoma-1 // 12q23.3 // 387882 //	7958253	0.0267494	1.05653
18223	8038441	---	8038441	0.0204121	1.05622
7734	7933413	NR_003611 // BMS1P5 // BMS1 pseudogene 5 // 10q11.22 // 399761 // AL832069 // B	7933413	0.0355552	1.05621
25901	8114536	NM_198282 // TMEM173 // transmembrane protein 173 // 5q31.2 // 340061 // ENST00	8114536	0.0139248	1.05608
4301	7898679	NM_032264 // NBPF3 // neuroblastoma breakpoint family, member 3 // 1p36.12 // 84	7898679	0.0145794	1.05579
25754	8113220	NM_012081 // ELL2 // elongation factor, RNA polymerase II, 2 // 5q15 // 22936 //	8113220	0.00373132	1.0555
13236	7987097	---	7987097	0.0202063	1.05548
3368	7895928	---	7895928	0.00176959	1.05525
11795	7973377	NM_004050 // BCL2L2 // BCL2-like 2 // 14q11.2-q12 // 599 // ENST00000250405 //	7973377	0.0331421	1.05501
9875	7953695	---	7953695	0.0324287	1.05483
22169	8077786	NM_001570 // IRAK2 // interleukin-1 receptor-associated kinase 2 // 3p25.3 // 36	8077786	0.00536743	1.05476
739	7893248	---	7893248	0.00951258	1.05476
13626	7991587	NM_203472 // SELS // selenoprotein S // 15q26.3 // 55829 // NM_018445 // SELS /	7991587	0.0186556	1.05468
30209	8154951	AY513283 // GLUL // glutamate-ammonia ligase (glutamine synthetase) // 1q31 // 2	8154951	0.0481161	1.05461
25224	8108127	NM_001745 // CAMLG // calcium modulating ligand // 5q23 // 819 // ENST000002971	8108127	0.00307037	1.05376
21539	8071466	NM_006767 // LZTR1 // leucine-zipper-like transcription regulator 1 // 22q11.21 //	8071466	0.00836456	1.05313
5564	7911323	AY341950 // FAM138A // family with sequence similarity 138, member A // 1p36.33	7911323	0.0277112	1.05278
17595	8031984	AY341950 // FAM138A // family with sequence similarity 138, member A // 1p36.33	8031984	0.0277112	1.05278
9973	7954604	NM_020782 // KLHDC5 // kelch domain containing 5 // 12p11.22 // 57542 // ENST00	7954604	0.00186901	1.0525
6159	7917672	---	7917672	0.00277721	1.05231
28086	8135697	NM_001077708 // ANKRD7 // ankyrin repeat domain 7 // 7q31 // 56311 // NM_019644	8135697	0.0100845	1.05224
21276	8068952	NM_020132 // AGPAT3 // 1-acylglycerol-3-phosphate O-acyltransferase 3 // 21q22.3	8068952	0.0451669	1.05218
21916	8075089	NM_001008697 // TFIP11 // tuftelin interacting protein 11 // 22q12.1 // 24144 //	8075089	0.0105742	1.0521
23603	8092724	---	8092724	0.0149914	1.05199
6382	7919729	NM_016022 // APH1A // anterior pharynx defective 1 homolog A (C. elegans) // 1p3	7919729	0.032489	1.05171
25976	8115327	NM_003118 // SPARC // secreted protein, acidic, cysteine-rich (osteonectin) // 5	8115327	0.0383891	1.05163
9258	7948092	NR_003034 // LOC441601 // septin 7 pseudogene // 11p11.12 // 441601 // BC067889	7948092	0.0495717	1.05081
9717	7952205	NM_006500 // MCAM // melanoma cell adhesion molecule // 11q23.3 // 4162 // ENST	7952205	0.026422	1.05073
8392	7939950	NM_001005496 // OR5D16 // olfactory receptor, family 5, subfamily D, member 16 /	7939950	0.0357028	1.0507
10052	7955425	NM_005171 // ATF1 // activating transcription factor 1 // 12q13 // 466 // ENST0	7955425	0.0488185	1.05069
11097	7966570	NM_001113122 // DDX54 // DEAD (Asp-Glu-Ala-Asp) box polypeptide 54 // 12q24.13 /	7966570	0.0125777	1.05068
29656	8149857	NM_017634 // KCTD9 // potassium channel tetramerisation domain containing 9 // 8	8149857	0.0387535	1.05032
31491	8167407	NM_181532 // ERAS // ES cell expressed Ras // Xp11.23 // 3266 // ENST0000033827	8167407	0.0416336	1.05017
32249	8173955	NM_080737 // SYTL4 // synaptotagmin-like 4 // Xq21.33 // 94121 // NM_001129896	8173955	0.021646	1.05015
13289	7987648	---	7987648	0.00954042	1.04976
12126	7976766	NM_024515 // WDR25 // WD repeat domain 25 // 14q32.2 // 79446 // ENST0000040231	7976766	0.020148	1.04976
18201	8038246	NM_003323 // TULP2 // tubby like protein 2 // 19q13.1 // 7288 // ENST000002139	8038246	0.00615285	1.04965
23513	8091877	---	8091877	0.0384227	1.04936
7972	7936023	BC126459 // C10orf95 // chromosome 10 open reading frame 95 // 10q24.32 // 79946	7936023	0.0141093	1.04907
16289	8019570	NM_033059 // KRTAP4-11 // keratin associated protein 4-11 // 17q12-q21 // 85282	8019570	0.0157331	1.04885
5423	7910134	NM_031944 // MIXL1 // Mix1 homeobox-like 1 (Xenopus laevis) // 1q42.12 // 83881	7910134	0.0187119	1.04881
28335	8137979	NM_0011101 // ACTB // actin, beta // 7p15-p12 // 60 // ENST0000031789 // ACTB /	8137979	0.0475926	1.04855
13720	7992670	NM_002613 // PDPK1 // 3-phosphoinositide dependent protein kinase-1 // 16p13.3 /	7992670	0.0180502	1.04847
13275	7987475	NM_004573 // PLCB2 // phospholipase C, beta 2 // 15q15 // 5330 // ENST000002604	7987475	0.0348279	1.048
12488	7980233	NM_002632 // PGF // placental growth factor // 14q24-q31 // 5228 // ENST0000023	7980233	0.0251724	1.0479
17662	8032730	NM_001961 // EEF2 // eukaryotic translation elongation factor 2 // 19pter-q12 //	8032730	0.0272802	1.04785
10884	7964466	NM_006400 // DCTN2 // dynactin 2 (p50) // 12q13.2-q13.3 // 10540 // ENST0000035	7964466	0.0329275	1.04779
15109	8006984	NM_002809 // PSMD3 // proteasome (prosome, macropain) 26S subunit, non-ATPase, 3	8006984	0.0370741	1.04774
6043	7916493	NM_003713 // PPAP2B // phosphatidic acid phosphatase type 2B // 1pter-p22.1 // 8	7916493	0.0281363	1.04764
14213	7997904	AK295122 // ZNF778 // zinc finger protein 778 // 16q24.3 // 197320 // AK023048	7997904	0.0294373	1.04763
30104	8154059	NM_003070 // SMARCA2 // SWI/SNF related, matrix associated, actin dependent regu	8154059	0.0138363	1.04719
20959	8065992	NM_021100 // NFS1 // NFS1 nitrogen fixation 1 homolog (S. cerevisiae) // 20q11.2	8065992	0.0428552	1.04712
4744	7903181	---	7903181	0.0469231	1.04663
15462	8010766	---	8010766	0.0109575	1.04627
28787	8142079	BC105284 // LOC100130771 // EF-hand domain-containing protein LOC100130771 // 7q	8142079	8.16E-07	1.04622
12118	7976667	---	7976667	0.0393722	1.04545
22356	8079746	NM_022171 // TCTA // T-cell leukemia translocation altered gene // 3p21 // 6988	8079746	0.033404	1.0454
8503	7940735	---	7940735	0.0207485	1.04502
32899	8179364	NM_006929 // SKIV2L // superkiller viralicidic activity 2-like (S. cerevisiae) /	8179364	0.043306	1.045
19080	8046199	---	8046199	0.0258097	1.04497
17906	8035581	NM_001017392 // SFRS14 // splicing factor, arginine/serine-rich 14 // 19p12 // 1	8035581	0.00228761	1.04418
16274	8019463	NM_139062 // CSNK1D // casein kinase 1, delta // 17q25 // 1453 // NM_001893 //	8019463	0.0316245	1.04412
22004	8075921	NM_052906 // ELFN2 // extracellular leucine-rich repeat and fibronectin type III	8075921	0.0185886	1.04297
16715	8023382	NM_003927 // MBD2 // methyl-CpG binding domain protein 2 // 18q21 // 8932 // NM	8023382	0.00660035	1.04277
14512	8000998	NM_024006 // VKORC1 // vitamin K epoxide reductase complex, subunit 1 // 16p11.2	8000998	0.0230434	1.04238
8523	7940959	NM_020155 // GPR137 // G protein-coupled receptor 137 // 11cen-q22.3 // 56834 //	7940959	0.026394	1.04228
23671	8093413	NM_032326 // TMEM175 // transmembrane protein 175 // 4p16.3 // 84286 // ENST000	8093413	0.0332538	1.04216
25437	8110253	NM_012279 // ZNF346 // zinc finger protein 346 // 5q35.2 // 23567 // ENST0000003	8110253	0.0345802	1.04194
19421	8049919	NM_152783 // D2HGDH // D-2-hydroxyglutarate dehydrogenase // 2q37.3 // 728294 //	8049919	0.00864483	1.04188
6250	7918681	NM_018364 // RSNB1 // round spermatid basic protein 1 // 1p13.2 // 54665 // ENS	7918681	0.0123169	1.04159
9161	7947129	NM_001029865 // DBX1 // developing brain homeobox 1 // 11p15.1 // 120237 // ENS	7947129	0.0368266	1.0412
17716	8033392	NM_020196 // XAB2 // XPA binding protein 2 // 19p13.2 // 56949 // ENST000003583	8033392	0.0380662	1.04078
9826	7953200	NM_001759 // CCND2 // cyclin D2 // 12p13 // 894 // ENST00000261254 // CCND2 //	7953200	0.043225	1.04048
30598	8158771	NM_031426 // C9orf58 // chromosome 9 open reading frame 58 // 9q34.13-q34.3 // 8	8158771	0.0305241	1.04041
23153	8088315	ENST00000295941 // ASB14 // ankyrin repeat and SOCS box-containing 14 // 3p21.1	8088315	0.0211728	1.03858
11150	7967212	NM_002150 // HPD // 4-hydroxyphenylpyruvate dioxygenase // 12q24-qter // 3242 //	7967212	0.0375796	1.03813
30639	8159243	NM_014811 // KIAA0649 // KIAA0649 // 9q34.3 // 9858 // ENST00000356818 // KIAA0	8159243	0.0476924	1.038
25445	8110392	NM_017510 // TMED9 // transmembrane emp24 protein transport domain containing 9	8110392	0.0375472	1.0379
28519	8139680	NM_015198 // COBL // cordon-bleu homolog (mouse) // 7p12.1 // 23242 // ENST00000	8139680	0.0148052	1.03774
23334	8090070	NM_183357 // ADCY5 // adenylate cyclase 5 // 3q13.2-q21 // 111 // ENST000003098	8090070	0.0421809	1.03745
9807	7952953	NM_018979 // WNK1 // WNK lysine deficient protein kinase 1 // 12p13.3 // 65125 /	7952953	0.0350697	1.03663
19558	8051443	NM_003162 // STRN // striatin, calmodulin binding protein // 2p22-p21 // 6801 //	8051443	0.0230709	1.03645
9836	7953291	NM_001769 // CD9 // CD9 molecule // 12p13.3 // 928 // ENST00000009180 // CD9 //	7953291	0.0244195	1.03618

6462	7920409	NM_006694	// JTB // jumping translocation breakpoint // 1q21 // 10899 /// ENST00	7920409	0.0228248	1.0361
10694	7962240	---	---	7962240	0.0430028	1.03501
26902	8124018	---	---	8124018	0.00762659	1.03333
32604	8176782	NR_001527	// TTTY6 // testis-specific transcript, Y-linked 6 // Yq11.223 // 8467	8176782	0.00838268	1.03323
32687	8177347	NR_001527	// TTTY6 // testis-specific transcript, Y-linked 6 // Yq11.223 // 8467	8177347	0.00838268	1.03323
13960	7995320	---	---	7995320	0.0346957	1.03074
9690	7951859	NM_000482	// APOA4 // apolipoprotein A-IV // 11q23 // 337 /// ENST00000357780 //	7951859	0.0318231	1.03069
22097	8076754	NM_006071	// PKDREJ // polycystic kidney disease (polycystin) and REJ homolog (s	8076754	0.0434915	1.03006
24252	8098848	NM_213613	// SLC26A1 // solute carrier family 26 (sulfate transporter), member 1	8098848	0.0120343	1.02976
6598	7922008	NM_053053	// TADA1L // transcriptional adaptor 1 (HFI1 homolog, yeast)-like // 1	7922008	0.0426217	1.02895
436	7892939	---	---	7892939	0.0275556	1.02811
27963	8134349	---	---	8134349	0.0255224	1.02801
25847	8114030	NM_007054	// KIF3A // kinesin family member 3A // 5q31 // 11127 /// ENST00000378	8114030	0.00948307	1.02789
28791	8142098	NM_020725	// ATXNL7L1 // ataxin 7-like 1 // 7q22.2 // 222255 /// ENST00000297416	8142098	0.00741284	1.02771
22974	8086048	NM_010406	// GLB1 // galactosidase, beta 1 // 3p21.33 // 2720 /// ENST0000039	8086048	0.0165219	1.02744
18669	8042637	NM_003494	// DYSF // dysferlin, limb girdle muscular dystrophy 2B (autosomal rec	8042637	0.0334124	1.02725
22378	8080084	NM_006010	// ARMET // arginine-rich, mutated in early stage tumors // 3p21.1 //	8080084	0.00674538	1.02664
23461	8091452	NM_001079809	// TMEM183B // transmembrane protein 183B // 3q25.1 // 653659 /// B	8091452	0.0365926	1.02651
1033	7893547	---	---	7893547	0.0405757	1.02623
25689	8112726	---	---	8112726	0.00053517	1.0253
12599	7981364	NM_032630	// CINP // cyclin-dependent kinase 2-interacting protein // 14q32.31 /	7981364	0.012975	1.02425
28015	8134904	NM_005837	// POP7 // processing of precursor 7, ribonuclease P/MRP subunit (S. c	8134904	0.017759	1.02313
22418	8080781	NM_017771	// PXK // PX domain containing serine/threonine kinase // 3p14.3 // 54	8080781	0.0207662	1.02296
28918	8143417	NM_004333	// BRAF // v-raf murine sarcoma viral oncogene homolog B1 // 7q34 // 6	8143417	0.0258951	1.02136
26301	8117955	NM_014046	// MRPS18B // mitochondrial ribosomal protein S18B // 6p21.3 // 28973	8117955	0.0133081	1.01668
32736	8177824	NM_014046	// MRPS18B // mitochondrial ribosomal protein S18B // 6p21.3 // 28973	8177824	0.0133081	1.01668
32873	8179139	NM_014046	// MRPS18B // mitochondrial ribosomal protein S18B // 6p21.3 // 28973	8179139	0.0133081	1.01668
30863	8161409	NM_015667	// FAM75A7 // family with sequence similarity 75, member A7 // 9q12 //	8161409	0.0337806	1.01206
23709	8093957	NM_018366	// CNO // cappuccino homolog (mouse) // 4p16.1 // 55330 /// ENST0000003	8093957	0.0109955	-1.00442
25400	8109843	NM_004946	// DOCK2 // dedicator of cytokinesis 2 // 5q35.1 // 1794 /// ENST000000	8109843	0.0334799	-1.01307
31801	8169920	NM_016024	// RBMX2 // RNA binding motif protein, X-linked 2 // Xq25 // 51634 //	8169920	0.0205356	-1.016
17412	8030498	NM_030973	// MED25 // mediator complex subunit 25 // 19q13.3 // 81857 /// ENST00	8030498	0.00915748	-1.01673
6685	7922756	NM_015039	// NMNAT2 // nicotinamide nucleotide adenyltransferase 2 // 1q25 //	7922756	0.00874657	-1.01746
27914	8133754	NR_023383	// PMS2L1 // postmeiotic segregation increased 2-like 11 pseudogene /	8133754	0.0446682	-1.01907
2535	7895082	---	---	7895082	0.0258342	-1.01937
27037	8124967	NM_004639	// BAT3 // HLA-B associated transcript 3 // 6p21.3 // 7917 /// NM_0807	8124967	0.040091	-1.02162
17138	8027566	NM_001806	// CEBPG // CCAAT/enhancer binding protein (C/EBP), gamma // 19q13.11	8027566	0.0426003	-1.02175
29519	8148955	NM_023080	// C8orf33 // chromosome 8 open reading frame 33 // 8q24.3 // 65265 //	8148955	0.0459774	-1.02326
32305	8174389	NM_033641	// COL4A6 // collagen, type IV, alpha 6 // Xq22 // 1288 /// NM_001847	8174389	0.0364461	-1.02334
17674	8032839	NM_032108	// SEMA6B // sema domain, transmembrane domain (TM), and cytoplasmic d	8032839	0.019807	-1.02541
18025	8036584	NM_001042507	// LGALS7B // lectin, galactoside-binding, soluble, 7B // 19q13.2 //	8036584	0.0243864	-1.02623
8292	7939087	BC047775	// C11orf46 // chromosome 11 open reading frame 46 // 11p14.1 // 120534	7939087	0.0255578	-1.02643
19645	8052413	---	---	8052413	0.0265921	-1.0267
32429	8175369	NM_024597	// MAP7D3 // MAP7 domain containing 3 // Xq26.3 // 79649 /// ENST00000	8175369	0.0157425	-1.02679
20788	8064430	---	---	8064430	0.034926	-1.02693
7744	7933498	BC029839	// FAM170B // family with sequence similarity 170, member B // 10q11.22	7933498	0.00579797	-1.02731
14325	7999044	NM_004380	// CREBBP // CREB binding protein // 16p13.3 // 1387 /// NM_001079846	7999044	0.0483203	-1.02819
26355	8118580	NM_005104	// BRD2 // bromodomain containing 2 // 6p21.3 // 6046 /// NM_001113182	8118580	0.00225	-1.02995
17267	8029050	NM_052848	// CCD9C7 // coiled-coil domain containing 97 // 19q13.2 // 90324 ///	8029050	0.00707151	-1.03086
882	7893394	---	---	7893394	0.0223275	-1.03131
6916	7925229	NM_152490	// B3GALNT2 // beta-1,3-N-acetylgalactosaminyltransferase 2 // 1q42.3	7925229	0.0375585	-1.03191
21503	8071185	NR_002733	// DGCRC5 // DiGeorge syndrome critical region gene 5 (non-protein codi	8071185	0.0209703	-1.03214
11799	7973414	NM_015514	// NGDN // neuroguidin, EGF-like binding protein // 14q11.2 // 25983 ///	7973414	0.029647	-1.03229
9737	7952350	NM_018400	// SCN3B // sodium channel, voltage-gated, type III, beta // 11q23.3 //	7952350	0.0400669	-1.03388
25256	8108435	NM_181838	// UBE2D2 // ubiquitin-conjugating enzyme E2D 2 (UBC4/5 homolog, yeast	8108435	0.0499824	-1.03416
13070	7985409	NR_003246	// FLJ40113 // golgi autoantigen, golgin subfamily a-like pseudogene /	7985409	0.00379926	-1.03485
13076	7985450	NR_003246	// FLJ40113 // golgi autoantigen, golgin subfamily a-like pseudogene /	7985450	0.00379926	-1.03485
29713	8150318	NM_023110	// FGFR1 // fibroblast growth factor receptor 1 // 8p11.2-p11.1 // 226	8150318	0.0286776	-1.03493
21999	8075886	NM_000878	// IL2RB // interleukin 2 receptor, beta // 22q13.2q23.1 // 3560 //	8075886	0.033657	-1.03496
12237	7977732	NR_002916	// SNORD8 // small nucleolar RNA, C/D box 8 // 14q11.2 // 319103	7977732	0.0165689	-1.035
1659	7894185	---	---	7894185	0.020144	-1.03583
15689	8013331	NM_015681	// B9D1 // B9 protein domain 1 // 17p11.2 // 27077 /// ENST00000261499	8013331	0.030926	-1.0359
16021	8016484	NM_032391	// C17orf92 // chromosome 17 open reading frame 92 // 17q21 // 84366 /	8016484	0.0244426	-1.03616
4353	7899153	NM_031286	// SH3BGL3 // SH3 domain binding glutamic acid-rich protein like 3 //	7899153	0.0310625	-1.03618
4526	7901038	NM_001012	// RPS8 // ribosomal protein S8 // 1p34.1-p32 // 6202 /// ENST00000396	7901038	0.0161952	-1.03696
29482	8148615	NM_030895	// ZNF696 // zinc finger protein 696 // 8q24.3 // 79943 /// ENST0000003	8148615	0.0415664	-1.03707
31274	8165538	NM_001033113	// ENTPD8 // ectonucleoside triphosphate diphosphohydrolase 8 // 9q	8165538	0.00823288	-1.03716
19257	8048081	NM_024532	// SPAG16 // sperm associated antigen 16 // 2q34 // 79582 /// NM_00102	8048081	0.0430827	-1.03719
5650	7912239	NM_024980	// GPR157 // G protein-coupled receptor 157 // 1p36.23 // 80045 /// EN	7912239	0.0280621	-1.03758
12172	7977119	NM_032374	// C14orf153 // chromosome 14 open reading frame 153 // 14q32.3 // 84	7977119	0.0294272	-1.03761
25245	8108359	NM_016606	// REEP2 // receptor accessory protein 2 // 5q31 // 51308 /// ENST0000	8108359	0.031672	-1.0381
12169	7977103	---	---	7977103	0.0464616	-1.04015
390	7892891	---	---	7892891	0.0109164	-1.04067
15306	8008912	---	---	8008912	0.0388457	-1.04068
30480	8157383	NM_032888	// COL27A1 // collagen, type XXVII, alpha 1 // 9q32 // 85301 /// ENST0	8157383	0.0406211	-1.04075
5150	7906969	---	---	7906969	0.00105541	-1.0412
10490	7960280	NM_152441	// FBXL14 // F-box and leucine-rich repeat protein 14 // 12p13.33 // 1	7960280	0.0458318	-1.04186
23021	8086505	NM_016598	// ZDHHC3 // zinc finger, DHHC-type containing 3 // 3p21.31 // 51304 /	8086505	0.0155388	-1.04225
7105	7926983	NM_183013	// CREM // cAMP responsive element modulator // 10p11.21 // 1390 /// N	7926983	0.0384417	-1.04239
15403	8010021	NM_001258	// CDK3 // cyclin-dependent kinase 3 // 17q22-qter // 1018 /// ENST000	8010021	0.0434083	-1.04244
5111	7906602	NM_020335	// VANGL2 // vang-like 2 (van gogh, Drosophila) // 1q22-q23 // 57216 /	7906602	0.0497801	-1.04251
29489	8148662	NM_173831	// ZNF707 // zinc finger protein 707 // 8q24.3 // 286075 /// NM_001100	8148662	0.00823031	-1.04255
18328	8039353	NM_000363	// TNNT3 // troponin I type 3 (cardiac) // 19q13.4 // 7137 /// ENST000	8039353	0.0497804	-1.04256
30928	8161824	NM_017998	// C9orf40 // chromosome 9 open reading frame 40 // 9q21.13 // 55071 /	8161824	0.0366137	-1.04298
18631	8042324	---	---	8042324	0.0224581	-1.04342
22237	8078450	NM_006371	// CRTAP // cartilage associated protein // 3p22.3 // 10491 /// ENST00	8078450	0.000268802	-1.04359
14693	8002882	NM_021615	// CHST6 // carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 6	8002882	0.0262967	-1.04414
7153	7927425	NM_020945	// WDFY4 // WDFY family member 4 // 10q11.22 // 57705 /// ENST00000312	7927425	0.0472505	-1.04447
10921	7964745	NM_016056	// TMBIM4 // transmembrane BAX inhibitor motif containing 4 // 12q14.1	7964745	0.0434582	-1.04452
30567	8158372	NM_003011	// SET // SET nuclear oncogene // 9q34 // 6418 /// NM_001122821 // SET	8158372	0.00785405	-1.04461
4993	7905512	ENST00000362017	// C1orf68 // chromosome 1 open reading frame 68 // 1q21.3 // 10	7905512	0.0361017	-1.04464
13442	7989770	NM_004884	// PUNC // putative neuronal cell adhesion molecule // 15q22.3-q23 //	7989770	0.0400854	-1.04485
138	7892635	---	---	7892635	0.0004417	-1.04526
7661	7932860	---	---	7932860	0.00417614	-1.04528
14199	7997779	NM_144604	// ZC3H18 // zinc finger CCCH-type containing 18 // 16q24.2-q24.3 // 1	7997779	0.0322807	-1.04539
23673	8093440	NM_001004356	// FGFRL1 // fibroblast growth factor receptor-like 1 // 4p16 // 53	8093440	0.0263189	-1.04551

10633	7961532	NM_001175 // ARHGDI1 // Rho GDP dissociation inhibitor (GDI) beta // 12p12.3 //	7961532	0.0160453	-1.04572
13973	7995346	---	7995346	0.0405446	-1.04574
24129	8097782	NM_001006 // RPS3A // ribosomal protein S3A // 4q31.2-q31.3 // 6189 // ENST00000	8097782	0.0100086	-1.04581
12435	7979800	---	7979800	0.0497378	-1.0461
25363	8109570	---	8109570	0.0217766	-1.04657
28788	8142084	CR601484 // YBX1P2 // Y box binding protein 1 pseudogene 2 // 7q22.2 // 646531	8142084	0.0113567	-1.04738
30627	8159036	NM_139025 // ADAMTS13 // ADAM metalloproteinase with thrombospondin type 1 motif,	8159036	0.0036101	-1.04767
13742	7992854	NM_004220 // ZNF213 // zinc finger protein 213 // 16p13.3 // 7760 // ENST000003	7992854	0.0101377	-1.04768
14951	8005586	NM_007148 // RNF112 // ring finger protein 112 // 17p11.2 // 7732 // ENST000002	8005586	0.0456012	-1.04782
22436	8080956	---	8080956	0.00722804	-1.04785
30199	8154856	NM_017811 // UBE2R2 // ubiquitin-conjugating enzyme E2R 2 // 9p13.3 // 54926 //	8154856	0.0115191	-1.048
10762	7963092	NM_175736 // FMNL3 // formin-like 3 // 12q13.12 // 91010 // NM_198900 // FMNL3	7963092	0.0430104	-1.04805
11337	7969271	NM_006704 // SUGT1 // SGT1, suppressor of G2 allele of SKP1 (S. cerevisiae) // 1	7969271	0.0364157	-1.04855
19511	8050894	NM_002254 // KIF3C // kinesin family member 3C // 2p23 // 3797 // ENST000002647	8050894	0.0203701	-1.04867
10401	7959157	NM_176818 // GATC // glutamyl-tRNA(Gln) amidotransferase, subunit C homolog (bac	7959157	0.0366356	-1.04868
28166	8136635	NM_197964 // C7orf55 // chromosome 7 open reading frame 55 // 7q34 // 154791 //	8136635	5.49E-05	-1.04878
2994	7895545	---	7895545	0.0123409	-1.0495
6953	7925561	AF448858 // LOC284702 // hypothetical protein LOC284702 // 1q44 // 284702 // AK	7925561	0.0310702	-1.04973
28691	8141066	NM_000940 // PON3 // paraoxonase 3 // 7q21.3 // 5446 // ENST00000265627 // PON3	8141066	0.0403859	-1.04983
15052	8006423	NM_173847 // SPACA3 // sperm acrosome associated 3 // 17q11.2 // 124912 // ENST	8006423	0.0385825	-1.0507
10824	7963698	NM_006856 // ATF7 // activating transcription factor 7 // 12q13 // 11016 // ENS	7963698	0.0432777	-1.05083
32251	8173979	NM_007052 // NOX1 // NADPH oxidase 1 // Xq22 // 27035 // NM_013955 // NOX1 // N	8173979	0.0146793	-1.05119
10831	7963760	NM_006163 // NFE2 // nuclear factor (erythroid-derived 2), 45kDa // 12q13 // 477	7963760	0.00219814	-1.05145
23541	8092162	ENST00000331659 // PP13439 // hypothetical LOC100128046 // 3q26.31 // 100128046	8092162	0.0229954	-1.05212
10444	7959751	NM_176818 // GATC // glutamyl-tRNA(Gln) amidotransferase, subunit C homolog (bac	7959751	0.00668691	-1.05248
25552	8111360	NM_016107 // ZFR // zinc finger RNA binding protein // 5p13.3 // 51663 // ENSTO	8111360	0.0228549	-1.05295
16535	8021714	---	8021714	0.0392689	-1.05295
11319	7969129	NM_001040443 // PHF11 // PHD finger protein 11 // 13q14.3 // 51131 // NM_001040	7969129	0.000808559	-1.05318
30663	8159531	NM_207510 // FLJ45224 // FLJ45224 protein // 9q34.3 // 401562 // AK127236 // FL	8159531	0.00408577	-1.05325
27984	8134552	NM_005720 // ARPC1B // actin related protein 2/3 complex, subunit 1B, 41kDa // 7	8134552	0.0027927	-1.05328
15604	8012464	XM_001721372 // LOC100128288 // hypothetical protein LOC100128288 // 17p13.1 //	8012464	0.0193524	-1.05359
12107	7976560	NM_000623 // BDKRB2 // bradykinin receptor B2 // 14q32.1-q32.2 // 624 // ENSTO	7976560	0.0457596	-1.05389
13910	7994683	NM_001083613 // TMEM219 // transmembrane protein 219 // 16p11.2 // 124446 // NM	7994683	0.0333407	-1.05395
15165	8007493	NM_001161 // ARL4D // ADP-ribosylation factor-like 4D // 17q12-q21 // 379 // EN	8007493	0.0133445	-1.054
14895	8005106	X52357 // ZNF29 // zinc finger protein 29 pseudogene // 17p13-p12 // 7577	8005106	0.0147499	-1.05416
26495	8120184	NM_172238 // TFAP2D // transcription factor AP-2 delta (activating enhancer bind	8120184	0.0499841	-1.05501
16313	8019687	NM_001002244 // ANAPC11 // APC11 anaphase promoting complex subunit 11 // 17q25.	8019687	0.000583193	-1.05528
26864	8123695	NM_206836 // PECL1 // peroxisomal D3,D2-enoyl-CoA isomerase // 6p24.3 // 10455 //	8123695	0.0452272	-1.05546
4975	7905395	NM_002796 // PSMB4 // proteasome (prosome, macropain) subunit, beta type, 4 // 1	7905395	0.0419088	-1.05562
14441	8000375	NM_001006634 // ARHGAP17 // Rho GTPase activating protein 17 // 16p12.1 // 55114	8000375	0.0338353	-1.05567
15051	8006415	NM_015544 // TMEM98 // transmembrane protein 98 // 17q11.2 // 26022 // NM_00103	8006415	0.040163	-1.05599
11250	7968297	NM_015932 // POMP // proteasome maturation protein // 13q12.3 // 51371 // ENSTO	7968297	0.00581028	-1.05608
651	7893160	---	7893160	0.0169425	-1.05686
21942	8075343	NM_005877 // SF3A1 // splicing factor 3a, subunit 1, 120kDa // 22q12.2 // 10291	8075343	0.0414492	-1.05698
30678	8159670	NM_006647 // NOXA1 // NADPH oxidase activator 1 // 9q34.3 // 10811 // ENST00000	8159670	0.00528949	-1.05716
17904	8035566	NM_004838 // HOMER3 // homer homolog 3 (Drosophila) // 19p13.11 // 9454 // ENST	8035566	0.0277661	-1.05727
11967	7975113	NM_145165 // CHURC1 // churchill domain containing 1 // 14q23.3 // 91612 // ENS	7975113	0.0414097	-1.05735
7150	7927383	NM_153034 // ZNF488 // zinc finger protein 488 // 10q11.22 // 118738 // ENSTO00	7927383	0.0228836	-1.05793
5803	7913965	NM_001114759 // ZNF683 // zinc finger protein 683 // 1p36.11 // 257101 // NM_17	7913965	0.0154773	-1.05811
15180	8007605	---	8007605	0.0370704	-1.05844
13374	7988987	NM_004498 // ONECUT1 // one cut homeobox 1 // 15q21.1-q21.2 // 3175 // ENST00000	7988987	0.0375724	-1.05888
31953	8171170	---	8171170	0.0235812	-1.05931
32835	8178790	NM_022107 // GPSM3 // G-protein signaling modulator 3 (AGS3-like, C. elegans) //	8178790	0.0455744	-1.05946
13020	7984989	NM_017828 // COMMD4 // COMM domain containing 4 // 15q24.2 // 54939 // ENST00000	7984989	0.0333377	-1.05953
1215	7893734	---	7893734	0.00736884	-1.05962
17529	8031568	---	8031568	0.0434582	-1.05972
30523	8157802	---	8157802	0.0472016	-1.05987
8588	7941709	NM_002896 // RBM4 // RNA binding motif protein 4 // 11q13 // 5936 // ENST000003	7941709	0.0452289	-1.06033
25028	8106096	---	8106096	0.0337995	-1.06059
17644	8032509	NM_052847 // GNG7 // guanine nucleotide binding protein (G protein), gamma 7 //	8032509	0.0315153	-1.0608
10180	7956743	ENST00000338970 // RPL14 // ribosomal protein L14 // 3p22-p21.2 // 9045 // U167	7956743	0.0344132	-1.06119
7318	7929026	ENST00000314855 // LOC100132116 // hypothetical LOC100132116 // 10q23.31 // 1001	7929026	0.00194908	-1.06127
28017	8134915	NM_003386 // ZAN // zonadhesin // 7q22 // 7455 // NM_173059 // ZAN // zonadhesi	8134915	0.0495314	-1.06158
17758	8033956	NM_004230 // S1PR2 // sphingosine-1-phosphate receptor 2 // 19p13.2 // 9294 //	8033956	0.00642232	-1.06175
3533	7896099	---	7896099	0.0141902	-1.06224
29676	8150087	---	8150087	0.00100827	-1.06225
26647	8121547	NM_001033564 // C6orf225 // chromosome 6 open reading frame 225 // 6q21 // 61920	8121547	0.0276503	-1.06265
28760	8141728	NM_022777 // RABL5 // RAB, member RAS oncogene family-like 5 // 7q22.1 // 64792	8141728	0.0185845	-1.06288
12436	7979802	---	7979802	0.0473353	-1.06312
2681	7895230	---	7895230	0.0238458	-1.06314
28707	8141222	NM_001006 // RPS3A // ribosomal protein S3A // 4q31.2-q31.3 // 6189 // ENST00000	8141222	0.0123836	-1.06323
23280	8089464	BC038577 // LOC151760 // hypothetical LOC151760 // 3q13.13 // 151760	8089464	0.0353114	-1.0633
7420	7930170	BC015994 // C10orf32 // chromosome 10 open reading frame 32 // 10q24.32 // 11903	7930170	0.0293557	-1.06334
28616	8140220	NM_030798 // WBSR16 // Williams-Beuren syndrome chromosome region 16 // 7q11.23	8140220	0.030043	-1.06347
32388	8175121	NM_001555 // IGSF1 // immunoglobulin superfamily, member 1 // Xq25 // 3547 // N	8175121	0.0110871	-1.06355
19567	8051573	NM_006449 // CDC42EP3 // CDC42 effector protein (Rho GTPase binding) 3 // 2p21 //	8051573	0.0115361	-1.06411
682	7893191	---	7893191	0.00647789	-1.06417
19139	8046815	NM_194250 // ZNF804A // zinc finger protein 804A // 2q32.1 // 91752 // ENST00000	8046815	0.0024703	-1.06451
16133	8017688	NM_199340 // LRRC37A3 // leucine rich repeat containing 37, member A3 // 17q24.1	8017688	0.0409032	-1.06454
20272	8059028	NM_194302 // CCDC108 // coiled-coil domain containing 108 // 2q35 // 255101 //	8059028	0.0351521	-1.06465
15597	8012376	NM_014232 // VAMP2 // vesicle-associated membrane protein 2 (synaptobrevin 2) //	8012376	0.0388589	-1.06469
25962	8115158	NM_001025071 // RPS14 // ribosomal protein S14 // 5q31-q33 // 6208 // NM_001025	8115158	0.0173558	-1.06498
522	7893029	---	7893029	0.0333343	-1.06516
7247	7928367	---	7928367	0.00310169	-1.06602
5735	7912994	ENST00000355609 // RP1-93P18.1 // hypothetical protein LOC126917 // 1p36.13 // 1	7912994	0.00418222	-1.06621
6023	7916274	NM_002370 // MAGOH // mago-nashi homolog, proliferation-associated (Drosophila)	7916274	0.0392645	-1.06626
19453	8050227	AY358123 // UNQ5830 // AILT5830 // 2p25.1 // 400943 // AY358741 // UNQ5830 // A	8050227	0.0310442	-1.06745
13502	7990540	NM_018285 // IMP3 // IMP3, U3 small nucleolar ribonucleoprotein, homolog (yeast)	7990540	0.0286885	-1.06753
18188	8038109	NM_017708 // FAM83E // family with sequence similarity 83, member E // 19q13.32-	8038109	0.0252279	-1.06768
15711	8013515	---	8013515	0.0141959	-1.06835
24428	8100507	NM_032495 // HOPX // HOP homeobox // 4q11-q12 // 84525 // NM_139211 // HOPX //	8100507	0.0128704	-1.06846
20419	8060675	NM_021873 // CDC25B // cell division cycle 25 homolog B (S. pombe) // 20p13 // 9	8060675	0.0327409	-1.06853
26964	8124469	NR_003504 // GUSBL1 // glucuronidase, beta-like 1 // 6p21 // 387036 // BC067351	8124469	0.0318769	-1.0687
20019	8055711	NM_004543 // NEB // nebulin // 2q22 // 4703 // ENST00000172853 // NEB // nebuli	8055711	0.0158989	-1.06905
6185	7917906	NM_000971 // RPL7 // ribosomal protein L7 // 8q21.11 // 6129 // ENST00000352983	7917906	0.0428062	-1.06924
28992	8144036	NM_005431 // XRCC2 // X-ray repair complementing defective repair in Chinese ham	8144036	0.0207127	-1.0697

9046	7946041	NM_000519 // HBD // hemoglobin, delta // 11p15.5 // 3045 // ENST00000380299 //	7946041	0.0379011	-1.06992
5879	7914791	NM_005066 // SFPQ // splicing factor proline/glutamine-rich (polypyrimidine trac	7914791	0.0218736	-1.07022
25020	8105995	BC067830 // LOC653391 // glucuronidase, beta pseudogene // 5q13.2 // 653391 //	8105995	0.0412883	-1.07084
18007	8036403	ENST00000316807 // DKFZp761D1918 // hypothetical protein DKFZp761D1918 // 19q13.	8036403	0.026385	-1.07111
18859	8044295	NM_001099289 // SH3RF3 // SH3 domain containing ring finger 3 // 2q13 // 344558	8044295	0.00419758	-1.07112
22944	8085716	NM_002971 // SATB1 // SATB homeobox 1 // 3p23 // 6304 // ENST00000338745 // SAT	8085716	0.0230015	-1.07124
5673	7912520	NM_002521 // NPPB // natriuretic peptide precursor B // 1p36.2 // 4879 // ENST0	7912520	0.0272655	-1.07168
15884	8015221	NM_033059 // KRTAP4-11 // keratin associated protein 4-11 // 17q12-q21 // 85282	8015221	0.0115257	-1.07179
21371	8069868	AB096962 // KRTAP7-1 // keratin associated protein 7-1 // 21q22.1 // 337878 //	8069868	0.00261624	-1.07189
12775	7982339	NM_002971 // SATB1 // SATB homeobox 1 // 3p23 // 6304 // ENST00000338745 // SAT	7982339	0.0329684	-1.07252
5316	7908917	NM_006763 // BTG2 // BTG family, member 2 // 1q32 // 7832 // ENST00000290551 //	7908917	0.0110066	-1.07266
3601	7896168	---	7896168	0.00310558	-1.07273
11100	7966600	NM_024959 // SLC24A6 // solute carrier family 24 (sodium/potassium/calcium excha	7966600	0.00301578	-1.07335
22509	8081356	---	8081356	0.0488	-1.07362
12838	7983054	NM_212464 // CAPN3 // calpain 3, (p94) // 15q15.1-q21.1 // 825 // NM_212467 //	7983054	0.0155312	-1.07367
1587	7894110	---	7894110	0.025461	-1.07375
9210	7947570	NM_001076787 // TP53I11 // tumor protein p53 inducible protein 11 // 11p11.2 //	7947570	0.00606169	-1.0741
19230	8047767	---	8047767	0.0222641	-1.0741
11141	7967107	AK096009 // C12orf27 // chromosome 12 open reading frame 27 // 12q24.31 // 28346	7967107	0.014939	-1.07419
4790	7903688	NM_182580 // CYB561D1 // cytochrome b-561 domain containing 1 // 1p13.3 // 28461	7903688	0.0348044	-1.07422
16599	8022378	---	8022378	0.0393765	-1.07426
1484	7894007	---	7894007	0.0436653	-1.07475
17370	8030049	NM_017457 // CYTH2 // cytohesin 2 // 19q13.3 // 9266 // NM_004228 // CYTH2 // c	8030049	0.0316242	-1.07485
10997	7965515	NM_018838 // NDUFA12 // NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 12 /	7965515	0.0393498	-1.07486
31026	8162729	NM_014788 // TRIM14 // tripartite motif-containing 14 // 9q22.33 // 9830 // NM_	8162729	0.0210781	-1.07521
23158	8088348	BC040291 // FAM116A // family with sequence similarity 116, member A // 3p14.3 //	8088348	0.0121533	-1.07531
16806	8024246	NM_017914 // C19orf24 // chromosome 19 open reading frame 24 // 19p13.3 // 55009	8024246	0.0391612	-1.07546
6627	7922301	NM_000261 // MYOC // myocilin, trabecular meshwork inducible glucocorticoid resp	7922301	0.0343673	-1.07557
27348	8128383	NM_017421 // COQ3 // coenzyme Q3 homolog, methyltransferase (S. cerevisiae) // 6	8128383	0.0283058	-1.07566
19958	8055275	---	8055275	0.0463624	-1.07577
13906	7994647	NM_145239 // PRRT2 // proline-rich transmembrane protein 2 // 16p11.2 // 112476	7994647	0.0285918	-1.076
30187	8154765	NM_001539 // DNAJA1 // DnaJ (Hsp40) homolog, subfamily A, member 1 // 9p13-p12 /	8154765	0.0369697	-1.07607
21982	8075707	---	8075707	0.0467997	-1.07632
23046	8086799	NM_006574 // CSPG5 // chondroitin sulfate proteoglycan 5 (neuroglycan C) // 3p21	8086799	0.0476593	-1.07645
16907	8025382	NM_024552 // LASS4 // LAG1 homolog, ceramide synthase 4 // 19p13.2 // 79603 //	8025382	0.0396019	-1.07696
29661	8149907	NM_171982 // TRIM35 // tripartite motif-containing 35 // 8p21.2 // 23087 // ENS	8149907	0.00352093	-1.07704
25559	8111455	BC034017 // MGC22265 // hypothetical protein MGC22265 // 5p14.3 // 349035 // AK	8111455	0.0204226	-1.07706
393	7892894	---	7892894	0.0363754	-1.0771
4895	7904843	NM_002614 // PDZK1 // PDZ domain containing 1 // 1q21 // 5174 // ENST0000034477	7904843	0.0205554	-1.07713
10238	7957404	BC029120 // C12orf26 // chromosome 12 open reading frame 26 // 12q21.31 // 84190	7957404	0.0187347	-1.07727
24827	8104115	---	8104115	0.0419681	-1.0773
30792	8160771	NM_194313 // KIF24 // kinesin family member 24 // 9p13.3 // 347240 // ENST00000	8160771	0.000246867	-1.07749
25687	8112709	NM_001099271 // C5orf37 // chromosome 5 open reading frame 37 // 5q13.3 // 13435	8112709	0.0127432	-1.07803
5600	7911634	NM_178545 // TMEM52 // transmembrane protein 52 // 1p36.33 // 339456 // ENST000	7911634	0.00993722	-1.0781
17887	8035345	NM_005543 // INSL3 // insulin-like 3 (Leydig cell) // 19p13.2-p12 // 36450 // EN	8035345	0.0238908	-1.07843
23739	8094144	NM_001714301 // UNC93B3 // unc-93 homolog B3 pseudogene (C. elegans) // 3p12.3 /	8094144	0.00898684	-1.07856
16773	8023926	NM_032510 // PARD6G // par-6 partitioning defective 6 homolog gamma (C. elegans)	8023926	0.0274198	-1.07856
17467	8030982	NM_001040185 // ZNF765 // zinc finger protein 765 // 19q13.41 // 91661 // NM_00	8030982	0.0203767	-1.0788
30808	8160898	AK032320 // LOC259308 // hypothetical LOC259308 // 9p12 // 259308 // AK125949 /	8160898	0.0196356	-1.07913
10032	7955195	NM_005480 // TROAP // trophinin associated protein (tastin) // 12q13.12 // 10024	7955195	0.0250364	-1.07918
21151	8067869	NM_144770 // RBM11 // RNA binding motif protein 11 // 21q11 // 54033 // ENST000	8067869	0.0291469	-1.07923
15058	8006466	NM_207313 // TMEM132E // transmembrane protein 132E // 17q12 // 124842 // ENST0	8006466	0.016605	-1.07929
17734	8033635	NM_030957 // ADAMTS10 // ADAM metalloproteinase with thrombospondin type 1 motif,	8033635	0.00486632	-1.07932
29828	8151376	NM_000971 // RPL7 // ribosomal protein L7 // 8q21.11 // 6129 // ENST00000352983	8151376	0.0186603	-1.07944
11587	7971615	NM_032565 // EBPL // emopamil binding protein-like // 13q12-q13 // 84650 // ENS	7971615	0.0270531	-1.07978
28262	8137252	NM_130759 // GIMAP1 // GTPase, IMAP family member 1 // 7q36.1 // 170575 // ENST	8137252	0.00929104	-1.0799
10479	7960143	NM_003428 // ZNF84 // zinc finger protein 84 // 12q24.33 // 7637 // NM_00112737	7960143	0.0428098	-1.08064
28383	8138485	---	8138485	0.0111452	-1.08068
18881	8044552	NM_173170 // IL1F5 // interleukin 1 family, member 5 (delta) // 2q14 // 26525 //	8044552	0.0103857	-1.08095
24439	8100557	NM_001010874 // SRD5A2L2 // steroid 5 alpha-reductase 2-like 2 // 4q13.1 // 2530	8100557	0.0419936	-1.08113
15270	8008596	---	8008596	0.0271132	-1.08119
14412	7999981	NM_052956 // ACSM1 // acyl-CoA synthetase medium-chain family member 1 // 16p12.	7999981	0.0332529	-1.08131
595	7893103	---	7893103	0.0127615	-1.08156
14897	8005117	NM_178571 // TBC1D26 // TBC1 domain family, member 26 // 17p11.2 // 353149 // E	8005117	0.0423389	-1.08171
5857	7914500	AF258548 // C1orf91 // chromosome 1 open reading frame 91 // 1p36.11-p34.2 // 56	7914500	0.030872	-1.08223
13853	7994026	BC061522 // DKFZp547E087 // hypothetical gene LOC283846 // 18p11.21 // 283846 //	7994026	0.033263	-1.0823
8519	7940891	NM_005528 // DNAJC4 // DnaJ (Hsp40) homolog, subfamily C, member 4 // 11q13 // 3	7940891	0.0108632	-1.08293
24421	8100456	---	8100456	0.0297028	-1.08309
21283	8069085	NM_003307 // TRPM2 // transient receptor potential cation channel, subfamily M,	8069085	0.0401012	-1.08322
16229	8018966	NM_003255 // TIMP2 // TIMP metalloproteinase inhibitor 2 // 17q25 // 7077 // ENS	8018966	0.00494038	-1.08348
14446	8000413	NM_145080 // NSMCE1 // non-SMC element 1 homolog (S. cerevisiae) // 16p12.1 // 1	8000413	0.0212019	-1.08351
10103	7955979	---	7955979	0.000196148	-1.08354
8742	7943226	NM_001080486 // LOC390243 // similar to folate receptor 4 (delta) isoform 1 // 1	7943226	0.00149385	-1.084
20387	8060330	NM_033089 // ZCHHC3 // zinc finger, CCHC domain containing 3 // 20p13-p12.2 // 8	8060330	0.0137174	-1.08403
9069	7946128	NM_032127 // FAM160A2 // family with sequence similarity 160, member A2 // 11p15	7946128	0.0473029	-1.08408
24508	8101207	BC137241 // ANKRD56 // ankyrin repeat domain 56 // 4q21.1 // 345079 // NM_00102	8101207	0.00420085	-1.08415
22782	8084067	NM_178042 // ACTL6A // actin-like 6A // 3q26.33 // 86 // NM_004301 // ACTL6A //	8084067	0.00195322	-1.08451
20074	8056545	NM_013233 // STK39 // serine threonine kinase 39 (STE20/SPS1 homolog, yeast) //	8056545	0.00782213	-1.08481
8471	7940431	NM_001079808 // PGA4 // pepsinogen 4, group I (pepsinogen A) // 11q12.2 // 64384	7940431	0.0341179	-1.08482
28179	8136631	NM_003143 // SSBP1 // single-stranded DNA binding protein 1 // 7q34 // 6742 //	8136631	0.0303995	-1.08492
32328	8174636	NM_001005849 // SUMO2 // SMT3 suppressor of mif two 3 homolog 2 (S. cerevisiae)	8174636	0.0169105	-1.08545
27736	8132404	AK293511 // C7orf36 // chromosome 7 open reading frame 36 // 7p14.1 // 57002 //	8132404	0.0266695	-1.0856
21890	8074925	BC034017 // MGC22265 // hypothetical protein MGC22265 // 5p14.3 // 349035 // BX	8074925	0.0201919	-1.08576
6411	7920025	---	7920025	0.0420937	-1.08585
12260	7977933	NM_012244 // SLC7A8 // solute carrier family 7 (cationic amino acid transporter,	7977933	0.00684464	-1.08598
16233	8018993	NM_001082575 // HRNBP3 // hexaribonucleotide binding protein 3 // 17q25.3 // 146	8018993	0.0219839	-1.0862
7978	7936083	NM_001011663 // PCGF6 // polycomb group ring finger 6 // 10q24.33 // 84108 // N	7936083	0.0277181	-1.08637
4531	7901054	NM_004073 // PLK3 // polo-like kinase 3 (Drosophila) // 1p34.1 // 1263 // ENST0	7901054	0.0118139	-1.08641
16699	8023246	BC093004 // C18orf32 // chromosome 18 open reading frame 32 // 18q21.1 // 497661	8023246	0.0252095	-1.08642
3137	7895691	---	7895691	0.026902	-1.08654
17382	8030158	NM_138764 // BAX // BCL2-associated X protein // 19q13.3-q13.4 // 581 // NM_138	8030158	0.0230964	-1.08687
15163	8007471	NM_031858 // NBR1 // neighbor of BRCA1 gene 1 // 17q21.31 // 4077 // NM_005899	8007471	0.0080406	-1.0869
18914	8044813	NM_183240 // TMEM37 // transmembrane protein 37 // 2q14.2 // 140738 // ENST0000	8044813	0.00908706	-1.08705
28877	8142977	---	8142977	0.0394682	-1.08735
31301	8165686	ENST00000361567 // ND5 // NADH dehydrogenase, subunit 5 (complex I) // --- // 45	8165686	0.017155	-1.08739
29341	8147228	NM_001359 // DECR1 // 2,4-dienoyl CoA reductase 1, mitochondrial // 8q21.3 // 16	8147228	0.00120023	-1.08756

10791	7963359	NM_002282 // KRT83 // keratin 83 // 12q13 // 3889 /// ENST00000293670 // KRT83 /	7963359	0.0277588	-1.08799
7035	NM_1926259	NM_1926259 // MCM10 // minichromosome maintenance complex component 10 // 10p13 /	7962659	0.00227092	-1.088
27094	8125748	NR_001444 // LYPLA2P1 // lysophospholipase II pseudogene 1 // 6p21.32 // 653639	8125748	0.0275236	-1.08804
36	7892530	---	7892530	0.0141471	-1.08812
16368	8020129	NM_003574 // VAPA // VAMP (vesicle-associated membrane protein)-associated prote	8020129	0.00642366	-1.08813
14470	8000676	BC061522 // DKFZp547E087 // hypothetical gene LOC283846 // 18p11.21 // 283846 //	8000676	0.0472354	-1.08821
10364	7958828	NM_006700 // TRAFD1 // TRAF-type zinc finger domain containing 1 // 12q // 10906	7958828	0.0455861	-1.08826
23681	8093518	NM_000142 // FGFR3 // fibroblast growth factor receptor 3 // 4p16.3 // 2261 //	8093518	0.0381584	-1.0884
12959	7984289	NM_004663 // RAB11A // RAB11A, member RAS oncogene family // 15q21.3-q22.31 // 8	7984289	0.0292354	-1.08846
11668	7972291	NM_007084 // SOX21 // SRY (sex determining region Y)-box 21 // 13q31-q32 // 1116	7972291	0.041147	-1.08863
6775	7923778	NM_001973 // ELK4 // ELK4, ETS-domain protein (SRF accessory protein 1) // 1q32	7923778	0.0121911	-1.08868
17389	8030260	NM_003660 // PPFIA3 // protein tyrosine phosphatase, receptor type, f polypeptid	8030260	0.00309966	-1.08897
15406	8010050	BC035511 // FAM100B // family with sequence similarity 100, member B // 17q25.1	8010050	0.0492225	-1.08904
4321	7898858	NM_138479 // C1orf213 // chromosome 1 open reading frame 213 // 1p36.12 // 14889	7898858	0.00190052	-1.08918
31289	8165658	ENST00000361453 // ND2 // NADH dehydrogenase, subunit 2 (complex I) // --- // 45	8165658	0.00731847	-1.08928
26331	8118235	NM_001003693 // LY6G6F // lymphocyte antigen 6 complex, locus G6F // 6p21 // 259	8118235	0.0273934	-1.08941
32758	8178063	NM_001003693 // LY6G6F // lymphocyte antigen 6 complex, locus G6F // 6p21 // 259	8178063	0.0273934	-1.08941
28417	8138757	NM_018951 // HOXA10 // homeobox A10 // 7p15-p14 // 3206 /// NM_153715 // HOXA10	8138757	0.0275639	-1.08975
14421	8000131	BC061522 // DKFZp547E087 // hypothetical gene LOC283846 // 18p11.21 // 283846 //	8000131	0.0353764	-1.08978
12977	7984538	---	7984538	0.00777621	-1.08999
25519	8111019	NM_001369 // DNAH5 // dynein, axonemal, heavy chain 5 // 5p15.2 // 1767 /// ENST	8111019	0.0093231	-1.09043
7381	7929732	NM_020348 // CNNM1 // cyclin M1 // 10q24.2 // 26507 /// ENST00000356713 // CNNM1	7929732	0.00685788	-1.09047
13114	7985920	NM_001039958 // MESP2 // mesoderm posterior 2 homolog (mouse) // 15q26.1 // 1458	7985920	0.0206085	-1.09061
8336	7939559	NM_130783 // TSPAN18 // tetraspanin 18 // 11p11.2 // 90139 /// NM_001031730 // T	7939559	0.0291322	-1.091
15756	8013947	NM_032854 // CORO6 // coronin 6 // 17q11.2 // 84940 /// ENST00000388767 // CORO6	8013947	0.00956007	-1.09108
31670	8168762	NM_001325 // CSTF2 // cleavage stimulation factor, 3' pre-RNA, subunit 2, 64kDa	8168762	0.0445535	-1.09119
13881	7994345	NM_001024401 // SBK1 // SH3-binding domain kinase 1 // 16p11.2 // 388228 /// ENS	7994345	0.0334873	-1.09126
7564	7931850	---	7931850	0.01428	-1.09156
32405	8175252	---	8175252	0.0267345	-1.09158
15341	8009324	---	8009324	0.0438283	-1.09185
4257	7898328	NM_001114600 // C1orf144 // chromosome 1 open reading frame 144 // 1p36.13 // 26	7898328	0.0175377	-1.09204
15104	8006900	NM_002686 // PNMT // phenylethanolamine N-methyltransferase // 17q21-q22 // 5409	8006900	0.017094	-1.09208
6410	7920000	NM_015100 // POGZ // pogo transposable element with ZNF domain // 1q21.3 // 2312	7920000	0.0283113	-1.09222
24570	8101844	NM_000671 // ADH5 // alcohol dehydrogenase 5 (class III), chi polypeptide // 4q2	8101844	0.0324375	-1.09222
10550	7960861	---	7960861	0.0111416	-1.09234
4404	7899627	NM_022164 // TINAGL1 // tubulointerstitial nephritis antigen-like 1 // 1p35.2 //	7899627	0.0118551	-1.09249
25173	8107576	NM_177478 // FTMT // ferritin mitochondrial // 5q21.3 // 94033 /// ENST000003213	8107576	0.00658529	-1.09252
15206	8007850	NM_014834 // LRRC37A // leucine rich repeat containing 37A // 17q21.31 // 9884 /	8007850	0.023646	-1.09273
12232	7977653	---	7977653	0.0484417	-1.09275
19214	8047565	NM_173511 // FAM117B // family with sequence similarity 117, member B // 2q33.1	8047565	0.00932492	-1.09286
2572	7895119	---	7895119	0.00712848	-1.09294
9552	7950671	NM_080491 // GAB2 // GRB2-associated binding protein 2 // 11q14.1 // 9846 /// NM	7950671	0.016827	-1.09294
26887	8123891	---	8123891	0.00464151	-1.09296
1596	7894119	---	7894119	0.0292802	-1.09312
19821	8053984	NM_144994 // ANKRD23 // ankyrin repeat domain 23 // 2q11.2 // 200539 /// ENST000	8053984	0.00879088	-1.09388
22828	8084704	AB209021 // EIF4A2 // eukaryotic translation initiation factor 4A, isoform 2 //	8084704	0.00253057	-1.09431
15208	8007867	NM_001006607 // LRRC37A2 // leucine rich repeat containing 37, member A2 // 17q2	8007867	0.0213541	-1.09437
25332	8109236	NM_014228 // SLC6A7 // solute carrier family 6 (neurotransmitter transporter, L-	8109236	0.0476599	-1.09449
18664	8042568	NR_002185 // OR7E91P // olfactory receptor, family 7, subfamily E, member 91 pse	8042568	0.0423091	-1.09452
20583	8062339	BC130646 // C20orf118 // chromosome 20 open reading frame 118 // 20q11.23 // 140	8062339	0.0488847	-1.09466
11309	7969003	NM_021999 // ITM2B // integral membrane protein 2B // 13q14.3 // 9445 /// ENST00	7969003	0.0211983	-1.09471
22018	8076072	NM_152868 // KCNJ4 // potassium inwardly-rectifying channel, subfamily J, member	8076072	0.0252334	-1.09475
27112	8125887	NM_003214 // TEAD3 // TEA domain family member 3 // 6p21.2 // 7005 /// AF142482	8125887	0.00452014	-1.09513
5422	7910124	NM_002107 // H3F3A // H3 histone, family 3A // 1q41 // 3020 /// NM_002107 // H3F	7910124	0.0350068	-1.09523
15673	8013243	NM_004169 // SHMT1 // serine hydroxymethyltransferase 1 (soluble) // 17p11.2 //	8013243	0.00504329	-1.09544
17466	8030980	NR_003699 // ZNF525 // zinc finger protein 525 // 19q13.41 // 170958 /// NM_0010	8030980	0.0048718	-1.09552
22995	8086315	---	8086315	0.0258397	-1.09554
16228	8018937	NM_025090 // USP36 // ubiquitin specific peptidase 36 // 17q25.3 // 57602 /// EN	8018937	0.0143197	-1.09561
23642	8093128	---	8093128	0.0492684	-1.0961
16504	8021453	NM_033280 // SEC11C // SEC11 homolog C (S. cerevisiae) // 18q21.32 // 90701 ///	8021453	0.0301394	-1.09619
31228	8164937	BC146946 // FAM163B // family with sequence similarity 163, member B // 9q34.2 /	8164937	0.0406102	-1.09624
20242	8058662	---	8058662	0.00903221	-1.09646
19104	8046515	NM_002107 // H3F3A // H3 histone, family 3A // 1q41 // 3020 /// NM_002107 // H3F	8046515	0.0320504	-1.09669
24084	8097447	---	8097447	0.0423572	-1.09678
17851	8034907	NM_005071 // SLC1A6 // solute carrier family 1 (high affinity aspartate/glutamat	8034907	0.00954524	-1.09692
10118	7956009	NM_152637 // METTL7B // methyltransferase like 7B // 12q13.2 // 196410 /// ENST0	7956009	0.0472392	-1.09706
9746	7952390	ENST00000334203 // OR10D4P // olfactory receptor, family 10, subfamily D, member	7952390	0.043968	-1.0971
19200	8047467	NM_139158 // PFTK2 // PFTAIRE protein kinase 2 // 2q33.2 // 65061 /// ENST000002	8047467	0.0110948	-1.09713
14957	8005632	---	8005632	0.0332123	-1.09728
24836	8104141	NM_052909 // PLEKHG4B // pleckstrin homology domain containing, family G (with R	8104141	0.0342229	-1.09729
4758	7903355	NM_022049 // GPR88 // G protein-coupled receptor 88 // 1p21.3 // 54112 /// ENST0	7903355	0.0477729	-1.09765
21305	8069340	NM_005181 // C21orf57 // chromosome 21 open reading frame 57 // 21q22.3 // 54059	8069340	0.0463426	-1.09793
29219	8146198	NM_002690 // POLB // polymerase (DNA directed), beta // 8p11.2 // 5423 /// ENST0	8146198	0.0239764	-1.09801
18996	8045368	NM_138326 // ACMSD // aminocarboxymuconate semialdehyde decarboxylase // 2q21.3	8045368	0.00835466	-1.09818
22936	8085606	---	8085606	0.0356718	-1.09822
32353	8174820	NM_152692 // C1GALT1C1 // C1GALT1-specific chaperone 1 // Xq24 // 29071 /// NM_0	8174820	0.0250633	-1.09823
29277	8146643	---	8146643	0.0217613	-1.09915
25308	8108977	---	8108977	0.0230381	-1.09929
32215	8173613	---	8173613	0.0269291	-1.09974
12874	7983478	NM_032413 // C15orf48 // chromosome 15 open reading frame 48 // 15q21.1 // 84419	7983478	0.00041264	-1.0998
13038	7985119	NM_018200 // HMG20A // high-mobility group 20A // 15q24 // 10363 /// ENST0000038	7985119	0.00721858	-1.09999
25653	8112428	NM_005582 // CD180 // CD180 molecule // 5q12 // 4064 /// ENST00000256447 // CD18	8112428	0.00188316	-1.10035
16180	8018315	NM_006937 // SUMO2 // SMT3 suppressor of mif two 3 homolog 2 (S. cerevisiae) //	8018315	0.0163859	-1.10037
28173	8136589	---	8136589	0.0244717	-1.10038
13310	7988082	NM_152455 // ZSCAN29 // zinc finger and SCAN domain containing 29 // 15q15.3 //	7988082	0.00927815	-1.1004
27682	8131917	---	8131917	0.0264392	-1.10049
10069	7955624	NM_002284 // KRT86 // keratin 86 // 12q13 // 3892 /// ENST00000293525 // KRT86 /	7955624	0.00568204	-1.10066
29635	8149685	NM_139278 // LGI3 // leucine-rich repeat LGI family, member 3 // 8p21.3 // 20319	8149685	0.00911597	-1.10074
16058	8016847	NM_005082 // TRIM25 // tripartite motif-containing 25 // 17q23.2 // 7706 /// ENS	8016847	0.0158486	-1.10085
11121	7966878	NM_007174 // CIT // citron (rho-interacting, serine/threonine kinase 21) // 12q2	7966878	0.0284412	-1.10086
23594	8092640	NM_002916 // RFC4 // replication factor C (activator 1) 4, 37kDa // 3q27 // 5984	8092640	0.0480458	-1.10114
32417	8175311	AY352211 // CXorf48 // chromosome X open reading frame 48 // Xq26.3 // 54967 ///	8175311	0.0290844	-1.10169
7320	7929047	NM_001547 // IFIT2 // interferon-induced protein with tetratricopeptide repeats	7929047	0.0474264	-1.10171
11680	7972428	NM_080818 // OXGR1 // oxoglutarate (alpha-ketoglutarate) receptor 1 // 13q32.1 /	7972428	0.025615	-1.1018
22895	8085164	NM_014850 // SRGAP3 // SLIT-ROBO Rho GTPase activating protein 3 // 3p25.3 // 99	8085164	0.0237002	-1.10181
5151	7906973	NM_001005214 // LRRC52 // leucine rich repeat containing 52 // 1q23.3 // 440699	7906973	0.000927931	-1.10253

7292	7928770	NM_033100 // PCDH21 // protocadherin 21 // 10q22.1-q22.3 // 92211 // ENST000003	7928770	0.0275978	-1.10254
5297	7908694	NM_020443 // NAV1 // neuron navigator 1 // 1q32.3 // 89796 // ENST00000295624 //	7908694	0.0224671	-1.02259
772	7893281	---	7893281	0.00573198	-1.10282
19409	8049722	NM_005301 // GPR35 // G protein-coupled receptor 35 // 2q37.3 // 2859 // ENST00	8049722	0.0196201	-1.10299
9641	7951417	NM_021571 // ICEBERG // ICEBERG caspase-1 inhibitor // 11q21-q22 // 59082 // AY	7951417	0.0239656	-1.1103
21705	8073081	NM_145298 // APOBEC3F // apolipoprotein B mRNA editing enzyme, catalytic polypep	8073081	0.0189218	-1.10311
12031	7975799	NM_017791 // FLVCR2 // feline leukemia virus subgroup C cellular receptor family	7975799	0.038165	-1.10323
20257	8058869	NM_022648 // TNS1 // tensin 1 // 2q35-q36 // 7145 // ENST00000171887 // TNS1 //	8058869	0.00777309	-1.10325
25197	8107855	---	8107855	0.00240902	-1.10329
11578	7971539	---	7971539	0.0382458	-1.10335
23685	8093590	NM_002938 // RNF4 // ring finger protein 4 // 4p16.3 // 6047 // ENST00000314289	8093590	0.0379792	-1.10366
5732	7912956	NM_018715 // RCC2 // regulator of chromosome condensation 2 // 1p36.13 // 55920	7912956	0.0112256	-1.10378
7139	7927277	NM_014696 // GPRIN2 // G protein regulated inducer of neurite outgrowth 2 // 10q	7927277	0.00302024	-1.1039
10334	7958398	NM_014653 // WSCD2 // WSC domain containing 2 // 12q23.3 // 9671 // ENST00000033	7958398	0.00524733	-1.10398
28346	8138088	NM_001037163 // MGC12966 // hypothetical protein LOC84792 // 7p22.1 // 84792 //	8138088	0.0258569	-1.10404
2502	7895047	---	7895047	0.0367601	-1.10428
4539	7901135	NM_016486 // TMEM69 // transmembrane protein 69 // 1p34.1 // 51249 // ENST00000	7901135	0.0296346	-1.10494
24580	8101945	NM_002106 // H2AFZ // H2A histone family, member Z // 4q24 // 3015 // ENST00000	8101945	0.0492148	-1.10543
4501	7900635	NM_001101376 // FAM183A // family with sequence similarity 183, member A // 1p34	7900635	0.0229509	-1.10554
14122	7997032	NM_173619 // MGC34761 // hypothetical protein MGC34761 // 16q22.1 // 283971 //	7997032	0.0044295	-1.10562
27924	8133860	NM_002069 // GNAI1 // guanine nucleotide binding protein (G protein), alpha inhi	8133860	0.0240605	-1.10569
25799	8113577	NM_018700 // TRIM36 // tripartite motif-containing 36 // 5q22.3 // 55521 // NM_	8113577	0.00680052	-1.1058
20561	8062108	NM_006404 // PROCR // protein C receptor, endothelial (EPCR) // 20q11.2 // 10544	8062108	0.0210931	-1.10586
32790	8178322	NM_006937 // SUMO2 // SMT3 suppressor of mif two 3 homolog 2 (S. cerevisiae) //	8178322	0.0201712	-1.10592
24676	8130880	BC029405 // H3F3A // H3 histone, family 3A // 1q41 // 3020	8130880	0.0400117	-1.10601
13790	7993255	---	7993255	0.00595292	-1.10603
20999	8066384	NM_176791 // GTSF1L // gametocyte specific factor 1-like // 20q13.12 // 149699 /	8066384	0.0275673	-1.10613
22581	8082118	---	8082118	0.0005098	-1.10627
19259	8048110	---	8048110	0.00754054	-1.10647
27121	8126016	---	8126016	0.0323296	-1.10656
21917	8075106	NM_003595 // TPST2 // tyrosylprotein sulfotransferase 2 // 22q12.1 // 8459 // N	8075106	0.0467973	-1.10703
9678	7951715	---	7951715	0.0287679	-1.10708
28689	8141050	NM_001006 // RPS3A // ribosomal protein S3A // 4q31.2-q31.3 // 6189 // ENST0000	8141050	0.0435336	-1.10732
23007	8086400	NM_144634 // LYLZ4 // lysozyme-like 4 // 3p22.1 // 131375 // ENST00000287748 //	8086400	0.0181562	-1.10733
2353	7894896	---	7894896	0.0221942	-1.10738
8322	7939418	---	7939418	0.0279538	-1.10741
2118	7894653	---	7894653	0.0039749	-1.1079
32406	8175254	---	8175254	0.0130863	-1.10804
11536	7971167	AY116214 // LOC646982 // TTL/TEL fusion protein TTL-T // 13q14.11 // 646982 //	7971167	0.0346882	-1.10856
14682	8002758	---	8002758	0.00578361	-1.10881
26182	8117170	---	8117170	0.0215151	-1.10896
5439	7910257	NM_020435 // GJC2 // gap junction protein, gamma 2, 47kDa // 1q42.13 // 57165 //	7910257	0.00963534	-1.10907
9901	7953943	NM_031412 // GABARAPL1 // GABA(A) receptor-associated protein like 1 // 12p13.2	7953943	0.0453497	-1.10908
26455	8119689	NM_002821 // PTK7 // PTK7 protein tyrosine kinase 7 // 6p21.1-p12.2 // 5754 //	8119689	0.0103013	-1.1094
20065	8056361	---	8056361	0.0319406	-1.10945
17487	8031102	NM_015629 // PRPF31 // PRP31 pre-mRNA processing factor 31 homolog (S. cerevisia	8031102	0.0147342	-1.10948
29151	8145532	NM_001979 // EPHX2 // epoxide hydrolase 2, cytoplasmic // 8p21-p12 // 2053 // E	8145532	0.0398174	-1.10979
22860	8084917	---	8084917	0.00436672	-1.10985
19437	8050071	NM_018269 // ADI1 // acireductone dioxygenase 1 // 2p25.3 // 55256 // ENST00000	8050071	0.0434721	-1.11003
21451	8070757	NM_144991 // C21orf29 // chromosome 21 open reading frame 29 // 21q22.3 // 54084	8070757	0.0471461	-1.11006
4961	7905254	---	7905254	0.000724178	-1.11016
16460	8021047	NM_015559 // SETBP1 // SET binding protein 1 // 18q21.1 // 26040 // BC146776 //	8021047	0.0283096	-1.11037
5345	7909261	NM_018724 // IL20 // interleukin 20 // 1q32 // 50604 // ENST00000367098 // IL20	7909261	0.0339356	-1.11067
24313	8099438	---	8099438	0.00138513	-1.11091
22095	8076747	AK123383 // LOC642648 // hypothetical LOC642648 // 22q13.31 // 642648	8076747	0.0162649	-1.11099
14680	8002713	NM_173619 // MGC34761 // hypothetical protein MGC34761 // 16q22.1 // 283971 //	8002713	0.0283485	-1.11105
9239	7947932	---	7947932	0.0339384	-1.11117
23105	8087739	NM_145071 // CISH // cytokine inducible SH2-containing protein // 3p21.3 // 1154	8087739	0.0231901	-1.11137
21335	8069612	AY035383 // C21orf42 // chromosome 21 open reading frame 42 // 21q21.3 // 54072	8069612	0.00453673	-1.11138
11004	7965606	NM_002918 // HAL // histidine ammonia-lyase // 12q22-q24.1 // 3034 // ENST00000	7965606	0.00967955	-1.11154
2432	7894976	---	7894976	0.0319333	-1.11171
31637	8168555	---	8168555	0.00142076	-1.11194
1749	7894277	---	7894277	0.041364	-1.11206
10150	7956301	NM_002332 // LRP1 // low density lipoprotein-related protein 1 (alpha-2-macroglo	7956301	0.0465503	-1.11249
4434	7899927	NM_153212 // GJB4 // gap junction protein, beta 4, 30.3kDa // 1p34.3 // 127534 /	7899927	0.00788091	-1.11251
18840	8044107	---	8044107	0.0320227	-1.11255
31192	8164562	NM_199350 // C9orf50 // chromosome 9 open reading frame 50 // 9q34.11 // 375759	8164562	0.00774146	-1.1128
32346	8174737	NM_024528 // NKAP // NFKB activating protein // Xq24 // 79576 // ENST0000037141	8174737	0.0332439	-1.113
4113	7896748	---	7896748	0.0179456	-1.11313
31489	8167360	NM_002049 // GATA1 // GATA binding protein 1 (globin transcription factor 1) //	8167360	0.000336999	-1.11318
10874	7964300	NM_014830 // ZBTB39 // zinc finger and BTB domain containing 39 // 12q13.3 // 98	7964300	0.0137781	-1.11323
7233	7928291	NM_004273 // CHST3 // carbohydrate (chondroitin 6) sulfotransferase 3 // 10q22.1	7928291	0.0178505	-1.11337
2912	7895463	---	7895463	0.0199336	-1.11369
5761	7913385	NM_002885 // RAP1GAP // RAP1 GTPase activating protein // 1p36.1-p35 // 5909 //	7913385	0.016939	-1.11383
9549	7950644	NM_004549 // NDUFC2 // NADH dehydrogenase (ubiquinone) 1, subcomplex unknown, 2,	7950644	0.00851982	-1.11416
19693	8052872	NM_003236 // TGFA // transforming growth factor, alpha // 2p13 // 7039 // NM_00	8052872	0.00725788	-1.11424
27339	8128310	---	8128310	0.0142544	-1.11446
24196	8098342	NM_003864 // SAP30 // Sin3A-associated protein, 30kDa // 4q34.1 // 8819 // ENST	8098342	0.0122152	-1.11462
8288	7939068	M64716 // RPS25 // ribosomal protein S25 // 11q23.3 // 6230 // M64716 // RPS25	7939068	0.025005	-1.11485
19374	8049394	NM_024080 // TRPM8 // transient receptor potential cation channel, subfamily M,	8049394	0.0400356	-1.11486
4955	7905163	NM_001899 // MRPS21 // mitochondrial ribosomal protein S21 // 1q21 // 54460 //	7905163	0.0203566	-1.11492
15538	8011680	NM_001140 // ALOX15 // arachidonate 15-lipoxygenase // 17p13.3 // 246 // ENST00	8011680	0.00449888	-1.11515
19213	8047563	---	8047563	0.0380265	-1.1154
7312	7928967	NM_001010939 // LIPJ // lipase, family member J // 10q23.31 // 142910 // ENST00	7928967	0.0164724	-1.11563
12062	7976084	NM_018418 // SPATA7 // spermatogenesis associated 7 // 14q31.3 // 55812 // NM_0	7976084	0.00714489	-1.11567
19003	8045470	NM_001080427 // THSD7B // thrombospondin, type 1, domain containing 7B // 2q21-q	8045470	0.000430052	-1.11572
30622	8158998	NM_000972 // RPL7A // ribosomal protein L7a // 9q34 // 6130 // ENST00000323345	8158998	0.00611702	-1.11581
28246	8137118	NM_001004302 // ZNF783 // zinc finger family member 783 // 7q36.1 // 155060 //	8137118	0.0337508	-1.11593
23628	8092970	NM_001647 // APOD // apolipoprotein D // 3q26.2-qter // 347 // ENST00000343267	8092970	0.00395969	-1.1161
4474	7900405	---	7900405	0.0203687	-1.11619
11404	7969828	---	7969828	0.0192401	-1.11643
14813	8004043	NM_001976 // ENO3 // enolase 3 (beta, muscle) // 17pter-p11 // 2027 // NM_05301	8004043	0.000435432	-1.11666
8970	7945503	NM_021008 // DEAF1 // deformed epidermal autoregulatory factor 1 (Drosophila) //	7945503	0.0339866	-1.11674
31412	8166619	NM_002363 // MAGEB1 // melanoma antigen family B, 1 // Xp21.3 // 4112 // NM_177	8166619	0.021812	-1.11688
24236	8098714	NM_004477 // FRG1 // FSHD region gene 1 // 4q35 // 2483 // ENST00000226798 // F	8098714	0.0135143	-1.11731
1210	7893729	---	7893729	0.0188964	-1.11739

29020	8144361	NM_024596 // MCPH1 // microcephalin 1 // 8p23.1 // 79648 // ENST00000344683 //	8144361	0.0462228	-1.1175
17266	8029029	NM_007040 // HNRNPUL1 // heterogeneous nuclear ribonucleoprotein U-like 1 // 19q	8029029	0.0456907	-1.11757
21257	8068713	NM_002462 // MX1 // myxovirus (influenza virus) resistance 1, interferon-inducib	8068713	0.0070517	-1.11762
17237	8028656	NM_022835 // PLEKHG2 // pleckstrin homology domain containing, family G (with Rh	8028656	0.0155777	-1.11766
4592	7901601	NM_016491 // MRPL37 // mitochondrial ribosomal protein L37 // 1p32.1 // 51253 //	7901601	0.0125751	-1.11786
26985	8124562	NM_145909 // ZNF323 // zinc finger protein 323 // 6p21.31[6p22.3-p22.1 // 64288	8124562	0.0293122	-1.11801
6315	7919217	NM_001012758 // NUDT17 // nudix (nucleoside diphosphate linked moiety X)-type mo	7919217	0.00200783	-1.11802
11452	7970426	---	7970426	0.0416523	-1.11817
3386	7895947	---	7895947	0.0483916	-1.11825
24558	8101728	NM_014883 // FAM13A1 // family with sequence similarity 13, member A1 // 4q22.1	8101728	0.0015852	-1.11826
10809	7963534	NM_002272 // KRT4 // keratin 4 // 12q12-q13 // 3851 // ENST00000293774 // KRT4	7963534	0.0230371	-1.11836
2042	7894573	---	7894573	0.00608124	-1.11866
3166	7895721	---	7895721	0.0416112	-1.11925
21040	8066739	ENST00000400371 // ZNF663 // zinc finger protein 663 // 20q13.12 // 100130934 //	8066739	0.0443013	-1.11977
30463	8157214	---	8157214	0.0341035	-1.11994
22739	8083745	---	8083745	0.0220567	-1.12007
7067	7926622	NM_012443 // SPAG6 // sperm associated antigen 6 // 10p12.2 // 9576 // NM_17224	7926622	4.93E-05	-1.12023
19971	8055314	NM_144586 // LYPD1 // LY6/PLAUR domain containing 1 // 2q21.2 // 116372 // NM_0	8055314	0.048175	-1.12032
32385	8175098	NM_178471 // GPR119 // G protein-coupled receptor 119 // Xq25 // 139760 // ENST	8175098	0.0154505	-1.12047
4460	7900201	NM_016037 // UTP11L // UTP11-like, U3 small nucleolar ribonucleoprotein, (yeast)	7900201	0.0433451	-1.12078
1904	7894434	---	7894434	0.00876635	-1.12084
14171	7997520	NM_001537 // HSBP1 // heat shock factor binding protein 1 // 16q23.3 // 3281 //	7997520	0.00338497	-1.12089
14820	8004152	NM_015253 // WSCD1 // WSC domain containing 1 // 17p13.2 // 23302 // ENST000003	8004152	0.034537	-1.12122
29778	8150974	---	8150974	0.0485964	-1.12125
3376	7895936	---	7895936	0.014446	-1.12133
13677	7992121	NM_001013638 // LOC388199 // hypothetical LOC388199 // 16p13.3 // 388199 // ENS	7992121	0.0304334	-1.12139
21893	8074934	NM_013378 // VPREB3 // pre-B lymphocyte gene 3 // 22q11.23[22q11 // 29802 // EN	8074934	0.0215452	-1.12166
27973	8134420	NM_003182 // TAC1 // tachykinin, precursor 1 // 7q21-q22 // 6863 // NM_013996 /	8134420	0.0463514	-1.12188
9332	7948470	NM_004778 // GPR44 // G protein-coupled receptor 44 // 11q12-q13.3 // 11251 //	7948470	0.0190576	-1.12223
11464	7970513	NM_145061 // C13orf3 // chromosome 13 open reading frame 3 // 13q12.11 // 221150	7970513	0.0346477	-1.12236
3713	7896282	---	7896282	0.0229978	-1.12246
31122	8163807	NM_015651 // PHF19 // PHD finger protein 19 // 9q33.2 // 26147 // NM_001009936	8163807	0.0150506	-1.12249
19975	8055361	NM_025052 // YSK4 // yeast Sps1/Ste20-related kinase 4 (S. cerevisiae) // 2q21.3	8055361	0.0428999	-1.12251
14503	8000930	---	8000930	0.00713588	-1.12259
6311	7919193	NR_002212 // NUDT4P1 // nudix (nucleoside diphosphate linked moiety X)-type moti	7919193	0.0178815	-1.12264
19198	8047463	---	8047463	0.0230685	-1.12268
21157	8067942	---	8067942	0.0177805	-1.12313
23982	8096425	BC051694 // MGC48628 // similar to KIAA1680 protein // 4q22.1 // 401145 // ENST	8096425	0.0406381	-1.12335
12629	7981722	AK128476 // IGHA1 // immunoglobulin heavy constant alpha 1 // 14q32.33 // 3493	7981722	0.0129399	-1.12412
18601	8042066	NM_080667 // CCDC104 // coiled-coil domain containing 104 // 2p16.1 // 112942 //	8042066	0.00982739	-1.12458
8347	7939665	NM_001012334 // MDK // midkine (neurite growth-promoting factor 2) // 11p11.2 //	7939665	0.0343247	-1.1246
221	7892719	---	7892719	0.0165344	-1.12474
8655	7942525	---	7942525	0.048915	-1.12516
7713	7933219	NM_001004297 // OR13A1 // olfactory receptor, family 13, subfamily A, member 1 /	7933219	0.0307513	-1.12538
23172	8088480	NM_002166 // ID2 // inhibitor of DNA binding 2, dominant negative helix-loop-hel	8088480	0.034745	-1.12561
24227	8098637	NM_207352 // CYP4V2 // cytochrome P450, family 4, subfamily V, polypeptide 2 //	8098637	0.0288182	-1.12571
15692	8013354	---	8013354	0.0417048	-1.12583
21090	8067233	NM_020182 // PMEPA1 // prostate transmembrane protein, androgen induced 1 // 20q	8067233	0.0240166	-1.12604
26650	8121559	---	8121559	0.0319094	-1.12609
20036	8055992	NM_145259 // ACVR1C // activin A receptor, type IC // 2q24.1 // 130399 // NM_00	8055992	0.0127984	-1.12612
13836	7993800	NM_001128301 // LYRM1 // Lyr motif containing 1 // 16p11.2 // 57149 // NM_02042	7993800	0.0419474	-1.12637
26641	8121502	NM_138408 // GTF3C6 // general transcription factor IIC, polypeptide 6, alpha 3	8121502	0.0216312	-1.1266
27718	8132248	---	8132248	0.00270736	-1.12703
19886	8054758	NR_024005 // MGC13005 // hypothetical LOC84771 // 9p24.3 // 84771 // NR_024004	8054758	0.0406068	-1.12703
14565	8001464	NM_145024 // CES7 // carboxylesterase 7 // 16q12.2 // 221223 // ENST00000319165	8001464	0.0214022	-1.12706
13918	7994804	NM_013292 // MYLPF // fast skeletal myosin light chain 2 // 16p11.2 // 29895 //	7994804	0.00858724	-1.12728
9013	7945896	NM_020402 // CHRNA10 // cholinergic receptor, nicotinic, alpha 10 // 11p15.5 //	7945896	0.031951	-1.12733
15215	8007919	NR_002940 // LRRC37A4 // leucine rich repeat containing 37, member A4 (pseudogen	8007919	0.0177008	-1.12762
25524	8111124	NM_001102562 // MARCH11 // membrane-associated ring finger (C3HC4) 11 // 5p15.1	8111124	0.00905436	-1.12788
18355	8039586	NM_144690 // ZNF582 // zinc finger protein 582 // 19q13.43 // 147948 // ENST000	8039586	0.0384025	-1.12796
6390	7919778	---	7919778	0.0489726	-1.12802
25680	8112647	---	8112647	0.0460873	-1.12817
566	7893074	---	7893074	0.00697918	-1.1288
10924	7964785	---	7964785	0.0166682	-1.12926
11755	7973030	NM_001004480 // OR11H6 // olfactory receptor, family 11, subfamily H, member 6 /	7973030	0.0272601	-1.12956
6470	7920506	NM_001010846 // SHE // Src homology 2 domain containing E // 1q21.3 // 126669 //	7920506	0.0260334	-1.1298
19616	8052089	---	8052089	0.0418185	-1.12988
29921	8151993	NM_004374 // COX6C // cytochrome c oxidase subunit VIc // 8q22-q23 // 1345 // E	8151993	0.0358549	-1.12993
4782	7903565	NM_013296 // GPSM2 // G-protein signaling modulator 2 (AGS3-like, C. elegans) //	7903565	0.0120773	-1.12995
11433	7970232	NM_000131 // F7 // coagulation factor VII (serum prothrombin conversion accelera	7970232	0.0511037	-1.13097
32478	8175690	NM_001011543 // MAGEA10 // melanoma antigen family A, 10 // Xq28 // 4109 // NM_	8175690	0.0247353	-1.13138
2553	7895100	---	7895100	0.0203268	-1.13141
15753	8013917	---	8013917	0.0139565	-1.13156
10890	7964555	NM_006576 // AVIL // advillin // 12q14.1 // 10677 // ENST00000257861 // AVIL //	7964555	0.0483061	-1.13196
25229	8108174	NM_032151 // PCBD2 // pterin-4 alpha-carbinolamine dehydratase/dimerization cofa	8108174	0.0407994	-1.13255
25589	8111913	---	8111913	0.0340698	-1.13275
26771	8122732	---	8122732	0.0327313	-1.13296
12270	7978056	ENST00000258869 // ZFX2 // zinc finger homeobox 2 // 14q11.2 // 85446 // AB051	7978056	0.00408141	-1.13326
15176	8007569	AK291924 // C17orf53 // chromosome 17 open reading frame 53 // 17q21.31 // 78995	8007569	0.000265407	-1.13332
20452	8060997	NM_018327 // SPTLC3 // serine palmitoyltransferase, long chain base subunit 3 //	8060997	0.0227423	-1.13353
1989	7894520	---	7894520	0.0178067	-1.13378
12552	7980983	NM_022151 // MOAP1 // modulator of apoptosis 1 // 14q32 // 64112 // ENST0000029	7980983	0.0178812	-1.13422
15830	8014706	NM_007144 // PCGF2 // polycomb group ring finger 2 // 17q12 // 7703 // ENST0000	8014706	0.00357744	-1.13473
21899	8074969	NM_001355 // DDT // D-dopachrome tautomerase // 22q11.23 // 1652 // NM_00108439	8074969	0.0426953	-1.13518
20542	8061869	NM_178466 // C20orf71 // chromosome 20 open reading frame 71 // 20q11.21 // 1288	8061869	0.0339716	-1.13527
16179	8018305	NM_016185 // HN1 // hematological and neurological expressed 1 // 17q25.1 // 511	8018305	0.000685411	-1.13566
22148	8077511	---	8077511	0.0417735	-1.13575
19359	8049195	---	8049195	0.0144778	-1.13587
2093	7894628	---	7894628	0.0201456	-1.13589
20565	8062134	BC085019 // GDF5OS // growth differentiation factor 5 opposite strand // 20q11.2	8062134	0.0117683	-1.13642
5078	7906305	---	7906305	0.0425107	-1.13654
17781	8034249	NM_145045 // CCDC151 // coiled-coil domain containing 151 // 19p13.2 // 115948 /	8034249	0.0429707	-1.13655
24490	8101002	NM_001729 // BTC // betacellulin // 4q13-q21 // 685 // ENST00000395743 // BTC /	8101002	0.0257589	-1.13676
1450	7893972	---	7893972	0.00974145	-1.13681
8682	7942774	NM_173039 // AQP11 // aquaporin 11 // 11q14.1 // 282679 // ENST00000313578 // A	7942774	0.0246499	-1.13684
8335	7939546	NM_002231 // CD82 // CD82 molecule // 11p11.2 // 3732 // NM_001024844 // CD82 /	7939546	0.038768	-1.13684

16468	8021131	NM_031303 // KATNAL2 // katanin p60 subunit A-like 2 // 18q21.1 // 83473 // ENS	8021131	0.0389637	-1.1369
8957	7945357	NM_012239 // SIRT3 // sirtuin (silent mating type information regulation 2 homol	7945357	0.0131447	-1.13706
25291	8108744	NM_018934 // PCDHB14 // protocadherin beta 14 // 5q31 // 56122 // ENST000002394	8108744	0.0151841	-1.13717
17096	8027272	NM_003429 // ZNF85 // zinc finger protein 85 // 19p13.1-p12 // 7639 // ENST00000	8027272	0.0440669	-1.13739
27871	8133300	NR_003614 // PMS2L2 // postmeiotic segregation increased 2-like 2 pseudogene //	8133300	0.00947066	-1.13781
23929	8095806	NM_001179 // ART3 // ADP-ribosyltransferase 3 // 4p15.1-p14/p15.1-p14/p15.1-p1	8095806	0.0346072	-1.13834
3155	7895710	---	7895710	0.026051	-1.13858
29835	8151430	---	8151430	0.0422588	-1.13911
25938	8114900	NM_004576 // PPP2R2B // protein phosphatase 2 (formerly 2A), regulatory subunit	8114900	0.0257745	-1.13925
27074	8125461	---	8125461	0.00547909	-1.13929
10724	7962579	NM_181847 // AMIGO2 // adhesion molecule with Ig-like domain 2 // 12q13.11 // 34	7962579	0.00504415	-1.1394
3312	7895869	---	7895869	0.0437176	-1.13954
25602	8111998	NM_021072 // HCN1 // hyperpolarization activated cyclic nucleotide-gated potassi	8111998	0.0450877	-1.13957
22235	8078442	NM_005508 // CCR4 // chemokine (C-C motif) receptor 4 // 3p24 // 1233 // ENST00	8078442	0.0190524	-1.13971
8185	7938072	NM_001005181 // OR56B4 // olfactory receptor, family 56, subfamily B, member 4 /	7938072	0.0481075	-1.13978
133	7892630	---	7892630	0.00545879	-1.13981
21385	8070073	NM_019596 // C21orf62 // chromosome 21 open reading frame 62 // 21q22.11 // 5624	8070073	0.0438633	-1.13988
30780	8160637	NM_001497 // B4GALT1 // UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, poly	8160637	0.0195097	-1.14065
11377	7969574	---	7969574	0.0186943	-1.14066
15986	8016245	NR_002940 // LRRRC37A4 // leucine rich repeat containing 37, member A4 (pseudogen	8016245	0.0275579	-1.14105
16635	8022640	NM_000791 // DHFR // dihydrofolate reductase // 5q11.2-q13.2 // 1719 // ENST000	8022640	0.0274078	-1.14107
5842	7914282	NM_014654 // SDC3 // syndecan 3 // 1pter-p22.3 // 9672 // ENST00000339394 // SD	7914282	0.000437559	-1.1413
20633	8062862	---	8062862	0.00993175	-1.14142
1263	7893782	---	7893782	0.0497966	-1.14143
2077	7894612	---	7894612	0.014741	-1.1421
23416	8090960	NM_016216 // DBR1 // debranching enzyme homolog 1 (S. cerevisiae) // 3q22.3 // 5	8090960	0.0367658	-1.1425
22738	8083743	NM_025047 // ARL14 // ADP-ribosylation factor-like 14 // 3q26.1 // 80117 // ENS	8083743	0.03972	-1.14276
5234	7907907	---	7907907	0.00952084	-1.14335
1513	7894036	---	7894036	0.0345443	-1.14335
7764	7933707	NM_032997 // ZWINT // ZW10 interactor // 10q21-q22 // 11130 // NM_007057 // ZWI	7933707	0.00390836	-1.14346
27222	8126954	NM_138694 // PKHD1 // polycystic kidney and hepatic disease 1 (autosomal recessi	8126954	0.0203046	-1.14384
24786	8103769	NM_000860 // HPGD // hydroxyprostaglandin dehydrogenase 15 (NAD) // 4q34-q35 //	8103769	0.0466981	-1.14403
15531	8011516	NM_174954 // ATP2A3 // ATPase, Ca++ transporting, ubiquitous // 17p13.3 // 489 /	8011516	0.00308398	-1.14451
3814	7896384	---	7896384	0.0470036	-1.14476
11476	7970622	---	7970622	0.0453897	-1.14504
26679	8121755	---	8121755	0.00534583	-1.14523
9541	7950555	NM_00112892 // LRRRC32 // leucine rich repeat containing 32 // 11q13.5-q14 // 26	7950555	0.0160836	-1.14533
9556	7950724	---	7950724	0.00320046	-1.14536
9682	7951781	BC071695 // C11orf71 // chromosome 11 open reading frame 71 // 11q14.2-q14.3 //	7951781	0.0420111	-1.14559
13209	7986757	NM_002487 // NDN // necdin homolog (mouse) // 15q11.2-q12 // 4692 // ENST0000003	7986757	0.0249887	-1.14563
6130	7917370	NM_152890 // COL24A1 // collagen, type XXIV, alpha 1 // 1p22.3 // 255631 // ENS	7917370	0.0158555	-1.14564
25709	8112886	---	8112886	0.0440108	-1.1457
8925	7945069	---	7945069	0.0394714	-1.14579
29188	8145824	NM_021631 // FKSG2 // apoptosis inhibitor // 8p11.2 // 59347	8145824	0.0168575	-1.14633
27324	8128079	NM_080743 // SRP35 // serine-arginine repressor protein (35 kDa) // 6q15 // 135	8128079	0.0480404	-1.14647
20997	8066347	NM_133170 // PTPRT // protein tyrosine phosphatase, receptor type, T // 20q12-q1	8066347	0.023153	-1.14707
4309	7898734	---	7898734	0.0241054	-1.1471
12636	7981740	---	7981740	0.0152178	-1.14746
9958	7954460	NM_001001660 // LYRM5 // LYR motif containing 5 // 12p12.1 // 144363 // ENST000	7954460	0.0171602	-1.14769
18576	8041804	ENST00000343465 // LOC388946 // hypothetical LOC388946 // 2p21 // 388946	8041804	0.0249243	-1.14815
27721	8132286	---	8132286	0.0480093	-1.14851
680	7893189	---	7893189	0.0483708	-1.14858
22226	8078380	---	8078380	0.00371462	-1.14881
17456	8030939	AB091368 // ZNF534 // zinc finger protein 534 // 19q13.41 // 147658 // AB091369	8030939	0.049762	-1.14894
15813	8014452	---	8014452	0.0321021	-1.14904
28755	8141676	NM_178176 // MOGAT3 // monoacylglycerol O-acyltransferase 3 // 7q22.1 // 346606	8141676	0.00611618	-1.14906
29283	8146685	NM_015169 // RRS1 // RRS1 ribosome biogenesis regulator homolog (S. cerevisiae)	8146685	0.0309005	-1.14947
3366	7895926	---	7895926	0.0433427	-1.14971
23271	8089394	NM_032579 // RETNLB // resistin like beta // 3q13.1 // 84666 // ENST00000295755	8089394	0.0231122	-1.14992
27311	8127991	ENST00000369586 // FAM165A // family with sequence similarity 165, member A // 6	8127991	0.0393088	-1.15023
30690	8159846	---	8159846	0.00943224	-1.15041
32421	8175330	---	8175330	0.0400523	-1.15071
32915	8179564	NM_002263 // KIFC1 // kinesin family member C1 // 6p21.3 // 3833 // ENST0000038	8179564	0.0445074	-1.15116
6542	7921425	ENST00000325769 // OR6K3 // olfactory receptor, family 6, subfamily K, member 3	7921425	0.00793534	-1.1516
17453	8030914	NM_173530 // ZNF610 // zinc finger protein 610 // 19q13.33 // 162963 // ENST000	8030914	0.0375781	-1.15173
22708	8083455	---	8083455	0.0310388	-1.15183
19839	8054192	NM_138798 // MITD1 // MIT, microtubule interacting and transport, domain contain	8054192	0.0317516	-1.15207
16402	8020421	---	8020421	0.0308841	-1.15225
10623	7961438	---	7961438	0.00770662	-1.15247
22912	8085340	NM_014667 // VGLL4 // vestigial like 4 (Drosophila) // 3p25.2 // 9686 // NM_001	8085340	0.0273235	-1.15249
13120	7985963	NM_001029964 // TLL1 // tubulin tyrosine ligase-like family, member 13 // 15q2	7985963	0.0183535	-1.1528
27844	8133119	BC014249 // VKORC1L1 // vitamin K epoxide reductase complex, subunit 1-like 1 //	8133119	0.0493741	-1.153
25994	8115476	NM_004270 // MED7 // mediator complex subunit 7 // 5q33.3 // 9443 // NM_0011008	8115476	0.0159371	-1.15344
24592	8102065	NM_020139 // BDH2 // 3-hydroxybutyrate dehydrogenase, type 2 // 4q24 // 56898 //	8102065	0.0360269	-1.15359
18485	8040614	---	8040614	0.0364788	-1.1537
12392	7979378	NM_018168 // C14orf105 // chromosome 14 open reading frame 105 // 14q23.1 // 551	7979378	0.0243005	-1.15385
15022	8006085	NM_198529 // EFCAB5 // EF-hand calcium binding domain 5 // 17q11.2 // 374786 //	8006085	0.00166522	-1.15433
24646	8102643	NM_001237 // CCNA2 // cyclin A2 // 4q25-q31 // 890 // ENST00000274026 // CCNA2	8102643	0.00792726	-1.15441
5091	7906400	NM_005531 // IFI16 // interferon, gamma-inducible protein 16 // 1q22 // 3428 //	7906400	0.0451973	-1.15441
24203	8098421	---	8098421	0.0141485	-1.15457
26836	8123388	NM_018974 // UNC93A // unc-93 homolog A (C. elegans) // 6q27 // 54346 // ENST00	8123388	0.0340107	-1.15479
5289	7908612	NM_001105517 // FAM58B // family with sequence similarity 58, member B // 1q32.1	7908612	0.0453933	-1.15482
9909	7953993	NM_030766 // BCL2L14 // BCL2-like 14 (apoptosis facilitator) // 12p13-p12 // 793	7953993	0.00563228	-1.15569
266	7892765	---	7892765	0.0151972	-1.15643
30602	8158829	NM_013318 // KIAA0515 // KIAA0515 // 9q34.13 // 84726 // ENST00000357304 // KIA	8158829	0.0314735	-1.15661
25219	8108050	NM_003202 // TCF7 // transcription factor 7 (T-cell specific, HMG-box) // 5q31.1	8108050	0.0350239	-1.15665
24204	8098423	NM_018248 // NEIL3 // nei endonuclease VIII-like 3 (E. coli) // 4q34.3 // 55247	8098423	0.0154372	-1.15725
29183	8145797	---	8145797	0.0357618	-1.15751
25459	8110491	NM_014594 // ZNF354C // zinc finger protein 354C // 5q35 // 30832 // ENST000003	8110491	0.00884998	-1.15782
21381	8069991	NM_144659 // TCP10L // t-complex 10 (mouse)-like // 21q22.11 // 140290 // ENST0	8069991	0.0224349	-1.15796
19762	8053484	NM_003896 // ST3GAL5 // ST3 beta-galactoside alpha-2,3-sialyltransferase 5 // 2p	8053484	0.0122515	-1.15801
24788	8103789	NM_005277 // GPM6A // glycoprotein M6A // 4q34 // 2823 // NM_201591 // GPM6A //	8103789	0.0419413	-1.15821
3230	7895787	---	7895787	0.0192211	-1.15846
24850	8104319	---	8104319	0.0181974	-1.15863
23139	8088142	NM_018397 // CHDH // choline dehydrogenase // 3p21.1 // 55349 // ENST0000031525	8088142	0.0238657	-1.1592
20427	8060745	NM_175839 // SMOX // spermine oxidase // 20p13 // 54498 // NM_175842 // SMOX //	8060745	0.00723153	-1.15965

22596	8082252 ---	8082252	0.0336297	-1.15986
10254	7957528 ---	7957528	0.046434	-1.15989
23595	8092654 NM_052969 // RPL39L // ribosomal protein L39-like // 3q27 // 116832 /// ENST0000	8092654	0.0312741	-1.16034
20159	8057797 NM_004657 // SDPR // serum deprivation response (phosphatidyserine binding prot	8057797	0.0122189	-1.16083
30807	8160889 NM_002989 // CCL21 // chemokine (C-C motif) ligand 21 // 9p13 // 6366 /// ENST00	8160889	0.000234084	-1.16123
1579	7894102 ---	7894102	0.0225623	-1.16127
11617	7971899 ---	7971899	0.0446399	-1.16142
4750	7903227 NM_017734 // PALMD // palmdelphin // 1p22-p21 // 54873 /// ENST00000263174 // PA	7903227	0.0483795	-1.16142
18750	8043375 ---	8043375	0.0218425	-1.16162
19048	8045848 NM_173355 // UPP2 // uridine phosphorylase 2 // 2q24.1 // 151531 /// ENST00000000	8045848	0.0287065	-1.16173
28361	8138277 AK075525 // VWDE // von Willebrand factor D and EGF domains // 7p21.3 // 221806	8138277	0.00973361	-1.16184
14837	8004325 AY129319 // EIF5A // eukaryotic translation initiation factor 5A // 17p13-p12 //	8004325	0.0194644	-1.16209
28259	8137240 NM_153236 // GIMAP7 // GTPase, IMAP family member 7 // 7q36.1 // 168537 /// ENST	8137240	0.0433888	-1.16222
32294	8174311 ---	8174311	0.0442355	-1.16268
10068	7955613 NM_005556 // KRT7 // keratin 7 // 12q12-q13 // 3855 /// ENST00000331817 // KRT7	7955613	0.0239768	-1.16306
23657	8093272 NR_003291 // LOC348840 // hypothetical LOC348840 // 3q29 // 348840 /// BC053879	8093272	0.0358952	-1.16333
10074	7955694 NM_002178 // IGFBP6 // insulin-like growth factor binding protein 6 // 12q13 //	7955694	0.0267079	-1.16349
13598	7991374 NM_002168 // IDH2 // isocitrate dehydrogenase 2 (NADP+), mitochondrial // 15q26.	7991374	0.030233	-1.16351
10189	7956838 ---	7956838	0.0193976	-1.16393
5373	7909601 NR_004389 // SNORA16B // small nucleolar RNA, H/ACA box 16B // 1q32.3 // 692157	7909601	0.0378796	-1.16415
8835	7944179 NM_000733 // CD3E // CD3e molecule, epsilon (CD3-TCR complex) // 11q23 // 916 //	7944179	0.0217533	-1.16431
2518	7895063 ---	7895063	0.0444121	-1.16451
10917	7964722 NM_007191 // WIF1 // WNT inhibitory factor 1 // 12q14.3 // 11197 /// ENST0000028	7964722	0.00666061	-1.16495
11948	7974814 ---	7974814	0.0492017	-1.16528
27167	8126428 ENST00000372922 // TRERF1 // transcriptional regulating factor 1 // 6p21.1-p12.1	8126428	0.0172479	-1.16533
2091	7894626 ---	7894626	0.0413445	-1.16592
24982	8105583 ---	8105583	0.0351752	-1.16605
643	7893152 ---	7893152	0.00523261	-1.16608
24431	8100523 NM_021114 // SPINK2 // serine peptidase inhibitor, Kazal type 2 (acrosin-trypsin	8100523	0.0467098	-1.16622
28430	8138842 NM_006092 // NOD1 // nucleotide-binding oligomerization domain containing 1 // 7	8138842	0.0397193	-1.16691
14111	7996917 ---	7996917	0.0202713	-1.16693
12787	7982495 ---	7982495	0.030984	-1.16702
7698	7933139 NM_006955 // ZNF33B // zinc finger protein 33B // 10q11.2 // 7582 /// ENST0000003	7933139	0.0327905	-1.16713
23905	8095585 NM_001098484 // SLC4A4 // solute carrier family 4, sodium bicarbonate cotranspor	8095585	0.0147283	-1.16759
22599	8082270 NM_182628 // CCDC37 // coiled-coil domain containing 37 // 3q21.2 // 348807 ///	8082270	0.00404436	-1.16768
6418	7920100 NM_182578 // THEM5 // thioesterase superfamily member 5 // 1q21.3 // 284486 ///	7920100	0.048303	-1.16879
21079	8067167 NM_198433 // AURKA // aurora kinase A // 20q13.2-q13.3 // 6790 /// NM_003600 //	8067167	0.0280372	-1.16896
14389	7999674 NM_022844 // MYH11 // myosin, heavy chain 11, smooth muscle // 16p13.11 // 4629	7999674	0.0192568	-1.16903
24596	8102141 NM_176869 // PPA2 // pyrophosphatase (inorganic) 2 // 4q25 // 27068 /// NM_00690	8102141	0.0340027	-1.16904
4150	7897132 NM_022114 // PRDM16 // PR domain containing 16 // 1p36.23-p33 // 63976 /// NM_19	7897132	0.0365853	-1.16919
32576	8176574 XR_042499 // LOC652811 // similar to adican // --- // 652811 /// XM_001714468 /	8176574	0.0210073	-1.16933
27944	8134051 NM_001039706 // C7orf63 // chromosome 7 open reading frame 63 // 7q21.13 // 7984	8134051	0.0119912	-1.1694
2634	7895182 ---	7895182	0.00456675	-1.16942
32636	8177046 ---	8177046	0.018978	-1.16951
7558	7931822 AY423624 // LOC100128356 // protein transactivated by hepatitis B virus E antige	7931822	0.0104361	-1.16967
11772	7973114 ---	7973114	0.0164743	-1.17022
7874	7934842 NM_024756 // MMRN2 // multimerin 2 // 10q23.2 // 79812 /// ENST00000372027 // MM	7934842	0.0245765	-1.17091
7065	7926596 NM_012071 // COMMD3 // COMM domain containing 3 // 10pter-q22.1 // 23412 /// ENS	7926596	0.0392926	-1.1712
3338	7895897 ---	7895897	0.00214168	-1.1719
16543	8021777 BC119776 // FLJ44881 // FLJ44881 // 18q23 // 400661 /// AK126829 // FLJ44881 //	8021777	0.0210566	-1.17193
444	7892948 ---	7892948	0.0230409	-1.17198
28138	8136200 NM_016352 // CPA4 // carboxypeptidase A4 // 7q32 // 51200 /// ENST00000222482 //	8136200	0.0344841	-1.17215
28258	8137232 NM_175571 // GIMAP8 // GTPase, IMAP family member 8 // 7q36.1 // 155038 /// ENST	8137232	0.00407069	-1.17223
32003	8171577 ---	8171577	0.0241471	-1.1724
6146	7917561 NM_052941 // GBP4 // guanylate binding protein 4 // 1p22.2 // 115361 /// ENST000	7917561	0.0202768	-1.17242
4628	7901969 NM_005012 // ROR1 // receptor tyrosine kinase-like orphan receptor 1 // 1p32-p31	7901969	0.0467307	-1.17264
22943	8085714 ---	8085714	0.0171195	-1.17305
21080	8067178 NM_080615 // GCNT7 // glucosaminyl (N-acetyl) transferase family member 7 // 20q	8067178	0.0165508	-1.17343
23278	8089459 ---	8089459	0.0433423	-1.17349
3766	7896335 ---	7896335	0.0329366	-1.17363
28443	8138950 NM_203288 // RP9 // retinitis pigmentosa 9 (autosomal dominant) // 7p14.3 // 610	8138950	0.0178139	-1.17402
15283	8008706 NM_080677 // DYNLL2 // dynein, light chain, LC8-type 2 // 17q22 // 140735 /// EN	8008706	0.0192388	-1.17414
22377	8080082 ---	8080082	0.0213026	-1.17444
29624	8149574 NM_018371 // CSGALNACT1 // chondroitin sulfate N-acetylgalactosaminyltransferase	8149574	0.0479692	-1.17462
6711	7923041 ---	7923041	0.00417417	-1.1747
1682	7894209 ---	7894209	0.0416237	-1.17497
22843	8084810 ---	8084810	0.0126649	-1.17531
27778	8132838 ---	8132838	0.000371899	-1.17558
27152	8126303 NM_018643 // TREM1 // triggering receptor expressed on myeloid cells 1 // 6p21.1	8126303	0.00369329	-1.17563
22308	8079204 NM_006991 // ZNF197 // zinc finger protein 197 // 3p21 // 10168 /// NM_001024855	8079204	0.043025	-1.1759
1177	7893696 ---	7893696	0.0141259	-1.17597
8059	7937020 NM_002417 // MKI67 // antigen identified by monoclonal antibody Ki-67 // 10q25-q	7937020	0.0202469	-1.17617
25394	8109819 ENST00000338333 // LOC345630 // similar to hCG1641252 // 5q35.1 // 345630 /// XM	8109819	0.0158113	-1.17669
13861	7994109 NM_005030 // PLK1 // polo-like kinase 1 (Drosophila) // 16p12.1 // 5347 /// ENST	7994109	0.0113886	-1.1771
23281	8089467 NM_024508 // ZBED2 // zinc finger, BED-type containing 2 // 3q13.13 // 79413 ///	8089467	0.00391675	-1.17711
23713	8093991 ---	8093991	0.0128954	-1.17775
7040	7926330 NM_001080836 // MEIG1 // meiosis expressed gene 1 homolog (mouse) // 10p13 // 64	7926330	0.00361188	-1.17777
23180	8088550 NM_198859 // PRICKLE2 // prickle homolog 2 (Drosophila) // 3p14.1 // 166336 ///	8088550	0.0189134	-1.17884
32477	8175685 NM_021049 // MAGEA5 // melanoma antigen family A, 5 // Xq28 // 4104 /// ENST0000	8175685	0.0480544	-1.17988
15828	8014702 AY459295 // LOC100129395 // NS5ATP13TP1 // 17q12 // 100129395	8014702	0.0161402	-1.18017
15603	8012450 NM_201520 // SLC25A35 // solute carrier family 25, member 35 // 17p13.1 // 39951	8012450	0.0168384	-1.1805
25514	8110971 NM_138809 // CMBL // carboxymethylglutamate decarboxylase homolog (Pseudomonas) // 5p15.	8110971	0.0218399	-1.18072
4673	7902474 ---	7902474	0.00933012	-1.18106
29675	8150076 NM_001394 // DUSP4 // dual specificity phosphatase 4 // 8p12-p11 // 1846 /// NM_	8150076	0.0233451	-1.18115
11029	7965846 NM_016053 // CCDC53 // coiled-coil domain containing 53 // 12q23.2 // 51019 ///	7965846	0.0371408	-1.18163
18567	8041676 NM_016008 // DYNC2L1 // dynein, cytoplasmic 2, light intermediate chain 1 // 2p	8041676	0.0396712	-1.1824
151	7892648 ---	7892648	0.00312279	-1.18255
5013	7905598 NM_012437 // SNAPIN // SNAP-associated protein // 1q21.3 // 23557 /// ENST000003	7905598	0.0197321	-1.18325
18098	8037240 NM_006905 // PSG1 // pregnancy specific beta-1-glycoprotein 1 // 19q13.2 // 5669	8037240	0.0489227	-1.18347
3258	7895815 ---	7895815	0.0413585	-1.1835
13274	7987472 AK095915 // C15orf56 // chromosome 15 open reading frame 56 // 15q15.1 // 644809	7987472	0.045247	-1.18354
30855	8161373 ENST00000377437 // LOC441426 // hypothetical gene supported by AK126863 // 9p11.	8161373	0.0336003	-1.18356
30897	8161554 ENST00000377437 // LOC441426 // hypothetical gene supported by AK126863 // 9p11.	8161554	0.0336003	-1.18356
30118	8154211 ---	8154211	0.0267488	-1.18383
5646	7912207 ---	7912207	0.0439979	-1.18434
11057	7966148 ---	7966148	0.0469826	-1.18455

18479	8040547	XM_933365 // LOC646049 // hypothetical LOC646049 // 2p23.3 // 646049	8040547	0.0149748	-1.18593
15666	8013135	NM_001005291 // SREBF1 // sterol regulatory element binding transcription factor	8013135	0.0258981	-1.18625
3755	7896324	---	7896324	0.0191249	-1.18633
11630	7971950	NM_080759 // DACH1 // dachshund homolog 1 (Drosophila) // 13q21 // 1602 // NM_0	7971950	0.0247813	-1.18647
17929	8035803	NM_021269 // ZNF708 // zinc finger protein 708 // 19p12 // 7562 // ENST00000356	8035803	0.00948771	-1.18657
20887	8065353	NM_000361 // THBD // thrombomodulin // 20p11.2 // 7056 // ENST00000377103 // TH	8065353	0.0363591	-1.18681
6169	7917739	---	7917739	0.0334778	-1.1869
9302	7948308	---	7948308	0.0284491	-1.18707
19400	8049655	---	8049655	0.0121325	-1.18731
21891	8074927	AK300413 // LOC100128388 // similar to hCG39998 // 22q11.23 // 100128388 // AK0	8074927	0.0241598	-1.18751
11059	7966172	NM_018711 // SVOP // SV2 related protein homolog (rat) // 12q24.11 // 55530 //	7966172	0.0326435	-1.18756
1301	7893820	---	7893820	0.0197905	-1.18771
11264	7968514	---	7968514	0.0276797	-1.18777
18453	8040417	---	8040417	0.0293948	-1.18845
474	7892979	---	7892979	0.0474206	-1.18882
27793	8132917	NM_182633 // ZNF713 // zinc finger protein 713 // 7p11.2 // 349075 // ENST00000	8132917	0.0453484	-1.18887
27558	8130660	---	8130660	0.0455583	-1.18901
25386	8109712	NM_012484 // HMMR // hyaluronan-mediated motility receptor (RHAMM) // 5q33.2-qte	8109712	0.0398932	-1.18979
27939	8134018	NM_181646 // ZNF804B // zinc finger protein 804B // 7q21.13 // 219578 // ENST00	8134018	0.0359208	-1.18981
23828	8095005	BC137387 // FLJ21511 // hypothetical protein FLJ21511 // 4p12-p11 // 80157	8095005	0.0357572	-1.18993
11169	7967456	NM_145058 // RILPL2 // Rab interacting lysosomal protein-like 2 // 12q24.31 // 1	7967456	0.0428863	-1.18995
10073	7955663	NM_170754 // TENC1 // tensin like C1 domain containing phosphatase (tensin 2) //	7955663	0.0229605	-1.1901
26618	8121312	NM_016487 // C6orf203 // chromosome 6 open reading frame 203 // 6q21 // 51250 //	8121312	0.0201078	-1.19031
3946	7896519	---	7896519	0.00922164	-1.19114
271	7892770	---	7892770	0.0344496	-1.19145
2186	7894723	---	7894723	0.0240169	-1.19164
18074	8037005	NM_000660 // TGFB1 // transforming growth factor, beta 1 // 19q13.2 19q13.1 // 7	8037005	0.0380654	-1.19209
3592	7896158	---	7896158	0.013469	-1.19273
31769	8169636	---	8169636	0.0300679	-1.19325
3532	7896098	---	7896098	0.0109239	-1.19419
10266	7957604	---	7957604	0.0262651	-1.19436
25204	8107909	NM_003059 // SLC22A4 // solute carrier family 22 (organic cation/ergothioneine t	8107909	0.0453823	-1.19449
12228	7977615	NM_198232 // RNASE1 // ribonuclease, RNase A family, 1 (pancreatic) // 14q11.2 /	7977615	0.0330037	-1.19453
8439	7940153	NM_022074 // FAM111A // family with sequence similarity 111, member A // 11q12.1	7940153	0.0200514	-1.19498
8204	7938195	NM_176822 // NLRP14 // NLR family, pyrin domain containing 14 // 11p15.4 // 3383	7938195	0.0235309	-1.19499
16145	8017831	NM_181656 // C17orf58 // chromosome 17 open reading frame 58 // 17q24.2 // 28401	8017831	0.0167964	-1.19519
21846	8074615	---	8074615	0.00901627	-1.19587
21992	8075828	NM_006860 // RABL4 // RAB, member of RAS oncogene family-like 4 // 22q13.1 // 11	8075828	0.0210576	-1.19603
26616	8121298	---	8121298	0.0126039	-1.19618
20299	8059387	NM_024785 // FAM124B // family with sequence similarity 124B // 2q36.2 // 79843	8059387	0.011899	-1.19654
20521	8061579	NM_012112 // TPX2 // TPX2, microtubule-associated, homolog (Xenopus laevis) // 2	8061579	0.0472679	-1.19661
14513	8001007	NM_002773 // PRSS8 // protease, serine, 8 // 16p11.2 // 5652 // ENST00000317508	8001007	0.034359	-1.19706
9522	7950409	NM_005472 // KCNE3 // potassium voltage-gated channel, Isk-related family, membe	7950409	0.00485877	-1.19707
16037	8016607	---	8016607	0.00581979	-1.19803
2583	7895130	---	7895130	0.0288091	-1.19805
1040	7893554	---	7893554	0.0326459	-1.19814
8989	7945680	NR_002196 // H19 // H19, imprinted maternally expressed transcript (non-protein	7945680	0.0477629	-1.19851
26779	8122805	---	8122805	0.0253498	-1.19856
15438	8010379	NM_024110 // CARD14 // caspase recruitment domain family, member 14 // 17q25 //	8010379	0.0166591	-1.19878
8776	7943550	---	7943550	0.00628605	-1.19924
25925	8114780	NM_016580 // PCDH12 // protocadherin 12 // 5q31 // 51294 // ENST00000231484 //	8114780	0.0100376	-1.19924
32492	8175802	NM_080701 // TREX2 // three prime repair exonuclease 2 // Xq28 // 11219 // ENST	8175802	0.039285	-1.1997
31298	8165680	---	8165680	0.012658	-1.19971
23145	8088192	NM_015576 // ERC2 // ELKS/RAB6-interacting/CAST family member 2 // 3p14.3 // 260	8088192	0.0321647	-1.19987
14794	8003846	---	8003846	0.0102873	-1.19991
3189	7895745	---	7895745	0.0493928	-1.20037
2421	7894964	---	7894964	0.0416899	-1.20056
26689	8121850	NM_012259 // HEY2 // hairy/enhancer-of-split related with YRPW motif 2 // 6q21 /	8121850	0.0168555	-1.20133
20481	8061227	NM_020689 // SLC24A3 // solute carrier family 24 (sodium/potassium/calcium excha	8061227	0.029067	-1.20151
10525	7960654	NM_016162 // ING4 // inhibitor of growth family, member 4 // 12p13.31 // 51147 /	7960654	0.0228169	-1.20207
19587	8051812	---	8051812	0.0494322	-1.20211
15694	8013358	---	8013358	0.00115913	-1.20261
9207	7947553	NM_020929 // LRRC4C // leucine rich repeat containing 4C // 11p12 // 57689 // E	7947553	0.0210161	-1.20372
22853	8084880	NM_005524 // HES1 // hairy and enhancer of split 1, (Drosophila) // 3q28-q29 //	8084880	0.0060687	-1.20375
27606	8131101	NM_198949 // NUDT1 // nudix (nucleoside diphosphate linked moiety X)-type motif	8131101	0.0367374	-1.20441
17722	8033458	NM_007260 // LYPLA2 // lysophospholipase II // 1p36.12-p35.1 // 11313 // NR_001	8033458	0.0169962	-1.20442
2571	7895118	---	7895118	0.015441	-1.2046
1486	7894009	---	7894009	0.0325689	-1.20622
13192	7986629	NR_002224 // ADAM6 // ADAM metalloproteinase domain 6 // 14q32.33 // 8755 // NR_	7986629	0.0078794	-1.20638
4712	7902891	NM_182976 // ZNF326 // zinc finger protein 326 // 1p22.2 // 284695 // NM_182975	7902891	0.0423324	-1.20728
32408	8175261	---	8175261	0.0240758	-1.20801
29611	8149396	ENST00000358192 // LOC442381 // similar to seven transmembrane helix receptor //	8149396	0.0229011	-1.20817
12562	7981065	ENST00000238576 // SERPINA2 // serpin peptidase inhibitor, clade A (alpha-1 anti	7981065	0.0238803	-1.20844
19087	8046283	NM_000817 // GAD1 // glutamate decarboxylase 1 (brain, 67kDa) // 2q31 // 2571 //	8046283	0.0477279	-1.20855
24613	8102328	NM_000204 // CFI // complement factor I // 4q25 // 3426 // ENST00000394634 // C	8102328	0.0359014	-1.20874
8647	7942417	NM_014786 // ARHGEF17 // Rho guanine nucleotide exchange factor (GEF) 17 // 11q1	7942417	0.0199019	-1.20889
26851	8123579	NM_152554 // C6orf195 // chromosome 6 open reading frame 195 // 6p25.2 // 154386	8123579	0.0423603	-1.20931
6684	7922754	XR_019568 // KRT18P28 // keratin 18 pseudogene 28 // 1q25.3 // 343326	7922754	0.0376762	-1.21053
4647	7902227	NM_001924 // GADD45A // growth arrest and DNA-damage-inducible, alpha // 1p31.2-	7902227	0.0361284	-1.21153
9319	7948371	---	7948371	0.0021412	-1.21197
7091	7926871	---	7926871	0.0208186	-1.21274
10330	7958375	---	7958375	0.0116217	-1.21315
20595	8062478	---	8062478	0.0342715	-1.2132
11597	7971671	NR_003923 // GUCY1B2 // guanylate cyclase 1, soluble, beta 2 // 13q14.2-q14.3 //	7971671	0.00399525	-1.21336
3227	7895784	---	7895784	0.02601	-1.2136
3981	7896556	---	7896556	0.0264088	-1.21383
22312	8079237	NM_020242 // KIF15 // kinesin family member 15 // 3p21.31 // 56992 // ENST00000	8079237	0.0290623	-1.21392
18973	8045277	---	8045277	0.0358552	-1.21412
6144	7917532	NM_004120 // GBP2 // guanylate binding protein 2, interferon-inducible // 1p22.2	7917532	0.0277011	-1.2148
5769	7913582	NM_001077195 // ZNF436 // zinc finger protein 436 // 1p36 // 80818 // NM_030634	7913582	0.0256891	-1.21524
17933	8035825	NM_001001411 // ZNF676 // zinc finger protein 676 // 19p12 // 163223 // ENST000	8035825	0.0355773	-1.21525
16283	8019541	NM_024702 // ZNF750 // zinc finger protein 750 // 17q25.3 // 79755 // ENST00000	8019541	0.00300782	-1.21603
23766	8094391	---	8094391	0.0476091	-1.21616
9721	7952243	NM_015645 // C1QTNF5 // C1q and tumor necrosis factor related protein 5 // 11q23	7952243	0.0147064	-1.21638
1071	7893585	---	7893585	0.049271	-1.21662
17943	8035865	---	8035865	0.0449618	-1.21721

5997	7915955	NM_019073 // SPATA6 // spermatogenesis associated 6 // 1p33 // 54558 // ENST000	7915955	0.00297636	-1.21739
22616	8082473	NM_000174 // GP9 // glycoprotein IX (platelet) // 3q21 // 2815 // ENST000003073	8082473	0.022701	-1.21835
7432	7930304	NM_004832 // GSTO1 // glutathione S-transferase omega 1 // 10q25.1 // 9446 // E	7930304	0.0175309	-1.21876
14156	7997352	NM_016373 // WWOX // WW domain containing oxidoreductase // 16q23.3-q24.1 // 517	7997352	0.0106234	-1.21883
5421	7910111	NM_000120 // EPHX1 // epoxide hydrolase 1, microsomal (xenobiotic) // 14q2.1 //	7910111	0.0129055	-1.21933
20898	8065410	NM_001899 // CST4 // cystatin S // 20p11.21 // 1472 // ENST00000217423 // CST4	8065410	0.0475084	-1.2198
8846	7944331	---	7944331	0.0330154	-1.2208
6867	7924756	---	7924756	0.0151646	-1.22111
3480	7896045	---	7896045	0.0266586	-1.22126
29453	8148325	---	8148325	0.0111716	-1.22135
7654	7932790	---	7932790	0.0440876	-1.22153
20526	8061653	NM_080625 // C20orf160 // chromosome 20 open reading frame 160 // 20q11.2 // 140	8061653	0.0273978	-1.22174
5518	7911108	---	7911108	0.00640921	-1.22232
14190	7997731	AK055241 // FLJ30679 // hypothetical protein FLJ30679 // 16q24.1 // 146512	7997731	0.0377909	-1.22235
17405	8030393	NM_000951 // PRRG2 // proline rich Gla (G-carboxyglutamic acid) 2 // 19q13.33 //	8030393	0.0356341	-1.2237
14225	7998053	AK022609 // FLJ12547 // hypothetical protein FLJ12547 // 16q24.3 // 80058 // EN	7998053	0.0229604	-1.22419
6275	7918900	---	7918900	0.0192859	-1.22425
11445	7970381	ENST00000316778 // RP11-195B21.3 // hypothetical LOC644249 // 9q12 // 644249 //	7970381	0.0244773	-1.22459
5555	7912178	NM_030904 // OR2T1 // olfactory receptor, family 2, subfamily T, member 1 // 1q4	7912178	0.000263939	-1.22556
20604	8062557	NM_005568 // PPP1R16B // protein phosphatase 1, regulatory (inhibitor) subunit 1	8062557	0.0271082	-1.22593
31991	8171481	NM_003916 // AP1S2 // adaptor-related protein complex 1, sigma 2 subunit // Xp22	8171481	0.042473	-1.22678
10903	7964640	---	7964640	0.0494844	-1.22728
26080	8116346	---	8116346	0.00832735	-1.22808
5329	7909102	---	7909102	0.01321	-1.22853
362	7892863	---	7892863	0.0311104	-1.22876
29323	8147030	NM_007029 // STMN2 // stathmin-like 2 // 8q21.13 // 11075 // ENST00000220876 //	8147030	0.0293825	-1.22993
25868	8114211	---	8114211	0.0279623	-1.23018
18448	8040372	---	8040372	0.0476202	-1.23079
2743	7895292	---	7895292	0.0303802	-1.2313
890	7893402	---	7893402	0.0402695	-1.23135
11336	7969263	NM_001011724 // RP11-78J21.1 // heterogeneous nuclear ribonucleoprotein A1-like	7969263	0.0391404	-1.23169
2372	7894915	---	7894915	0.0135575	-1.23234
11910	7974404	NM_005192 // CDKN3 // cyclin-dependent kinase inhibitor 3 // 14q22 // 1033 // E	7974404	0.00217838	-1.23266
6757	7923582	XM_001719378 // LOC100132728 // similar to cpn10 protein // 1q32.1 // 100132728	7923582	0.00509076	-1.23391
22311	8079229	NM_145044 // ZNF501 // zinc finger protein 501 // 3p21.31 // 115560 // ENST0000	8079229	0.0122113	-1.23391
22736	8083737	---	8083737	0.0357531	-1.23438
10277	7957665	NM_005230 // ELK3 // ELK3, ETS-domain protein (SRF accessory protein 2) // 12q23	7957665	0.0248718	-1.23457
23780	8094533	AK034357 // FLJ16686 // FLJ16686 protein // 4p14 // 401124 // BC157885 // FLJ16	8094533	0.0372215	-1.23462
1463	7893985	---	7893985	0.0491839	-1.23568
2661	7895209	---	7895209	0.043686	-1.2358
25378	8109649	---	8109649	0.00878487	-1.23582
24098	8097513	NM_002413 // MGST2 // microsomal glutathione S-transferase 2 // 4q28.3 // 4258 //	8097513	0.0110628	-1.23591
29581	8149269	---	8149269	0.0496998	-1.23615
6532	7921346	NM_001764 // CD1B // CD1b molecule // 1q22-q23 // 910 // ENST00000368168 // CD1	7921346	0.0465996	-1.23731
12513	7980481	BX248745 // LOC100131497 // hypothetical protein LOC100131497 // 14q24.3 // 1001	7980481	0.0385801	-1.23787
25004	8105828	NM_031966 // CCNB1 // cyclin B1 // 5q12 // 891 // ENST00000256442 // CCNB1 // c	8105828	0.0467419	-1.23826
16337	8019842	NM_0010171 // TYMS // thymidylate synthetase // 18p11.32 // 7298 // ENST00000323	8019842	0.0466691	-1.23903
16412	8020493	---	8020493	0.00846479	-1.2391
8667	7942603	NM_025098 // MOGAT2 // monoacylglycerol O-acyltransferase 2 // 11q13.5 // 80168	7942603	0.0235258	-1.23916
22454	8081034	---	8081034	0.00269962	-1.2396
18469	8040486	---	8040486	0.0164908	-1.23961
25794	8113504	NM_004772 // C5orf13 // chromosome 5 open reading frame 13 // 5q22.1 // 9315 //	8113504	0.01499	-1.24121
1388	7893909	---	7893909	0.0146708	-1.24138
5982	7915787	NM_003629 // PIK3R3 // phosphoinositide-3-kinase, regulatory subunit 3 (gamma) //	7915787	0.0375136	-1.24186
30240	8155301	NM_144964 // RG9MTD3 // RNA (guanine-9-) methyltransferase domain containing 3 //	8155301	0.0326377	-1.24287
18710	8043028	---	8043028	0.0109002	-1.24306
12817	7982757	NM_170589 // CASC5 // cancer susceptibility candidate 5 // 15q14 // 57082 // NM	7982757	0.00647187	-1.24493
3050	7895601	---	7895601	0.0333511	-1.24659
19041	8045808	---	8045808	0.0478953	-1.2472
26489	8120124	NM_153839 // GPR111 // G protein-coupled receptor 111 // 6p12.3 // 222611 // EN	8120124	0.00531187	-1.24944
19164	8047172	---	8047172	0.038723	-1.2505
2391	7894934	---	7894934	0.032268	-1.25134
8066	7937104	AK097584 // LOC100128830 // hypothetical protein LOC100128830 // 10q26.3 // 1001	7937104	0.00750053	-1.25135
21980	8075695	NM_014349 // APOL3 // apolipoprotein L, 3 // 22q13.1 // 80833 // NM_030644 // A	8075695	0.000133122	-1.2525
12101	8068214	---	8068214	0.0323571	-1.25281
13428	7989647	NM_014736 // KIAA0101 // KIAA0101 // 15q22.31 // 9768 // NM_001029989 // KIAA01	7989647	0.00454779	-1.2531
26694	8121911	NM_001012507 // C6orf173 // chromosome 6 open reading frame 173 // 6q22.32 // 38	8121911	0.0350851	-1.2547
9414	7949371	AK124141 // LOC399904 // hypothetical LOC399904 // 11q13.1 // 399904 // ENST000	7949371	0.0344858	-1.25499
6468	7920487	BC127710 // C1orf189 // chromosome 1 open reading frame 189 // 1q21.3 // 388701	7920487	0.00976781	-1.25677
19672	8052696	---	8052696	0.0165553	-1.25726
30697	8159917	---	8159917	0.0119403	-1.25818
9469	7949894	---	7949894	0.0209668	-1.25851
9200	7947512	NM_015430 // DKFZP586H2123 // regeneration associated muscle protease // 11p13 //	7947512	0.0416293	-1.25851
12740	7982100	---	7982100	0.00261253	-1.25968
10871	7964271	NM_000946 // PRIM1 // primase, DNA, polypeptide 1 (49kDa) // 12q13 // 5557 // E	7964271	0.0225296	-1.25988
2769	7895318	---	7895318	0.0104211	-1.25989
5383	7909708	NM_016343 // CENPF // centromere protein F, 350/400ka (mitosin) // 1q32-q41 // 1	7909708	0.0270928	-1.26041
28238	8137048	---	8137048	0.00682228	-1.26085
20161	8057817	---	8057817	0.0355184	-1.2614
5112	7906613	NM_021181 // SLAMF7 // SLAM family member 7 // 1q23.1-q24.1 // 57823 // ENST000	7906613	0.00583488	-1.26401
5172	7907156	NM_002995 // XCL1 // chemokine (C motif) ligand 1 // 1q23 // 6375 // ENST0000003	7907156	0.0338022	-1.26443
22659	8083025	AF196865 // BPESC1 // blepharophimosis, epicanthus inversus and ptosis, candidat	8083025	0.0491147	-1.26461
25377	8109639	NM_004219 // PTTG1 // pituitary tumor-transforming 1 // 5q35.1 // 9232 // ENST0	8109639	0.0151698	-1.26494
22305	8079187	AK131507 // ZNF852 // zinc finger protein 852 // 3p21.32 // 285346	8079187	0.023722	-1.26581
16506	8021468	XM_001720161 // LOC100131971 // similar to 40S ribosomal protein S26 // 18q21.32	8021468	0.0116713	-1.26614
4436	7899939	NM_002060 // GJA4 // gap junction protein, alpha 4, 37kDa // 1p35.1 // 2701 //	7899939	0.0493261	-1.26671
3762	7896331	---	7896331	0.00103661	-1.26725
7710	7933204	NM_007021 // C10orf10 // chromosome 10 open reading frame 10 // 10q11.21 // 1106	7933204	0.00826481	-1.26779
5415	7910022	NM_152495 // CNIH3 // cornichon homolog 3 (Drosophila) // 1q42.12 // 149111 //	7910022	0.0233657	-1.27046
22745	8083777	ENST00000407723 // LOC131055 // hypothetical LOC131055 // 3q26.1 // 131055 // X	8083777	0.0106792	-1.27325
27403	8129039	XR_016871 // LOC442249 // similar to hCG1783452 // 6q21 // 442249	8129039	0.00887575	-1.27547
26612	8121269	---	8121269	0.000975416	-1.27861
22563	8081941	---	8081941	0.00291273	-1.27904
6976	7925732	NM_012353 // OR1C1 // olfactory receptor, family 1, subfamily C, member 1 // 1q4	7925732	0.0371792	-1.27934
185	7892682	---	7892682	0.0231663	-1.28146
5797	7913869	NM_203401 // STMN1 // stathmin 1/oncoprotein 18 // 1p36.1-p35 // 3925 // NM_005	7913869	0.0285256	-1.2824

2119	7894654 ---	7894654	0.0242653	-1.28336
3660	7896228 ---	7896228	0.0214295	-1.28354
28844	8142661 ---	8142661	0.0161293	-1.29328
24550	8101675 NM_004827 // ABCG2 // ATP-binding cassette, sub-family G (WHITE), member 2 // 4q	8101675	0.037439	-1.29334
6766	7923698 ---	7923698	0.0142386	-1.29342
28236	8137044 ---	8137044	0.00669549	-1.29354
1825	7894354 ---	7894354	0.0219042	-1.29418
23035	8086660 NM_013270 // TSP50 // testes-specific protease 50 // 3p14-p12 // 29122 /// ENST0	8086660	0.0214485	-1.29458
29836	8151432 ---	8151432	0.0278173	-1.30078
26951	8124413 NM_003539 // HIST1H4D // histone cluster 1, H4d // 6p21.3 // 8360 /// ENST000003	8124413	0.00415792	-1.30205
13184	7986565 XM_001125928 // LOC283804 // similar to testicular Metalloprotease-like, Disinte	7986565	0.0141726	-1.30422
2717	7895266 ---	7895266	0.0466902	-1.30744
1416	7893937 ---	7893937	0.00204521	-1.30923
1987	7894518 ---	7894518	0.0274969	-1.31071
29440	8148261 ---	8148261	0.0282456	-1.31114
9883	7953747 ---	7953747	0.0457432	-1.31617
15217	8007931 NM_000212 // ITGB3 // integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61	8007931	0.0350884	-1.31731
1387	7893908 ---	7893908	0.0429149	-1.32059
27738	8132413 ---	8132413	0.0115499	-1.32067
1639	7894165 ---	7894165	0.0385031	-1.32111
17019	8026468 NM_023944 // CYP4F12 // cytochrome P450, family 4, subfamily F, polypeptide 12 /	8026468	0.033293	-1.32152
6204	7918149 ---	7918149	0.043398	-1.32203
2113	7894648 ---	7894648	0.00510981	-1.32326
1923	7894453 ---	7894453	0.0188217	-1.32485
25242	8108301 NM_005733 // KIF20A // kinesin family member 20A // 5q31 // 10112 /// ENST000003	8108301	0.0345198	-1.32529
28410	8138718 NM_006735 // HOXA2 // homeobox A2 // 7p15-p14 // 3199 /// ENST00000222718 // HOX	8138718	0.00028054	-1.32579
32559	8176476 ---	8176476	0.0476454	-1.32758
28143	8136248 NM_002402 // MEST // mesoderm specific transcript homolog (mouse) // 7q32 // 423	8136248	0.00439903	-1.32778
32011	8171725 NM_152780 // MAP7D2 // MAP7 domain containing 2 // Xp22.12 // 256714 /// ENST000	8171725	0.0107395	-1.32889
18563	8041638 ---	8041638	0.0480031	-1.32916
16014	8016455 ---	8016455	0.0307906	-1.33107
25881	8114300 NM_017415 // KLHL3 // kelch-like 3 (Drosophila) // 5q31 // 26249 /// ENST0000030	8114300	0.0107942	-1.33235
3145	7895699 ---	7895699	0.0347629	-1.33454
11742	7973004 NM_172194 // OR4Q3 // olfactory receptor, family 4, subfamily Q, member 3 // 14q	7973004	0.0394958	-1.33886
21401	8070233 NM_144492 // CLDN14 // claudin 14 // 21q22.3 // 23562 /// NM_012130 // CLDN14 //	8070233	0.00181067	-1.33932
9114	7946579 NM_006691 // LYVE1 // lymphatic vessel endothelial hyaluronan receptor 1 // 11p1	7946579	0.0140075	-1.33999
19161	8047127 NM_012223 // MYO1B // myosin IB // 2q12-q34 // 4430 /// ENST00000392318 // MYO1B	8047127	0.0447829	-1.34042
25997	8115490 NM_033274 // ADAM19 // ADAM metallopeptidase domain 19 (meltrin beta) // 5q32-q3	8115490	0.0307942	-1.3427
2323	7894864 ---	7894864	0.00040472	-1.34801
6907	7925126 ---	7925126	0.0258087	-1.34934
26853	8123598 NM_030666 // SERPINB1 // serpin peptidase inhibitor, clade B (ovalbumin), member	8123598	0.0418586	-1.35111
31008	8162570 NM_000197 // HSD17B3 // hydroxysteroid (17-beta) dehydrogenase 3 // 9q22 // 3293	8162570	0.0270492	-1.35268
19983	8055465 NM_001008540 // CXCR4 // chemokine (C-X-C motif) receptor 4 // 2q21 // 7852 ///	8055465	0.00263164	-1.35658
3650	7896218 ---	7896218	0.0112148	-1.35789
9890	7953835 NM_005810 // KLRG1 // killer cell lectin-like receptor subfamily G, member 1 //	7953835	0.00829298	-1.35958
9060	7946109 NM_001005167 // OR52E6 // olfactory receptor, family 52, subfamily E, member 6 /	7946109	0.0459125	-1.36042
26919	8124160 ---	8124160	0.0473001	-1.36245
16376	8020197 ENST00000314074 // DKFZp779B1634 // similar to KIAA1074 protein // 18p11.21 // 3	8020197	0.0483042	-1.36451
31291	8165663 ---	8165663	0.0414806	-1.36546
5274	7908481 NM_021023 // CFHR3 // complement factor H-related 3 // 1q32 // 10878 /// ENST000	7908481	0.0305136	-1.37217
27238	8127156 ---	8127156	0.0411189	-1.37289
10923	7964759 NM_021150 // GRIP1 // glutamate receptor interacting protein 1 // 12q14.3 // 234	7964759	0.0260839	-1.37453
6589	7921909 NM_178550 // C1orf110 // chromosome 1 open reading frame 110 // 1q23.3 // 339512	7921909	0.00689212	-1.37613
25678	8112615 NM_003633 // ENC1 // ectodermal-neural cortex (with BTB-like domain) // 5q12-q13	8112615	0.00297262	-1.38027
3363	7895922 ---	7895922	0.0299745	-1.38386
157	7892654 ---	7892654	0.0248533	-1.38604
11494	7970793 NM_181785 // SLC46A3 // solute carrier family 46, member 3 // 13q12.3 // 283537	7970793	0.0226798	-1.3871
12663	7981945 ---	7981945	0.0479607	-1.38912
11011	7965677 ---	7965677	0.00940228	-1.39135
25610	8112043 ---	8112043	0.0352293	-1.40197
31327	8165864 XM_001720545 // LOC392425 // similar to hCG1790520 // Xp22.31 // 392425	8165864	0.021074	-1.40406
11249	7968295 ---	7968295	0.031961	-1.40898
1723	7894250 ---	7894250	0.0486961	-1.41183
9703	7952046 NM_144765 // MPZL2 // myelin protein zero-like 2 // 11q24 // 10205 /// NM_005797	7952046	0.0331638	-1.4137
15357	8009476 NM_002758 // MAP2K6 // mitogen-activated protein kinase kinase 6 // 17q24.3 // 5	8009476	0.00950828	-1.41873
3382	7895943 ---	7895943	0.0409179	-1.42005
3412	7895976 ---	7895976	0.0230699	-1.42193
32672	8177222 NM_013230 // CD24 // CD24 molecule // 6q21 // 100133941 /// ENST00000382840 // C	8177222	0.0456045	-1.43456
29726	8150509 NM_000930 // PLAT // plasminogen activator, tissue // 8p12 // 5327 /// NM_033011	8150509	0.0079947	-1.43712
11937	7974687 ---	7974687	0.0103448	-1.44522
26619	8121317 ---	8121317	0.0287985	-1.44797
7128	7927169 ENST00000315429 // ZNF487 // zinc finger protein 487 // 10q11.21 // 642819	7927169	0.0186301	-1.44995
20979	8066214 NM_004613 // TGM2 // transglutaminase 2 (C polypeptide, protein-glutamine-gamma-	8066214	0.00215702	-1.45113
29651	8149825 NM_003155 // STC1 // stanniocalcin 1 // 8p21-p11.2 // 6781 /// ENST00000290271 /	8149825	0.0281824	-1.45403
28261	8137250 NM_015660 // GIMAP2 // GTPase, IMAP family member 2 // 7q36.1 // 26157 /// ENST0	8137250	0.00356788	-1.45854
3792	7896361 ---	7896361	0.0298261	-1.45922
9610	7951163 ---	7951163	0.0310079	-1.46006
1635	7894160 ---	7894160	0.0426253	-1.46133
22832	8084717 NM_173216 // ST6GAL1 // ST6 beta-galactosamide alpha-2,6-sialyltransferase 1 // 3	8084717	0.0427221	-1.47096
20686	8063408 ---	8063408	0.049782	-1.47297
30329	8156022 BC130654 // LOC642947 // hypothetical protein LOC642947 // 9q21.13 // 642947 //	8156022	0.011913	-1.47527
32013	8171758 NR_023358 // SCARNA9L // small Cajal body-specific RNA 9-like (retrotransposed)	8171758	0.0310932	-1.47817
3478	7896043 ---	7896043	0.0151242	-1.48004
6635	7922351 AK130460 // LOC646870 // hypothetical protein LOC646870 // 1q25.1 // 646870	7922351	0.0353137	-1.48081
11709	7972713 NM_004093 // EFN2 // ephrin-B2 // 13q33 // 1948 /// ENST00000245323 // EFN2 //	7972713	0.00613831	-1.48097
2056	7894589 ---	7894589	0.0313354	-1.4866
2564	7895111 ---	7895111	0.0123017	-1.48745
2390	7894933 ---	7894933	0.0108182	-1.49471
19703	8052947 NM_019885 // CYP26B1 // cytochrome P450, family 26, subfamily B, polypeptide 1 /	8052947	0.0421597	-1.49494
23495	8091715 NM_020169 // LXN // latexin // 3q25.32 // 56925 /// ENST00000264265 // LXN // la	8091715	0.00565815	-1.49781
12167	7977075 NR_002964 // SNORA28 // small nucleolar RNA, H/ACA box 28 // 14q32.32 // 677811	7977075	0.0297469	-1.50075
21869	8074789 ---	8074789	0.0368805	-1.50481
9090	7946328 ---	7946328	0.00773656	-1.53297
31303	8165692 ---	8165692	0.0400306	-1.54929
7237	7928308 NM_019058 // DDIT4 // DNA-damage-inducible transcript 4 // 10pter-q26.12 // 5454	7928308	0.00460096	-1.54956
1357	7893877 ---	7893877	0.00811304	-1.56499

7323	7929065 NM_001548 // IFIT1 // interferon-induced protein with tetratricopeptide repeats	7929065	0.0254945	-1.57407
2096	7894631 ---	7894631	0.0490182	-1.59069
9301	7948306 ---	7948306	0.0481814	-1.60351
6329	7919340 NM_005266 // GJA5 // gap junction protein, alpha 5, 40kDa // 1q21.1 // 2702 ///	7919340	0.00319539	-1.62014
15769	8014063 NM_006495 // EVI2B // ecotropic viral integration site 2B // 17q11.2 // 2124 ///	8014063	0.0495808	-1.62407
2400	7894943 ---	7894943	0.0198262	-1.6301
5412	7910010 ---	7910010	0.0269225	-1.65329
8409	7939988 NM_001004742 // OR5M3 // olfactory receptor, family 5, subfamily M, member 3 //	7939988	0.0472464	-1.65479
16885	8025124 AK128820 // LOC100034248 // hypothetical LOC100034248 // 19p13.3 // 100034248	8025124	0.0233798	-1.66344
5679	7912537 NM_004753 // DHRS3 // dehydrogenase/reductase (SDR family) member 3 // 1p36.1 //	7912537	0.00645293	-1.69034
3254	7895811 ---	7895811	0.0444324	-1.69624
23543	8092169 NM_003810 // TNFSF10 // tumor necrosis factor (ligand) superfamily, member 10 //	8092169	0.0430802	-1.77005
2361	7894904 ---	7894904	0.00965646	-1.77497
1694	7894221 ---	7894221	0.0309952	-1.80759
8643	7942379 ---	7942379	0.0110078	-1.83755
26164	8117020 NM_013262 // MYLIP // myosin regulatory light chain interacting protein // 6p23-	8117020	0.00215768	-1.8724
27641	8131441 ---	8131441	0.0378624	-1.87579
21262	8068761 NM_207627 // ABCG1 // ATP-binding cassette, sub-family G (WHITE), member 1 // 21	8068761	0.014928	-1.88812
3057	7895608 ---	7895608	0.0344248	-1.91208
29062	8144569 ---	8144569	0.0324667	-1.94554
20869	8065242 XR_041836 // HSPC072 // HSPC072 protein // 20p11.23 // 29075 // AF161557 // HSP	8065242	0.0172758	-1.9487
21534	8071420 NM_000185 // SERPIND1 // serpin peptidase inhibitor, clade D (heparin cofactor),	8071420	0.00351306	-1.96538
2815	7895364 ---	7895364	0.0234859	-1.9967
3336	7895895 ---	7895895	0.0296052	-2.0344
1717	7894244 ---	7894244	0.0325293	-2.05052
3513	7896079 ---	7896079	0.0202602	-2.13152
2898	7895449 ---	7895449	0.0264011	-2.23193
4886	7904726 NM_006472 // TXNIP // thioredoxin interacting protein // 1q21.1 // 10628 // ENS	7904726	0.00680781	-2.83514
2242	7894781 ---	7894781	0.031585	-3.25793

Figure I

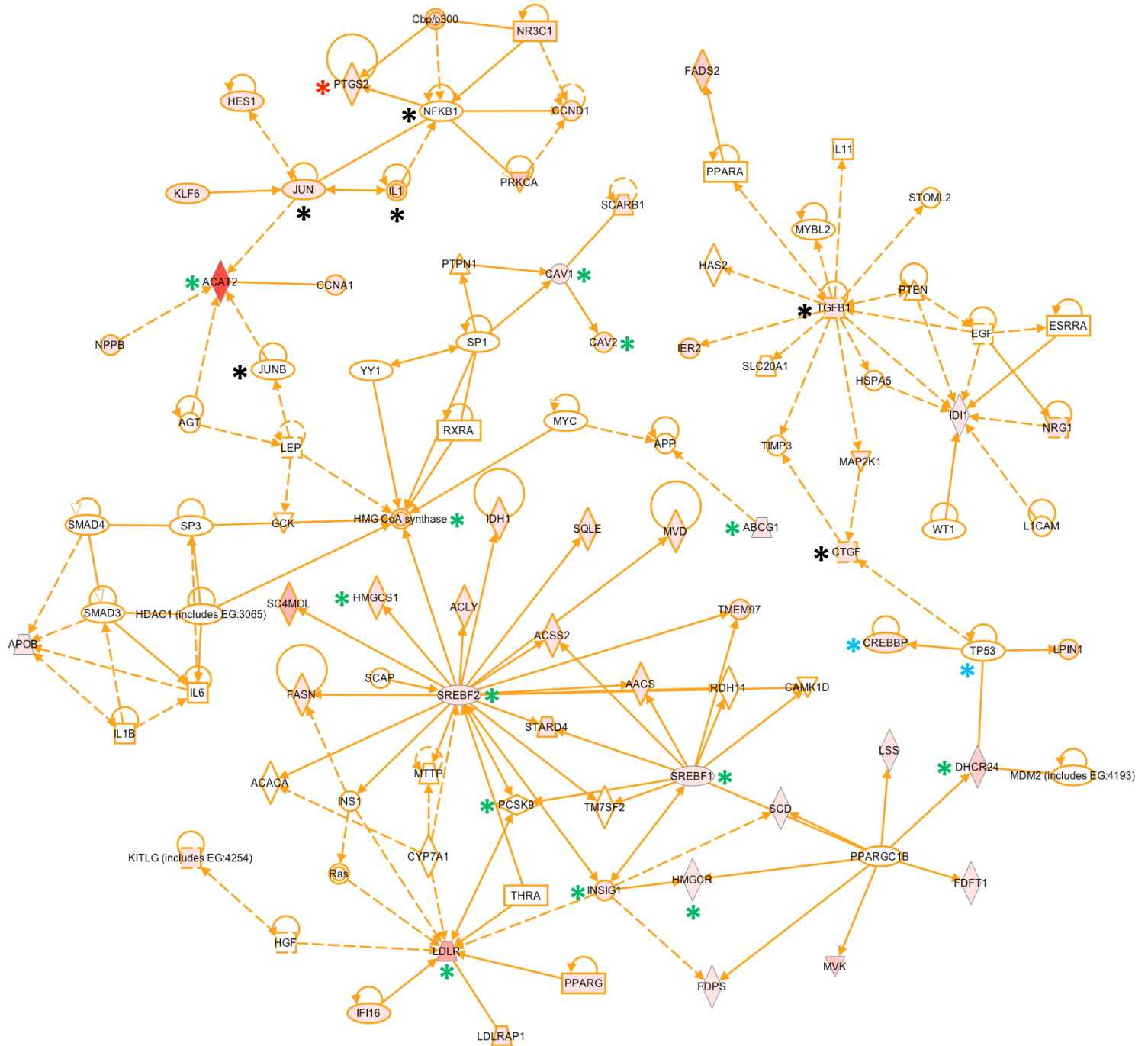
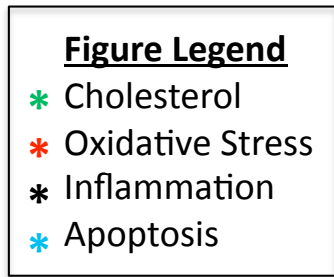


Figure II

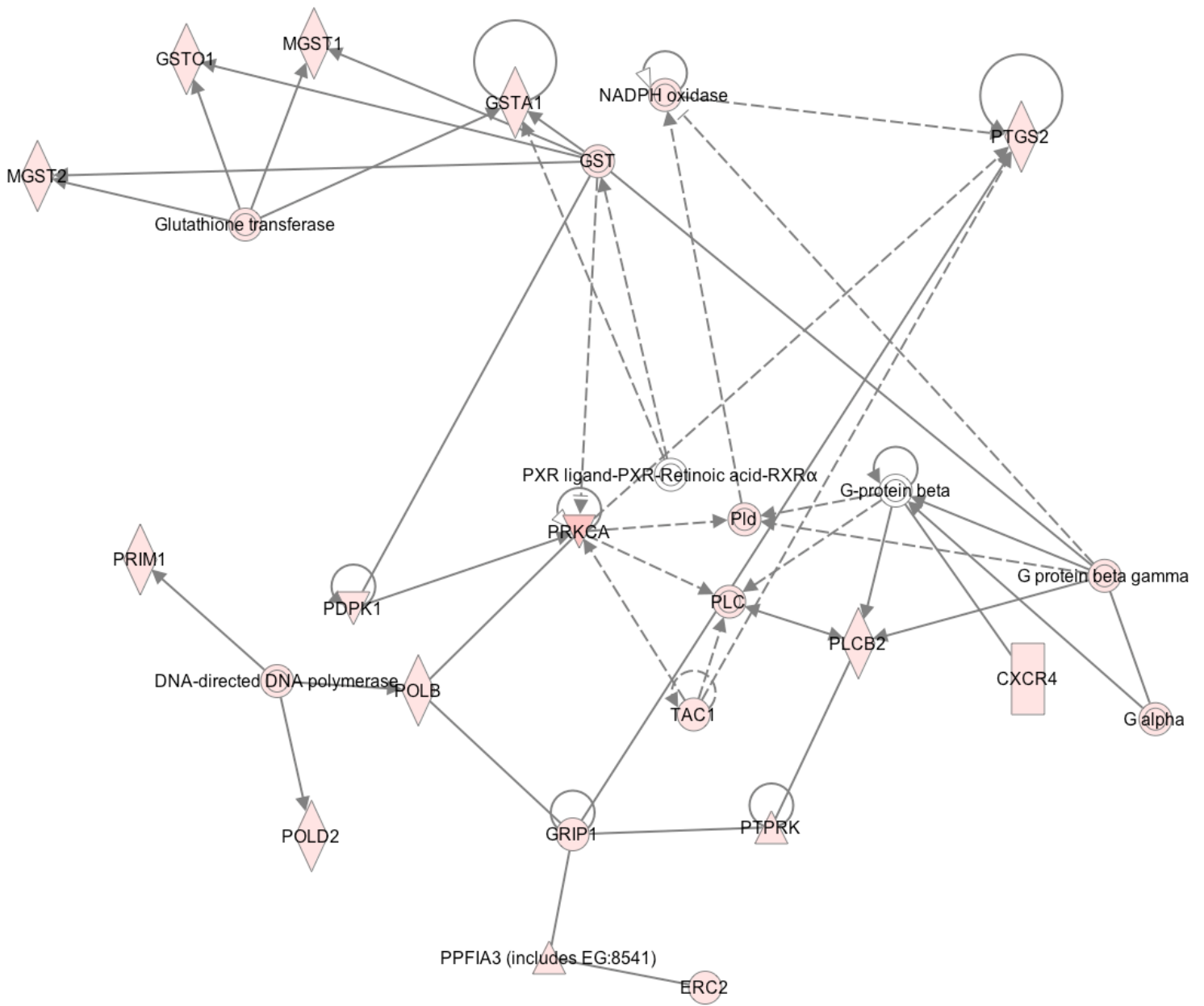


Figure III

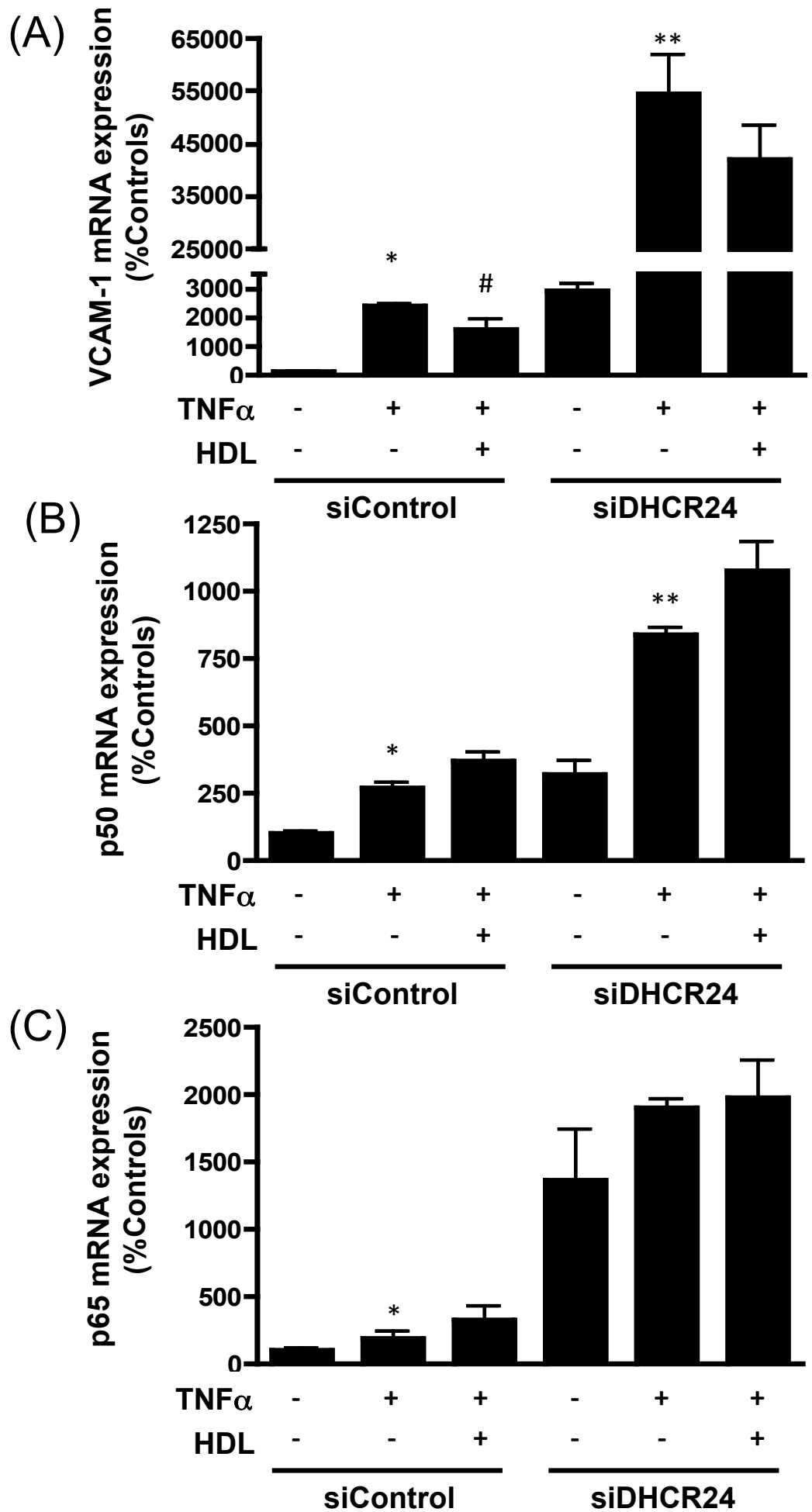


FIGURE LEGENDS FOR SUPPLEMENTARY MATERIAL

Figure I: Network of functionally related genes regulated by rHDLs.

Ingenuity Pathway Analysis (IPA) was used to create networks from the comparison rHDL versus PBS ($P < 0.01$, ANOVA statistics). The top network produced by IPA is shown. The microarray dataset containing gene identifiers and corresponding expression values was uploaded as an Excel spreadsheet using the template provided in the application. Each gene identifier was mapped to its corresponding gene object in the Ingenuity Pathway Knowledge Base (IPKB). The networks are displayed graphically as nodes (genes/gene products) and edges (the biological relationships between the nodes). A number of the genes in the network are related to cholesterol metabolism/synthesis (marked with green stars), oxidative stress (marked with red stars), apoptosis/cell cycles (marked with blue stars) or inflammation (marked with black stars). The complete list of genes of the networks can be seen in Table II (Supplementary).

Figure II: Network of antioxidant related genes regulated by rHDLs.

IPA was used to create an antioxidant network from the comparison between rHDL and PBS ($P < 0.01$, ANOVA statistics). The network is displayed graphically as nodes (genes/gene products) and edges (the biological relationships between the nodes). Shown are a number of genes that are known to be strong antioxidants with their known regulators.

Figure III: DHCR24 regulates VCAM-1, p50 and p65 NF- κ B expression

HCAECs transfected with siRNA targeted against DHCR24 (siDHCR24) or a scrambled control (siControl) were incubated with rHDLs or PBS for 16 hours with or without activation by TNF α for 5 hours. Total RNA was extracted and subjected to RT-PCR. (A) VCAM-1, (B) p50 and (C) p65 mRNA levels increased in siDHCR24-treated cells with no inhibition by rHDLs. * $P < 0.05$ compared to PBS-treated controls (siControl). # $P < 0.05$ TNF- α compared to rHDLs+TNF- α . ** $P < 0.05$ compared to siDHCR24 PBS-treated controls.