

Table7.Functional Classification

Table 7. Functional classification of genes regulated upon infection with PRV-Be and/or HSV-1(F)

Genbank#	Description	PRV		HSV	
		Max. fold change	Time (hpi)	Max. fold change	Time (hpi)
<u>Stress Response</u>					
AI104388	Heat shock 27 kDa protein (Hsp27)	-9.1	12		
AI014169	upregulated by 1,25-dihydroxyvitamin D-3, Vdup1 (oxidative stress)	-7.49	12		
L32591	GADD45	-6.33	12		
AI138143	glutathione S-transferase, theta 2; Gstt2	-5.08	12		
M11942, AI234604	Heat shock cognate protein 70, Hsc70	-4.97	12		
AA900900	RalA binding protein 1, Ralbp1	-4.88	12		
AI233261	Glutamate-cysteine ligase, regulatory (rate-limiting enzyme in antioxidant glutathione synthesis)	-4.45	12		
AA891829	GTP cyclohydrolase 1 (downregulation contributes to glucocorticoid hypertension in rats)	-4.37	12		
U95727	DnaJ homolog 2	-3.92	12		
AF100470	stress-associated ER protein 1	-3.71	12		
AA108277	Heat shock protein (hsp-E7I)	-3.62	12		
U57050	hypertension-related mRNA	-3.58	12		
AA899935	platelet-activating factor acetylhydrolase alpha 2 (downregulated by mediators of inflammation)	-3.53	12		
AI136977	FK506 binding protein 4 (immunophilin; antioxidant and neuroprotectant)	-3.39	12		
Z24721	Superoxide dismutase 3 (opposes inactivation of NO and maintains equilibrium between superoxide (O ₂ ⁻) and NO)	-3.36	12		
U62897	carboxypeptidase D precursor (stimulates NOS)	-3.22	12		
U30186	growth arrest and DNA-damage-inducible protein GADD153	-3.16	12		
AF026476	USF-1 (represses basal expression and IL-1beta induction of iNOS)	-3.06	12		
J02722	heme oxygenase-1 (induced by oxidative stress stimuli via MAP kinases of the JNK and p38 pathways)	4.06	8		
S81478	oxidative stress-inducible protein tyrosine phosphatase (MKP-1/CL100)	3.14, -3.58	8, 12		
M11794	metallothionein-2 and metallothionein-1 (anti-oxidant)	5.38	12		
X02904	glutathione S-transferase			-4.15	12
X60351	alpha B-crystallin (small heat-shock protein)			-3.86	12
AI170613	Heat shock 10 kD protein 1 (chaperonin 10)			-3.60	12
AA891848	Catalase (marker of oxidative stress)			-3.42	12
AI010083	peroxiredoxin 1			-3.25	12
Z75029	heat shock protein 70.2			31.02	12
Z27118	heat shock protein 70			26.34	12
D15069	adrenomedullin (vasodilator peptide, upreg. by cytokines eg. IL1-beta)			7.38	12
AI235747	Glutathione-S-transferase, alpha type (Ya)			7.06	12
AA926149	Catalase			3.93	12
M62642	hemopexin (antioxidant; binds and transports heme to prevent heme-mediated oxidative stress)			3.78	12
K01932	glutathione S-transferase Yc subunit			-8.37	12
D10926	tissue factor pathway inhibitor			-5.86	12
U07619	tissue factor protein			-5.82	12
AF058787	heme oxygenase-3 (HO-3)			3.58	12
AA875390	thioredoxin-like protein	8.29	0	4.48, 3.9, -	0, 5,
M83298, AI103238	protein phosphatase 2A (dephosphorylates Rb family protein during oxidative stress thereby causing cell death)	3.33, -3.87	4, 12	3.13, 4.95	6, 12
X15705	heat shock protein-related gene hst70.	-3.67	12	3.85, 4.79	4, 8
AA818604,				3.68, 7.27	8, 12
AA848563	Heat shock protein 70-1	-3.07	12	23.12	12
AF055714	hypertension-regulated vascular factor-1C-4	3.4	12	3.63, 4.24	12
AA799650	peroxiredoxin 3	-3.6	12	-4.33	12
M64711, E02223	endothelin-1 (insulin-induced vasoconstrictor)	9.13	12	4.97	12
AA875620, X77209	Hsp70-3	4	12	3.54	12
AF006617	microsomal stress 70 protein ATPase core (Stch) {similar to HSP70}	-3.57	12	-7.94	12

Table7.Functional Classification

AI169631	Prohibitin	-12.82	12	-4.12	12
S63521	glucose-regulated protein GRP78 (stress protein)	-71.43	12	-5.38	12
M14050	Heat shock 70kD protein 5 (glucose regulated protein)	-18.87	12	-3.91	12
AI228738	FK506-binding protein 1 (12kD)	-6.76	12	-3.04	12
<u>Transcription Factor</u>					
D31734	Distal-less 3 (Dlx-3) homeobox protein	-3.75	6		
L06804	LIM homeodomain protein (LH-2)	-3.69	8		
AF052042	zinc finger protein Y1 (RLZF-Y)	-12.35	12		
Z17223	mesenchyme homeo box 2 (Gax)	-9.68	12		
L42855	RNA polymerase II transcription factor SIII p18 subunit	-9.34	12		
D13417	transcriptional repressor HES-1 (Notch effector)	-8.15	12		
U09551	HMG-box containing protein 1 (HBP1)	-6	12		
U97061	zinc-finger protein, Slug (repressor of E-cadherin)	-5.81	12		
AJ004858	Sry-related HMG-box protein Sox11	-5.32	12		
AA800513	ESTs, transformation/transcription domain-assoc. protein (highly similar)	-5.23	12		
M65251	angiotensinogen gene-inducible enhancer-binding protein 1	-4.99	12		
AB002406	TIP49, ruvB-like protein 1 (putative ATP-dependent DNA helicase)	-3.59	12		
AA800912	ESTs, general transcription factor II I repeat domain-containing 1	-3.55	12		
AA800794	ESTs, Zinc-finger protein HT2A (highly similar)	-3.42	12		
D12769	BTE binding protein	-3.42	12		
X62323	Pan-1 (transcription factor E2a)	-3.32	12		
X65948	alpha initiation factor (TFIIB)	-3.27	12		
AF015953	TIC mRNA (related to BMAL1, MOP3)	-3.18	12		
AF055884	nuclear DEAF-1 related transcriptional regulator (NUDR)	-3.11	12		
U56862	pancreas only zinc finger protein (POZF-1)	-3.09	12		
AA859750	ESTs, ETS-domain transcriptional repressor (highly similar)	-3.02	12		
AI175900	Ets1	3.76	12		
X07266	gene 33 (negative regulator of EGFR; causes activation of NF-KB)	41.49	8		
U78102	Krox20 (NGFI-B or Egr2)	15.56	8		
AF001417	Kruppel-like transcription factor Zf9/COPEB (induces uPA expression and activates latent TGF-beta1)	4.27	8		
L13193	brain factor-3 (HFH-BF-3) (forkhead transcription factor)	3.27	8		
AB017044	hepatocyte nuclear factor 3 gamma, HNF-3 (regulates glucose transporter expression)	4.39	12		
X53858	thyroid transcription factor 1.	4.17	12		
U17837	retinoblastoma-interacting zinc-finger protein RIZ			-3.06, 4.53	1, 12
AA944177	high mobility group box 1			-13.45	12
M63282	leucine zipper protein			6.26	12
L13201	HNF-3/forkhead homolog-1 (HFH-1)			5.22	12
L23148	inhibitor of DNA-binding, splice variant Id1.25			4.56	12
M87634	brain factor-1 (member of the HNF-3/forkhead family)			4.37	12
U17013	transcription factor Oct1			4.3	12
U56732	KRAB/zinc finger suppressor protein 1 (KS1)			4.19	12
D82074	brain basic helix-loop-helix factor 1 (BHF-1)			3.88	12
AF000942	Inhibitor of DNA-binding 3, Id3a			3.78	12
L22760	DNA binding protein (GATA-GT1)			3.4	12
X54249	zinc finger protein AT-BP1			3.01	12
AF039832	homeobox protein (rPtx2)	-10.27	12	4.14	4
X59993	putative zinc finger protein	-7.21	12	6.85	12
AI014091,					
AA900476	Cbp/p300-interacting transactivator; Cited2	-5.56	12	-3.77	12
AA900750, U72620	Lost on transformation 1, Lot1 (potential tumor suppressor)	-4.72	12	-3.79	12
AI230395, E12829	TBP-interacting protein 120A (Tip120A)	-4.35	12	-3.88	12
L20913	vascular endothelial growth factor form 3 (VEGF-3)	-3.18	12	3.95	12
U07610	zinc finger protein (HF-1b)	-3.01	12	3.23	12
U75397, U75398	Krox24 (NGFI-A or Egr1)	9.38	8	3.03	12
X60769	silencer factor B (IL-6 inducible trans-activator LAP)	-5.56	12	-7.09	12
AB012235	Nuclear Factor 1, NF1-X1	-3.4	12	-6.58	12

Table7.Functional Classification

X64403	CCAAT /enhancer binding protein gamma	-4.07	12	-3.02	12
AA891717	ESTs, upstream transcription factor 1 (Highly similar)	5.24	12	9	12
S82627	pem (orphan homeobox gene/oncofetal gene)	4.08	12	3.24	12
AI230256	Inhibitor of DNA binding 2, Id2	3.91	12	8.13	12
U91679	ETS domain transcription factor Pet-1	3.51	12	3.43	12
<u>Apoptosis</u>					
U49930	Caspase 3, ICE-like cysteine protease	-7.88	12		
U77933	Nedd2/Ich-1 mRNA (involved with apoptosis)	-5.58	12		
AA891969	ESTs, nuclear DNA-binding protein (C1D protein) (highly similar)	-5.4	12		
U05989	clone par-4 induced by effectors of apoptosis	-5.11	12		
AF025670	caspase 6	-4.71	12		
Y13591	calpastatin	-3.55	12		
AI171796	calpain 6	-3.42	12		
U27201	tissue inhibitor of metalloproteinase 3 (TIMP-3)	-3.02	12		
L14680	bcl-2			-3.15	2
AA818072	bcl-2 associated death agonist, BAD			-12.16	12
AI169327	tissue inhibitor of metalloproteinase 1, Timp1			-10.87	12
S72594	tissue inhibitor of metalloproteinase type 2, TIMP-2			-6	12
X63594	RL/IF-1 (IkappaB)			5.94	12
X66693	granzyme B			4.76	12
U70268	mud-7 (involved in neuronal programmed cell death)			3.33	12
L24374	matrix metalloproteinase-7 (cleaves Fas ligand)			3.03	12
AF065433	Bcl-2 related apoptotic gene product BimL	-3.48	5	-3.86, 5.48	2, 12
AF065431	Bcl-2 related apoptotic gene product BimL	-3.09	6	7.56	12
M60921, AA944156	B-cell translocation gene 2, Btg2 (prevents neuronal apoptosis)	4.88	6	4.63	12
U49729	rBax alpha (Bcl2-associated X protein; apoptosis inducer)	-4.7	12	-5.35	12
<u>Signaling</u>					
M22926	muscarinic acetylcholine receptor M5	-3.6	0		
AI176191	tissue-type vomeronasal neurons putative pheromone receptor V2R2	-3.29	0		
L22655	anti-acetylcholine receptor antibody gene, kappa-chain	-3.93	1		
U95157	ryanodine receptor type II	-3.3	3		
X55812	SKR6 (a CB1 cannabinoid receptor)	-6.97	6		
X60661	RYD5 (potential ligand-binding protein)	3.87, -3.04	4, 6		
AA848831	endothelial differentiation, LPA G-protein-coupled receptor 2 (Edg2)	-3.72	8		
L38483	jagged (Notch ligand)	-21.13	12		
M23697	tissue-type plasminogen activator (t-PA)	-9.41	12		
AB017596	plasma cell membrane glycoprotein, PC1 (insulin signaling)	-8.75	12		
M81225	farnesyltransferase alpha subunit (insulin target; interacts with TGF-beta receptor	-7.96	12		
U08136	Golgi protein MG-160 (cysteine-rich FGF receptor, E-selectin ligand-1, or latent	-6.98	12		
AI176461	TGF-beta complex protein-1)	-6.6	12		
L01702	E-selectin, ligand	-6.38	12		
AJ000556	protein-tyrosine-phosphatase, receptor-type, A	-6.04	12		
AI172476	Janus protein tyrosine kinase 1, JAK1.	-5.89	12		
U57391	TGFB inducible early growth response, Tieg	-5.76	12		
X91810	SH2-B PH domain containing signaling mediator 1 (Jak2 substrate)	-5.75	12		
AA800784	Stat3	-5.74	12		
D12498	cysteine rich protein 61, Cyr61	-5.67	12		
D85435	FGF receptor-1	-5.58	12		
AA892554	protein kinase C delta-binding protein	-5.23	12		
S78215	ESTs, Ras-GTPase-activating protein binding protein 2 (highly similar)	-5.06	12		
U73142	protein phosphatase 1 alpha	-4.98	12		
AF009329	p38 MAP kinase	-4.84	12		
AF061443	SHARP-1 (component of HDAC corepressor, represses Notch target genes in	-4.79	12		
D13623	the absence of activated Notch)	-4.65	12		
	G protein-coupled receptor (LGR4)				
	Ribosome binding protein p34, RBP34 (interacts with FGF)				

Table7.Functional Classification

U10699	Edg5, endothelial differentiation, sphingolipid G-protein-coupled receptor	-4.2	12	
AA801286	Inositol (myo)-1(or 4)-monophosphatase 1	-4.14	12	
X58375	insulin-receptor (IRS-1)	-3.89	12	
U38812	IP3 Receptor	-3.64	12	
AA893443	Ras-related small GTPase RAP1B	-3.6	12	
D38450	G protein coupled receptor	-3.56	12	
D29766	Crk-associated substrate, p130 (Src substrate)	-3.47	12	
AF067727	Smad1 protein	-3.38	12	
M31076	transforming growth factor alpha (TGF-alpha)	-3.29	12	
X85183	ras-related GTPase, ragA.	-3.27	12	
X99267	presenilin-2 (component of gamma-secretase, cleaves Notch and APP)	-3.25	12	
X98490	p32-subunit of replication protein A (binds SH2 domain of STAT3 & regulates its transcription)	-3.24	12	
M25758	phosphatidylinositol transfer protein	-3.14	12	
X54656	glutamate receptor.	-3.04	12	
U38481	ROK-alpha (inhibits insulin signaling by binding IRS-1)	-3.02	12	
M24067	plasminogen activator inhibitor-1, PAI-1 (TGF-beta1 responsive; detaches cells from ECM by inactivating integrins)	6.22	8	
D28498	Fit-1 tyrosine kinase receptor (soluble VEGF receptor)	4.73	12	
X13411	elk protein (brain-specific receptor tyrosine kinase)	3.47	12	
AA963674	MAPKK2	3.21	12	
E12743	cholecystokinin-A receptor	3.04	12	
AI030997	toll-like receptor 4			-4.36, 4.43 0, 4
M31837, AI009405	insulin-like growth factor binding protein precursor IGF-BP3			8.17 12
U65656	gelatinase A (matrix metalloproteinase 2)			-16.42 12
U59809	insulin-like growth factor II receptor			-14.51 12
L19180	receptor-linked protein tyrosine phosphatase (PTP-P1)			-12.71 12
AA891916	Mir16 (GPI phosphodiesterase regulated by stimulation of GPCRs)			-8.42 12
U03491	TGF beta-3			-8.40 12
AA957896	mitogen activated protein kinase kinase 2, MAPKK2			-8.38 12
L19341	activin type I receptor			-6.83 12
X52498	transforming growth factor-beta 1			-6.79 12
AA892268	receptor-like tyrosine kinase, Ryk			-6.58 12
M81642	G-protein coupled thrombin receptor			-5.69 12
L04485	MAP kinase kinase			-5.63 12
M91595	insulin-like growth factor binding protein-2			-5.50 12
AF068136	G alpha interacting protein (GAIP)			-5.14 12
A09811	BRL-3A binding protein (insulin-like growth factor binding protein)			-5.12 12
S55223	putative protein kinase C regulatory protein; 14-3-3 protein beta subtype			-5.08 12
AB011369	protein kinase C-binding protein Beta15 RBCK2			-4.82 12
AB017912	Smad2 protein			-4.63 12
D14441	acidic membrane protein of rat brain NAP-22 (calmodulin binding)			-4.43 12
AA849769	follistatin-related protein (upregulated by TGF-beta1)			-3.94 12
AF004218	brain sigma receptor			-3.73 12
X13722	LDL-receptor			3.75, -3.72 0, 12
AI231354	stress activated protein kinase alpha II, Mapk9			-3.69 12
X87885	G protein pathway suppressor 1			-3.44 12
AI007614	ESTs, MAPKKK-4 (highly similar)			-3.39 12
AF079864	putative G-protein coupled receptor RA1c			-3.38 12
AI228247	Guanine nucleotide binding protein, alpha inhibiting polypeptide 3			-3.20 12
AB008538	liver HDL receptor			-3.19 12
L35767	very low density lipoprotein receptor (VLDLR)			-3.02 12
M17527	GTP-binding protein, alpha inhibiting 1			3.55 0
S53987	nicotinic receptor alpha 7 subunit			8.09 12
U01146	nuclear orphan receptor HZF-3			6.36 12
U02320	neu differentiation factor (neuregulin; activates JAK/STAT pathway)			5.65 12
U31159	SH3 domain binding protein CR16 (glucocorticoid-regulated gene; MAPK substrate)			5.20 12
AA891764	low density lipoprotein receptor-related protein 2			4.76 12
AB009463	low density lipoprotein receptor-related protein 3			4.63 12

Table7.Functional Classification

X95990	C5a anaphylatoxin receptor			4.19	12
U76206	orphan G protein-coupled receptor, VTR 15-20			3.86	12
U37462	MAP kinase/ERK kinase 5 (MEK5)			3.83	12
S48190	activin receptor type II			3.82	12
AA924289	insulin-like growth factor binding protein			3.77	12
AF013144	dual-specificity phosphatase; MAP-kinase phosphatase (cpg21)			3.64	12
M36074	mineralocorticoid receptor			3.58	12
L10073	5-hydroxytryptamine receptor (5HT5b)			3.57	12
AF090692	cystatin-related epididymal spermatogenic protein (CRES) (cystein protease inhibitor)			3.55	12
AA946488	protein tyrosine phosphatase 2E			3.52	12
U93306	VEGF receptor-2/FLK-1 (endothelial cell-selective angiogenic factor)			3.46	12
S47609	adenosine receptor			3.29	12
X89701	olfactory receptor TPCR13			3.29	12
X59249	putative G-protein coupled receptor			3.26	12
S46785	insulin-like growth factor binding protein complex acid-labile subunit			3.18	12
L14323	phospholipase C-beta1b			3.16	12
AI138070	protein tyrosine phosphatase, non-receptor type 11			3.14	12
U47014	pro-protein convertase 5 isoform B			3.11	12
U92802	orphan G-protein coupled receptor, GPR41 (similar to human IL8-related receptor)			3.10	12
J03572	alkaline phosphatase			3.10	12
X89697	olfactory receptor TPCR07			3.10	12
U10303	Edg-1 orphan receptor (G-protein coupled receptor; enhances MAPK and PLA2 activities)	-7.73	0	-3.32	1
X94185	dual specificity phosphatase (MKP-3) (dephosphorylates ERK1/2 and causes apoptosis by degradation of Bcl-2)	10.92, -3.46	8, 12	-3.04	12
AF053988	tissue-type vomeronasal neurons putative pheromone receptor V2R1-1	3.12	12	3.2	12
J05189	neuromedin K receptor	-3.1	3	5.54	12
AA859578	ESTs, proprotein convertase 5 precursor (highly similar)	-4.21	8	-3.81	4, 12
AI101320	jagged 2, Jag2	4.45	12	3.15	12
AI029920, M62781	Insulin-like growth factor-binding protein 5, Igfbp5	-9.09	12	-3.06	12
X91988	Stat5b	4.05	12	5.97	12
AI180424, D30740	14-3-3 protein, zeta polypeptide {putative protein kinase C regulator}	-3.35	12	-6.49	12
AA942751, D17614	14-3-3 protein, theta polypeptide	-7.63	12	-4.24	12
AF095927, J04503	Protein phosphatase 2C	-9.52	12	-4.95	12
AA892470, X1393	Calmodulin 1 (binds Cip1(p21) and nNOS)	-3.04	12	-4.9	12
L26110, U63318	TGF-beta type I receptor	8.87	12	6.94	12
M60786	endothelin receptor	3.51, -4.72	2, 12	-4.2	12
M55250	inhibitory glycine receptor alpha subunit	3.41	5	3.72	12
AA800613, AI136891, X63369	Zfp36/ Tis11 (upregulated by p38 MAPK; stabilizes TNF-alpha mRNA)	5.69, -6.85	8, 12	4.69	12
X71898	urinary plasminogen activator receptor 1 (uPAR1)	5.25	8		
X96437	PRG1/LEX-1 (NF-KB target; involved in ERK signaling and prevention of T-cell apoptosis)	3.18	8	3.5	12
AA859896, AA925762	Myristoylated alanine-rich protein kinase C substrate, Macs	-7.35	12	-8.62	12
M58040	transferrin receptor	3.33	5	6.99	12
S46785	insulin-like growth factor binding protein complex acid-labile subunit	3.11	12	3.42	12
X89699	olfactory receptor TPCR10	4.04	12	3.58	12
X16038	alkaline phosphatase	-3.5	12	-3.72	12
AF063102	calcium-independent alpha-latrotoxin receptor homolog 2 (CIRL-2)	-11.91	12	-18.18	12
U88324	G protein beta1 subunit (rGb1)	-17.54	12	-15.87	12
D01046	RAB11B, member RAS oncogene family	-16.39	12	-15.15	12
AA891527	four and a half LIM domains 2, fh12 (interacts with IGFBP-5)	-34.48	12	-13.70	12
AF030089	activity and neurotransmitter-induced early gene protein 4 (ania-4)	-6.67	12	-13.16	12
Z46614	caveolin (induces PI3K/Akt signaling pathway and increases arsenite cytotoxicity)	-3.55	12	-10.75	12
M60103	Protein tyrosine phosphatase, receptor-type, F	-5.95	12	-8.40	12

Table7.Functional Classification

AF014503	p8 mRNA (TGF-beta responsive gene enhances Smad transcriptional activity)	-6.49	12	-6.99	12
AI232477	G protein gamma-5 subunit	-5.24	12	-6.45	12
L25785	Transforming growth factor beta stimulated clone 22, TSC-22	-12.66	12	-6.14	12
AF032120	GLUT1 transporter C-terminal BP (regulator of G-protein signaling)	-6.71	12	-6.02	12
AB000778	phospholipase D	-6.71	12	-5.85	12
X12355	phosphoinositide-specific phospholipase C form-I (PI-PLC I)	-4.33	12	-5.16	12
AJ007016	protein tyrosine phosphatase, type IVA, member 2	-5.32	12	-4.26	12
M64301	Mitogen-activated protein kinase 6 (ERK3)	-6.37	12	-3.83	12
AB001576	neural- and thymus-derived activator for ErbB kinases (NTAK)	5.19	12	4.06	12
U36786	putative pheromone receptor VN7	3.21	12	3.08	12
S76466	serine-threonine kinase receptor	3.09	12	4.59	12
<u>Neuronal</u>					
U67137	PSD-95/SAP90-associated protein-1 (SAPAP-1)	-5.89	5		
U08259	N-methyl-D-aspartate receptor NMDAR2C subunit	-3.99	5		
AF044910	survival motor neuron (smn)	-9.11	12		
X87157	neurotensin endopeptidase.	-6.58	12		
AF030087	activity and neurotransmitter-induced early gene 2 (ania-2)	-6.51	12		
AB020879	homer 3 (neuronal imm. early gene; regulates glutamate recept. signalling)	-3.79	12		
U14950	synapse-associated protein 97 (SAP97)	-3.58	12		
D32249	neurodegeneration associated protein 1	-3.42	12		
AF031430	syntaxin 7	-3.06	12		
E12625	novel protein expressed with nerve injury.	3.91	8		
X80395	rVAT (vesicle transporter of acetylcholine)	5.24	12		
U28975	glycine transporter GLYT-1 (regulates synaptic glycine concentrations required for activation NMDA subtypes of glutamate receptor)	4.38	12		
S98336	Mullerian inhibiting substance (member of TGF-beta family)	4.37	12		
S76758	brain-derived neurotrophic factor BDNF (possible role in synaptic formation and transmission)	4.15	12		
M90518	metabotropic glutamate receptor (GLUR4)	3.47	12		
L08491	GABA-A receptor alpha-2 subunit gene	3.3	12		
AF083269	p41-Arc			-6.67	12
M93669	secretogranin II (precursor for neuropeptide, secretoneurin, involved in neurotransmission and inflammatory response)			-4.40, 4.53	0, 12
M64867	serotonin receptor			-3.75, 3.13	0, 12
AF093267	homer-1b (regulates trafficking of group I metabotropic glutamate recept.)			-5.6	2
E12625	novel protein expressed with nerve injury			-9.79	12
X65454	SC65 synaptonemal complex			-7.96	12
X76985	latexin (subtype-specific molecular marker of glutamatergic neurons)			-4.52	12
AA874794	nerve growth factor receptor associated protein 1			-4.5	12
AF016297	neuropilin-2 (receptor for axon guidance factors and VEGF)			-3.41	12
AA893471	Reelin (neuronal positioning)			6.88	12
S82649	neuronal activity-regulated pentraxin (Narp)			5.8	12
U39549	synaptogyrin			5.35	12
M61099	metabotropic glutamate receptor (MGLUR1)			5.16	12
AA858626	synaptic vesicle glycoprotein 2 b			4.47	12
AF005099	neuronal pentraxin receptor			3.85	12
J05232	neuronal nicotinic acetylcholine receptor-related protein beta-4			3.8	12
S77863	mu-opioid receptor MOR (induced by seizures)			3.7	12
L35558	neuronal glutamate/aspartate transport protein			3.62	12
AF093268	homer-1c			3.52	12
D13125	neural visinin-like Ca2+-binding protein type 2 (NVP-2)			3.16	12
M32061	alpha-2B-adrenergic receptor (RNG-alpha-2)			3.11	12
U14398	synaptotagmin IV homolog			3.05	12
U19866	activity-regulated cytoskeleton-associated protein, Arc	6.41	6	7.98	12
AF030088	activity and neurotransmitter-induced early gene 3 (ania-3)	3.67, 7.2	3, 4	4.14	3, 4, 8
X96790	metabotropic glutamate receptor subtype 7b	4.1	12	6.88	12
L22655	anti-acetylcholine receptor antibody gene, kappa-chain	3.18	12	-3.59	8

Table7.Functional Classification

M36419	glutamate receptor (GluR-B)	7.44	12	-3.64, 9.63	0, 12
S46131	dopamine D1 receptor	4.04	12	7.48	12
D28512	Synaptotagmin III	3.9	12	3.92	12
L20823	syntaxin 2	-4.98	12	-4.33	12
S61973	NMDA receptor glutamate-binding subunit	-3.23	12	-3.94	12
AF023621	neurotensin receptor-3/sortilin (novel candidate sorting receptor)	-5.16	12	-3.29	12
AB016161	GABAB receptor 1d	7.42	12	4.71	12
Z49748	m4 cholinergic muscarinic receptor	4.53	12	3.07	12
S56679	AMPA-selective glutamate receptor-A	4.13	12	4.06	12
Z11558	glia maturation factor beta (GMF-beta)	3.55	12	3.37	12
M89953	5-HT1D serotonin receptor	3.1	12	4.39	12
<u>Kinase</u>					
D49785	protein kinase (MUK)	-14.44	12		
M18330	protein kinase C delta	-11.04	12		
AA859827	ESTs, uridine-cytidine kinase 2 (highly similar)	-8.02	12		
X95577	beta subunit of AMP-activated protein kinase	-7.77	12		
U49953	protein kinase MUK2	-7.24	12		
Y15748	3-phosphoinositide dependent protein kinase-1 PDK1 {phosphorylates Akt; inhibited by binding 14-3-3}	-6.87	12		
AF084205	serine/threonine protein kinase TAO1	-4.83	12		
AF030558	phosphatidylinositol 5-phosphate 4-kinase gamma	-4.62	12		
X94351	CLK3 (dual-specificity protein kinase involved in mRNA splicing)	-3.84	12		
AI235291	casein kinase 1, alpha 1	-3.48	12		
H31623	Serine/threonine kinase 2	-3.31	12		
D10770	cAMP-dependent protein kinase (beta isoform of catalytic subunit)	-3.06	12		
S77556	receptor tyrosine kinase, Ptk-3S	5.12	12		
Z21935	protein kinase rMNK2.	3.89	12		
AB010154	sbk mRNA for serine/threonine protein kinase with SH3 ligand	3.11	12		
M73808	phosphorylase kinase catalytic subunit			-6.51	12
D30040	RAC protein kinase alpha (Akt)			-6.45	12
AI044254	pyridoxal kinase, Pdxk			8.24	12
U50412	PI3K regulatory subunit, p85 alpha			5.08	12
U40819	5'-AMP-activated protein kinase alpha-1 catalytic subunit			4.36	12
X63675	Pim-1 kinase (role in control of cell growth, differentiation & apoptosis)			3.8	12
AI104012	Dual Specificity Yak1-related kinase			3.68	12
X57986	cAMP-dependent protein kinase, C alpha subunit			3.34	12
U63971	rhodopsin kinase			3.19	12
E01789	C-kinase type-II (beta-2)			3.12	12
M31788	phosphoglycerate kinase	-5.82	3	3.12	12
D84667, AI102103	phosphatidylinositol 4-kinase	-5.97	12	-3.04	12
L01624	serum and glucocorticoid-regulated kinase (sgk)	5.93	8	8.21	12
D10262, D37884	choline kinase R1	3.54	12	8.24	12
X07320	phosphorylase kinase gamma-subunit	4.39	12	5.59	12
AF016247	tyrosine kinase; RTK40 homolog (tyro10)	-14.09	12	-9.35	12
X57986	cAMP-dependent protein kinase, C alpha subunit	-6.33	12	-8.77	12
AJ006710	phosphatidylinositol 3-kinase	-8.13	12	-5.68	12
H31287	LOC246273 kinase	-7.19	12	-5.44	12
L13407	calcium/calmodulin-dependent protein kinase II delta subunit	-6.67	12	-5.35	12
AI176052	adenylate kinase 3, Ak3	-3.98	12	-4.41	12
L24907	calcium/calmodulin-dependent protein kinase I	-5.78	12	-4.22	12
AI059291	protein kinase, cAMP-dependent, regulatory, type 2, alpha (Prkar2a)	5.49	12	4.99	12
<u>Cell-cycle</u>					
U34843	cell cycle progression related D123	-12	12		
U95920	pericentriolar material (PCM-1)	-8.63	12		
D38560	cyclinG-associated kinase	-5.61	12		
X83579	Cdk-activating kinase.	-4.82	12		
L11007	cyclin-dependent kinase 4 (cdk4)			-5.07	12
S55427	growth-arrest-specific Gas-3 homolog			-4.77	12

Table7.Functional Classification

Al180288	Caldesmon 1 (actin-binding target of Cdc2, phosphorylated during mitosis and prevents bleb formation)			-4.05	12
AA899106	cyclin D2			-3.78	12
AA957218	cyclin D1			3.37	12
U18419	nonmuscle caldesmon			3.00	12
AF030091	cyclin L			3.00	12
M24604	proliferating cell nuclear antigen (PCNA/cyclin)	-6.45	12	3.11	12
X75785	synaptonemal complex protein 3 (SCP3) - meiosis specific gene	4.11	5	4.91	5
AF036548	RGC-32 (involved in cell cycle activation; induced by complement)	-83.33	12	-37.04	12
AA893235	ESTs, Putative lymphocyte G0/G1 switch protein 2 (Highly similar)	-9.9	12	-6.41	12
X60767	cdc2	-15.38	12	-5	12
AA925473	cell division cycle 42 homolog (S. cerevisiae), Cdc42	-3.44	12	-3.5	12
<u>Oncogenesis</u>					
K02816	pR-ET2 encoded oncodevelopmental protein (putative)	-8.11	12		
AF090306	retinoblastoma binding protein 7 (antiproliferative)	-5.03	12		
AA875455	p53-activated gene 608, PAG608	-4.65	12		
Al175959	v-jun	4.27	12		
X63281	N-myc	-3.82	12		
X12535	ras-related protein p23	-3.74	12		
X76453	Hras-revertant gene 107	-3.51	12		
Al007857	HGF-regulated tyrosine kinase substrate	-3.39	12		
AA891041	jun B proto-oncogene	8.34	8		
Al102031	myc box dependent interacting protein 1, Bin1	3.09	12		
Y10019	down-regulated in mos-transformed cells DRM			-4.29	12
M13011	c-ras-H-1 protein			-4.2	12
L41275	p21 protein (cip1)			-3.61	12
U02522	metastasis associated 1, Mta1			-3.57	12
D37951	MIBP1 (c-myc intron binding protein 1)			3.08	12
Al639318	Ret proto-oncogene	-3.38, 4.06	0, 1	6.45, -3.92	1, 8
D38629	APC protein	-3.43	12	-3.65	0
X06769	c-fos	6.5	6	6.4	12
X03347	P75 gag-fos fusion protein	6.43	6	4.72	12
Y00396	c-myc oncogene	-4.93	12	-5.49	12
U82591	RCL {c-Myc target gene; growth related}	-4.33	12	-5.29	12
S80345	von Hippel-Lindau tumor suppressor gene homolog	-6.29	12	-3.1	12
Al105076	murine thymoma viral (v-akt) oncogene homolog 2	-4.1	12	-3.06	12
D11445	Gro (neutrophil chemoattractant; protooncogene)	3.05, 3.93	5, 12	4.19, 3.9	5, 12
<u>RNA binding proteins</u>					
U25746	RNA helicase with arginine-serine-rich domain	-13	12		
Al104524	heterogeneous nuclear ribonucleoprotein A/B, Hnrpab	-9.13	12		
U32577	heterogeneous nuclear ribonucleoprotein M (M4 protein)	-5.82	12		
AF079873	splicing factor 1 homolog	-5.49	12		
Al180350	CTD-binding SR-like protein rA9 (interacts with RNAP II, possibly links transcription with mRNA splicing)	-4.54	12		
M29295	snRNP-associated protein	-4.24	12		
AA800126	ESTs, splicing factor (highly similar)	-3.53	12		
AA892228	ESTs, elav-type RNA-binding protein 3 (highly similar)	-3.36	12		
AA859519	ESTs, RNA-binding protein with multiple splicing (highly similar)	3.4	12		
AA965147	heterogeneous nuclear ribonucleoprotein A1			-3.32	12
AA955859	splicing factor, arginine/serine-rich (transformer 2 Drosophila homolog)10			4.18	12
D49708	RNA binding protein (transformer-2-like)			3.01	12
AA955554	splicing factor, arginine/serine-rich 5	3.74	2	-4.2	1
Al177683	hnRNP protein	-5.15	12	-6.71	12
U25746	RNA helicase with arginine-serine-rich domain	-4.48	12	-4.27	12
AB022209	ribonucleoprotein F	-3.92	12	-4.18	12
U43534	double-stranded RNA-specific editase (RED1)	-4.46	12	-3.03	12
U77931	rRNA promoter binding protein	3.75	12	4.7	12

Table7.Functional Classification

Translation

AI031019	translation initiation factor eIF-2B alpha-subunit	-3.83	12		
AA892801	eukaryotic translation elongation factor 2	3.59	12		
AI639441	eukaryotic translation initiation factor eIF-2B, gamma-subunit			5.8	12
U64705	protein synthesis initiation factor 4AII			4.44	12
X83399, U05014	eIF-4E.	-4.96	12	-3.01	12
U95052	translation repressor NAT1	-5.99	12	-3.66	12

Protein folding

AA859980	T-complex 1 (Tcp-1) {chaperonin}	-11.27	12		
L17127	proteasome RN3 subunit	-9.6	12		
AI232268	LDL receptor-related protein associated protein 1 (chaperone for LRP)	-9.02	12		
AJ006340	26S proteasome, subunit p112	-7.35	12		
D90258	proteasome subunit RC8.	-6.7	12		
U13895	MSS1 protein (ATPase component of proteasomal regulatory complex)	-6.48	12		
AI172162	proteasome (prosome, macropain) subunit, beta type 4, Psmb4	-5.54	12		
L17127	proteasome RN3 subunit	-4.63	12		
AB000491	proteasome p45/SUG	-4.33	12		
AA849722	proteasome (prosome, macropain) subunit, beta type 1	-3.9	12		
U77918	proteosomal ATPase TBP1	-3.82	12		
AA892831	ESTs, 26S proteasome regulatory complex chain p44.5 (highly similar)	-3.71	12		
AF099093	ubiquitin-conjugating enzyme UBC7	-3.49	12		
D50695	proteasomal ATPase TBP7	-3.3	12		
X62671	ubiquitin-like protein/rps30	3.21	12		
U36482	endoplasmic reticulum protein ERp29 precursor (chaperone)			-5.83	12
AI230712	Subtilisin - like endoprotease			-3.83	12
AI231292	cystatin 3 (inhibitor of cysteine proteases)			-3.64	12
M96630	sec61 homologue (cotranslational folding)			-3.59	12
AA859882	ubiquitin carboxy-terminal hydrolase L1			-3.58	12
X05300	ribophorin I (subunit of oligosaccharyltransferase)			-3.53	12
AI170403	proteasome (prosome, macropain) subunit, alpha type 2			-3.43	12
AI233362	Lysosomal associated membrane protein 1 Lamp1			-3.18	12
AI176595	Cathepsin L (lysosomal cysteine peptidases)			-3.11	12
M32016	lysosomal membrane glycoprotein type B (lgp-B)			-3.11	12
D13907	mitochondrial processing protease P52			-3.02	12
AA893127	signal sequence receptor 4			4.65	12
U55765	RASP1 (serine protease inhibitor)			3.9	12
M24353	alpha-mannosidase II			3.31	12
U13176	ubiquitin conjugating enzyme	-13.75	12	-3.83	12
D10754	proteasome subunit R-DELTA	-11.63	12	-4.56	12
X55298	ribophorin II (subunit of oligosaccharyltransferase)	-4.41	12	-16.95	12
X54467	cathepsin D (lysosomal endoprotease)	-4.39	12	-10	12
D13623	Ribosome-binding protein p34 (role in ribosome-membrane association)	-9.09	12	-3.76	12
U21871	outer mitochondrial membrane receptor rTOM20	-3.37	12	-3.45	12
M83745	Protein convertase subtilisin / kexin, type I	3.28	12	5.94	12

Immunity

AI137470	lectin, mannose-binding, 1 (complement activation)	-4.88	12		
X67859	autoantigen	-4.23	12		
AA818025	CD59 antigen (complement inhibitor)	-3.77	12		
L26268	B cell translocation gene 1	-3.65	12		
U24652	Lnk1 adaptor (negatively regulates B lymphocyte production by controlling pro-B cell expansion)	4.06	8		
L38482	NK-cell specific serine protease	6.75	12		
M75168	HLA-B-associated transcript 1A	3.74	12		
U17919	allograft inflammatory factor-1	3.1	12		
M36151	MHC class II A-beta RT1.B-b-beta	3.02	12		
M21622	IgE receptor			-3.74	8
AA799550	T-cell activation protein-related protein			-6.87	12
AA893384	ESTs, Interferon regulatory factor 3 (IRF-3) (moderately similar)			-6.76	12

Table7.Functional Classification

AA818487	cyclophilin B			-5.52	12
AI103957	CD81 antigen (target of antiproliferative antibody 1)			-3.83	12
X61381	interferon induced mRNA.			-3.67	12
M34253	interferon regulatory factor 1 (IRF-1)			10.68	12
M23889	T-cell receptor beta chain			9.19	12
AI014163	interferon-related developmental regulator 1			6.64	12
S80118	nude			4.41	12
X73371	Fc gamma receptor			4.08	12
M84149	IgH chain VJ region			4.06	12
AF082533	NK receptor KILR-1			3.76	12
AF029240	MHC class Ib RT1.S3			3.67	12
D87919	interferon beta			3.59	12
AA892259	ESTs, interferon consensus sequence-binding protein (highly similar)			3.5	12
AF024712	MHC class Ib M4			3.07	12
E00444	DNA coding for gamma-interferon.	-3.8	6	-3.12	2
U16686	defensin	-3.38	6	-3.2	8
AF021349	natural killer cell protein group 2-C (NKG2C)	-3.25	6	6.22	12
U67888	mast cell protease 3 (RMCP-3)	-3.08, 3.88	6, 12	13.39	12
L37966	T-cell receptor alpha-chain	9.67	12	3.65	12
AI228674	Peptidylprolyl isomerase A (cyclophilin A) {immunophilin}	-3.2	12	-3.04	12
U57063	natural killer cell protease 7 (RNKP-7)	3.16	12	4.22	12
X62325	T cell receptor V-alpha J-alpha	-3.84	8	-3.26	8
L41684	clone REM2 ORF (monoclonal autoantibody)	-33.33	12	-16.13	12
X14323	IgG receptor FcRn large subunit p51.	-3.53	12	-7.3	12
X61654	CD63 mast-cell antigen	-13.89	12	-7.14	12
Z68145	immunoglobulin lambda-5 chain	4.93	12	4.43	12
X04310	CD8 antigen, beta-chain	4.27	12	3.21	12
U75411	anti-idiotypic immunoglobulin M light chain	3.57	12	4.59	12
M21622	high-affinity IgE receptor	3.32	12	3.06	12
<u>Cellular transport</u>					
U25282	brush border myosin I (BBMI)	-5.5	0		
AI136175	Rab38	-3.65	3		
AF054618	cortactin isoform C	-12.79	12		
AA866465	tropomyosin isoform 6	-11.14	12		
U79417	71 kDa component of rsec6/8 secretory complex	-10.53	12		
X89225	protein linked to system L-like neutral amino acid transport activity.	-8.86	12		
AA944324	ADP-ribosylation factor 6, Arf6	-7.77	12		
S62097	Rab geranylgeranyl transferase component B beta subunit	-7.77	12		
AB006451	rat Tim23 {mitochondrial preprotein import}	-7.68	12		
D79221	putative vesicle transport-related protein (RA410)	-7.5	12		
AF034582	vesicle associated protein (VAP1)	-7.42	12		
AA875253	ADP-ribosylation factor-like 1, Arl1	-5.51	12		
L10336	guanine nucleotide-releasing protein (mss4)	-5.21	12		
AI105348	cofilin 1, Cfl1	-4.85	12		
J03583	clathrin heavy chain	-4.83	12		
AI144767	tropomyosin 1, alpha	-4.44	12		
AA944423	cis-Golgi matrix protein GM130	-4.38	12		
M22323	gamma-enteric smooth muscle actin	-4.28	12		
U39044	cytoplasmic dynein intermediate chain 2A (IC-2A)	-4.08	12		
AA851887	Dynamin 2	-3.97	12		
AI105054	coatamer protein complex, subunit beta 1, Copb1	-3.8	12		
U75920	APC binding protein EB1 (regulation of microtubule polymerization)	-3.79	12		
U32575	rsec6 (subunit of the mammalian exocyst complex)	-3.66	12		
AA893634	ESTs, zeta2-COP (highly similar)	-3.64	12		
L07073	clathrin-associated adaptor protein homolog	-3.45	12		
AI231821	stathmin 1 (interacts with tubulin and inhibits microtubule polymerization)	-3.42	12		
AJ000485	CLIP-115 protein (links microtubules to organelles)	-3.4	12		
AI175935	myosin I heavy chain	-3.35	12		
AJ001320	multi PDZ domain protein.	-3.19	12		

Table7.Functional Classification

U31463	nonmuscle myosin heavy chain-A	-3.16	12		
U05784	microtubule-associated proteins 1A and 1B light chain 3	-3.14	12		
L11930	cyclase-associated protein homologue (interacts with cofilin and inhibits actin polymerization)	-3.11	12		
AA893210	beta prime COP	-3.09	12		
AA892369	ESTs, kinesin family member C3 (highly similar)	-3.03	12		
AB008521	dynein light intermediate chain 53/55	3.37	0		
AA892333	alpha-tubulin	4.09	12		
U49099	cis-Golgi p28 {ER-Golgi transport}	3.37	12		
X17682	microtubule associated protein MAP2c.			-3.01	6
U75917	clathrin-associated protein 17 (AP17)			-15.88	12
D25543	golgi-associated protein GCP360			-14.28	12
AF025506	prenylated rab acceptor 1 (PRA1)			-9.73	12
AJ006064	coronin-like protein (actin-associated protein)			-9.30	12
AA875033	fibulin 5 (induced by TGF-beta)			-9.26	12
X54617	myosin regulatory light chain			-5.86	12
AA893702	transcobalamin II precursor, Tcn2p			-5.36	12
D84477	RhoA			-5.17	12
AI012807	adaptor-related protein complex 2, mu 1 subunit (AP-2, mu-1)			-5.17	12
M15883	clathrin light chain			-3.94	12
AA891880	tricarboxylate carrier-like protein			-3.49	12
U12568	ADP-ribosylation factor-like protein 3 (rad3)			-3.32	12
J02780	tropomyosin 4			-3.14	12
AA799389	Rab3B protein			4.1	12
L24897	myosin heavy chain			3.62	12
AA875165	ESTs, gamma tubulin ring complex protein (Highly similar)			3.54	12
AI071399	vesicle transport-related, RA410			3.21	12
D31962	RhoGAP			3.06	12
D26500	dynein-like protein 9A			3.02	12
AF083331	kinesin-like protein (KIF1B)	-4.38	1	10.37	12
D50664	oligopeptide transporter	-4.82	3	3.09	12
AF019043	dynamamin-like protein (DLP1) {vesicle-associated}	-7.41	12	3.05	12
X13905	ras-related rab1B protein	-5.05	12	-6.45	12
AA875470	ESTs, COP9 (highly similar)	-3.14	12	-3.12	12
X03369	beta-tubulin T beta15.	-3.08	12	-7.93	2
X03369	beta-tubulin T beta15.	3.9	12	4.71	5
K03468	myosin heavy chain protein	3.66	12	-4.54	12
AI104567	actin alpha cardiac 1	3.95	5	4.66, 6.43	5, 12
U37099	small GTP-binding protein (rab3c)	5.16	12	4.66	12
U52950	microtubule-associated protein 1B	-4.88	2	-4.24	2
X06801	alpha-actin	-166.67	12	-27.03	12
AA875523	ESTs, Myosin light chain alkali, smooth-muscle isoform (Highly similar)	-4.81	12	-14.71	12
S77858	non-muscle myosin alkali light chain	-5.13	12	-10.2	12
AA900769	smooth muscle alpha-actin, Acta2	-5.99	12	-7.09	12
AA893173	ESTs, vacuolar protein sorting 29 (Highly similar)	-3.18	12	-6.99	12
S77900	myosin regulatory light chain isoform C	-3.3	12	-5.29	12
M15474, M60666	tropomyosin 2, alpha	-5.38	12	-5.24	12
X53565	TGN38 (cargo transporter; upregulates PAI-1 secretion)	-16.95	12	-5.21	12
X92097	coated vesicle membrane protein	-3.26	12	-5.13	12
X78606	rab28 (member RAS oncogene family)	-4.03	12	-3.7	12
AI073056	kinesin light chain 1	-10.31	12	-3.69	12
AF033027	prenylated SNARE protein Ykt6p	-8.13	12	-3.61	12
X97443	transmembrane protein Tmp21-l (vesicular trafficking)	-3.92	12	-3.32	12
AA900505	rhoB gene	-9.35	12	-3.24	12
X53455	microtubule-associated protein 2	-4.88	12	-3.11	12
AA800305	ESTs, rab5 (Highly similar)	-3	12	-3.1	12
L24776	tropomyosin 3, gamma	3.19	12	3.13	12
<u>Cell adhesion</u>					
AF072892	hyaluronan binding proteoglycan (versican V3 isoform precursor)	-4.71	12		

Table7.Functional Classification

AA799423	nexilin (actin filament-binding protein localized at cell-matrix adherens junction)	-4.23	12		
X70706	T-plastin.	-4.18	12		
X67788	ezrin (substr. for Lck tyrosine kinase; early effector of T-cell activation)	-3.53	12		
U58858	plakoglobin (desmosomal plaque protein)	-3.32	12		
L12025	tumor-associated glycoprotein E4 (Tage4)	3.25	8		
M61875	CD44 (hyaluronan binding protein)	5.05	12		
AF018261	Epsin (induces curvature in clathrin-coated pits)	3.55	12		
D10587	sialoglycoprotein (LGP85)	3.5	12		
X59677	M2 gene (mucin)	3.48	12		
AI146195	adducin 3, gamma (membrane-skeletal protein localized at spectrin-actin junctions)	3.04	12		
D25290	K-cadherin			-3.62	8
M35602	beta-fibrinogen			3.53, -3.41	1, 8
X89963	Thrombospondin-4, TSP-4(extracellular, adhesive protein)			-74.84	12
X82152	fibromodulin			-15.99	12
AA891204	Secreted acidic cystein-rich glycoprotein (osteonectin), Sparc			-14.03	12
M21354	collagen type III alpha-1			-11.02	12
AF017437	integrin-associated protein form 4			-6.58	12
AA799520	ESTs, Integral membrane protein 2B (highly similar)			-6.28	12
AJ005394	collagen type V alpha 1			-6.23	12
S63458	collagen type VIII alpha 1			-6.13	12
AA817887	profilin			-6.00	12
X62952	vimentin			-5.99	12
M83107	Transgelin SM22			-5.69	12
AF097593	testicular N-cadherin			-5.30	12
AA860057	fibrillin-2			-4.72	12
M69246	collagen-binding protein (gp46)			-4.09	12
AA859830	biglycan			-3.90	12
M58404	thymosin beta-10 (regulation of anchorage-independent growth & actin filament assembly)			-3.82	12
J04035	tropoelastin			-3.67	12
Z54212	epithelial membrane protein-1			-3.56	12
AA800962	ESTs, talin (highly similar)			-3.42	12
L11002	ankyrin binding glycoprotein-1 related mRNA			6.74	12
AI072634	keratin complex 1, acidic, gene 18			5.08	12
U06752	mucin 4			4.19	12
U76717	PG10.2 (glycoprotein involved in cell adhesion, growth and differentiation of pineal and retinal photoreceptor cells)			3.94	12
M76535	connexin (CXN-40) {gap junction structural protein}			3.73	12
AF069775	L1-like cell adhesion molecule (CALL)			3.58	12
AB017170	Slit-1 (ligand of heparan sulfate proteoglycan glypican-1)			3.43	12
X16072	beta B2 crystallin			3.29	12
AJ011811	claudin-7 (tight junction protein)			3.24	12
L47281	collagen type IV alpha-3			3.23	12
X05861	gamma-fibrinogen			3.22	12
S79214	collagen type X alpha 1			3.19	12
S79523	L-selectin			3.11	12
M19359	gamma-crystallin gene cluster			3.05	12
L17318	proline-rich proteoglycan (PRPG2)			3.04	12
U81037	ankyrin binding cell adhesion molecule NrCAM			3.03	12
U75916	zonula occludens 2 protein (ZO-2)			3.03	12
U59801	integrin alpha-M (Itgam)	-5.02, 5.1	0, 12	5.04	12
X51615	connexin (Cx26)	-4.07	1	3.61	12
AA875097	EST, Fibrinogen alpha/alpha-E chain precursor (highly similar)	-3.16, 8.7	1, 5	5.08	5
M88709	cell adhesion-like molecule	-5.48	3	-4.98	4
X59859, AI639233	decorin	3.1, -4.23, -		-3.75, 3.15, -3.58, 3.55, -	0, 2, 4, 5, 8
AB004278	protocadherin 2	3.07	2, 3, 4	15.88	4, 5, 8
		-3.03	5	3.88	12

Table7.Functional Classification

AI058601	ankyrin 3 (G), Ank3	-6.56	6	5.8	12
AA866466	cytokeratin 8 polypeptide	-4.8, 3.97	8, 12	7.19	12
AI231472, Z78279	collagen, type I, alpha 1	-11.24	12	-5.21	12
M28259	Fibronectin 1	-19.23	12	-8.85	12
AF087945	nitzin	4.49	12	-3.8	2
AF016503	procollagen C-proteinase enhancer protein (PCPE)	4.22	12	-3.8	12
U07615, X59677	mucin	7.01	12	5.39	12
AA893216	kidney-specific membrane protein	3.44	12	3.23, -5.31	2, 8
AA963857	glypican 3 (cell-surface heparan sulfate proteoglycans)	16.12	12	11.16	12
AF020046	integrin alpha OX-62	3.34	5	-3.01, 3.12	0, 5
M57276	leukocyte antigen MRC-OX44	-3.23	8	3.19, 4.47	12
S61865	syndecan (heparan sulfate proteoglycan core protein)	-3.86	12	-27.03	12
U49062	CD24 (ligand of P-Selectin)	10	12	25.73	12
Y12760	latent transforming growth factor beta binding protein 2 (ECM proteins for targeting TGF-beta action)	-10.1	12	-31.25	12
U20121	collagen type XI alpha-1	-15.63	12	-24.39	12
AB011531	Slit (drosophila) homolog 3	-7.94	12	-23.26	12
AA799580	junctophilin 2 (components of junctional complexes between plasma membrane and ER)	-7.8	12	-20.00	12
M14656	osteopontin	-12.05	12	-14.09	12
AA874848	thy-1 gene for cell-surface glycoprotein	-4.83	12	-14.09	12
AI012030	Matrix Gla protein, Mgp	-13.89	12	-12.50	12
U57362	collagen XII alpha 1	-3.07	12	-11.36	12
U27562	SC1 (ECM protein 2)	-3.98	12	-10.53	12
M64986	amphoterin (HMG1; heparin-binding protein)	-4.1	12	-9.90	12
M81687	syndecan 2	-10.87	12	-8.13	12
M15797	entactin (nidogen)	-21.74	12	-7.81	12
AI179399	collagen, type V, alpha 2	-17.24	12	-7.19	12
L00191	fibronectin 3	-9.26	12	-6.90	12
AA891812	ESTs, alpha adducin (Highly similar)	-13.16	12	-6.76	12
AB004276	protocadherin 4	-3.51	12	-6.58	12
U76714	cell adhesion regulator (CAR1)	-3.05	12	-5.32	12
X01785	thymocyte mRNA for cell surface protein (MRC OX-2)	-3.25	12	-5.10	12
AF084186	Noerythroid alpha-spectrin 2	-6.85	12	-4.70	12
X54640	Basigin (OX47 antigen)	-6.17	12	-4.53	12
X56541	membrane-spanning proteoglycan NG2	-4.59	12	-3.86	12
AI172064	beta-galactoside-binding lectin (galectin)	-4.07	12	-3.31	12
X82396	cathepsin B	-3.77	12	-3.29	12
X13016	OX-45 surface antigen	-4.29	12	-3.28	12
Z78279	collagen alpha1 type I	-8.26	12	-3.14	12
AI104225	Laminin chain beta 2, Lamb2	-3.53	12	-3.06	12
U33553	Chondroitin sulfate proteoglycan 5 (neuroglycan C)	3.69	12	3.14	12
X13983	alpha-2-macroglobulin gene	3.06	12	5.17	12
<u>Channels/ Transporters</u>					
U17133	zinc transporter (ZnT-1)	-4.46	12		
U78090	potassium channel regulator 1	-3.28	12		
AJ224680	cyclic nucleotide-gated channel beta subunit 1	3.68	12		
AF031642	kidney urea transporter (UT4)	3.25	12		
M88111	high affinity L-proline transporter	3.2	12		
U53927	astroglial high-affinity cationic amino acid transporter RCAT2 (similar to T-cell early-activation protein)	3.12	12		
AJ007627	ELK channel 2	3.11	12		
Z56277	CLC-5 chloride channel			-4.2	1
M27223	Na+ channel			-3.93	6
AF041105	organic anion transporter protein 3			-8.28	8
U10096	bumetanide-sensitive sodium-(potassium)-chloride cotransporter			3.55	12
AA799645	FXYD domain-containing ion transport regulator 1, Fxyd1			-9.17	12
AF048828	voltage dependent anion channel			-3.99	12
AF015304	equilibrative nitrobenzylthioinosine-sensitive nucleoside transporter			-3.87	12

Table7.Functional Classification

AF106563	P-glycoprotein-like ATP-binding cassette transporter			-3.79	12
AA891445	suppressor of K ⁺ transport defect 3, Skd3			-3	12
U04937	Na-Ca exchanger isoform NACA1			3.78	1
M99223	calcium transporting ATPase			4.95	12
AF021923	potassium-dependent sodium-calcium exchanger (NCKX2)			4.56	12
L29573	NaCl-dependent norepinephrine transporter			3.37	12
L39018	sodium channel protein 6 (SCP6)			3.35	12
L46873	proton-dependent peptide transporter			3.34	12
D21132	phosphatidylinositol transfer protein (beta isoform)			3.32	12
M30581	organellar Ca-2+ pump			3.11	12
AF022819	putative potassium channel TWIK			3.08	12
AF020756	P2X2-3 receptor (membrane ion channel that opens upon ATP binding)			3.07	12
AI145680	Solute carrier 16 (monocarboxylic acid transporter), member 1	-3.01	12	3.96	12
AF087453, M81784	K ⁺ channel	5.15	12	5.61	12
M57682	brain calcium channel alpha-1 subunit	-4.79	8	3.19, -4.33, -2, 6, 3.14, 3.29	8, 12
X67948	Aquaporin 1	-8.77	12	-13.51	12
D13906	Aquaporin 2	6.66	12	6.33	12
U75395	furosemide-sensitive K-Cl cotransporter	-6.99	12	-10.1	12
AF032120	GLUT1 transporter C-terminal binding protein (regulator of G-protein signaling)	-6.71	12	-6.02	12
M96601	taurine transporter	-9.35	12	-5.41	12
J05166	band 3 Cl-/HCO ₃ ⁻ exchanger (B3RP2)	-4.65	12	-5.24	12
AF035387	ATPase, H ⁺ transporting, lysosomal (vacuolar proton pump), subunit 1	-3.89	12	-5.1	12
D17370, U70476	cationic amino acid transporter-1 (CAT-1)	-5.88	12	-4.98	12
AI639049	solute carrier family 12, member 4	-3.31	12	-4.74	12
D12770	mitochondrial adenine nucleotide translocator	-12.99	12	-4.41	12
AF051561	Na-K-Cl cotransporter	-5.16	12	-3.53	12
AA892390	solute carrier family 11 member 2	-12.35	12	-3.08	12
<u>Growth Factor</u>					
D42148	growth potentiating factor			-7.13	12
M17412	growth and transformation dependent protein			-3.7	12
Z35138, L19112	fibroblast growth factor receptor 2b			3.19	3
AB009246	Stem cell growth factor (SCGF)			3.39	4
Z83757	growth hormone receptor			7.8	12
L05489	heparin-binding EGF-like growth factor			5.2	12
AA850734	vascular endothelial growth factor			3.03	12
X06107, M81183	insulin-like growth factor I (IGF-I)	-6.48, -3.02, 1, 2, 8, 3.58, 3.43	12	-5.69	12
X17012	insulin-like growth factor II (IGFII)	4.1	12	13.08	12
AI102795	Pleiotrophin (mitogenic/angiogenic heparin-binding peptide)	-3.65	12	-27.03	12
S54008	fibroblast growth factor receptor 1 beta	-32.26	12	-25	12
X62322	epithelin 1 and 2 (growth regulators of epithelial cells)	-7.94	12	-7.75	12
<u>Metabolism</u>					
AI228110	UDP-glucuronosyltransferase 8 (Ugt8)	-4.08	1		
D29646	ADP-ribosyl cyclase (CD38)	-4.46	3		
M57672	gamma-glutamyltransferase	-4.7	5		
AA893239	2-hydroxyphytanoyl-CoA lyase, Hpcl2	-3.23	6		
AA891764	low density lipoprotein receptor-related protein 2, Lrp2	-3.74	8		
D37920	squalene epoxidase	-19.44	12		
U01344	clone A-2 arylamine N-acetyltransferase	-17.1	12		
AI176504	glutaminase, Gls	-12.25	12		
AF093773	cytosolic malate dehydrogenase (Mdh)	-11.58	12		
J02791	acyl-CoA dehydrogenase medium subunit	-11.01	12		
AA892325	ESTs, choline/ethanolaminephosphotransferase (highly similar)	-10	12		
U21662	beta-1,2-N-acetylglucosaminyltransferase II {golgi-resident enzyme}	-9.65	12		

Table7.Functional Classification

D30647	very-long-chain Acyl-CoA dehydrogenase	-7.28	12		
J05210	ATP citrate-lyase (converts citrate into oxaloacetate releasing Acetyl-CoA; Akt substrate)	-6.96	12		
D87515	aminopeptidase-B (M1-family zinc metallopeptidase)	-6.96	12		
J02752	acyl-CoA oxidase	-6.89	12		
AA892314	Isocitrate dehydrogenase 1, Idh1 {key enzyme in citric acid cycle}	-6.81	12		
AA799700	ESTs, Selenophosphate synthetase 2 (highly similar) {redox modulation of Ras/MAPK pathway}	-6.37	12		
D89340	dipeptidyl peptidase III	-4.8	12		
U17260	arylamine N-acetyltransferase-1 (AT-1)	-4.65	12		
AA875233	Prosaposin (lysosomal degradation of sphingolipids)	-4.49	12		
D10706	Ornithine decarboxylase antizyme	-4.46	12		
D13978	argininosuccinate lyase (conversion of L-citrulline to L-arginine, substrate of NOS)	-4.34	12		
AA892006	ESTs, Vacuolar ATP synthase catalytic subunit A (highly similar)	-4.15	12		
D89514	IMP cyclohydrolase (catalyzes de novo purine biosynthesis	-4.06	12		
AJ000347	3'(2'),5'-bisphosphate nucleotidase.	-3.96	12		
S78556	75 kda glucose regulated protein (grp75)	-3.69	12		
J05031	isovaleryl-CoA dehydrogenase (IVD)	-3.52	12		
L07736	carnitine palmitoyltransferase I mRNA	-3.43	12		
X16554	phosphoribosylpyrophosphate synthetase subunit I	-3.13	12		
E03229	L-cysteine oxygen oxidoreductase	-3.1	12		
D00729	delta3, delta2-enoyl-CoA isomerase.	-3.05	12		
AA893325	ornithine aminotransferase	-3.04	12		
M22631	alpha-propionyl-CoA carboxylase	-3.03	12		
AFFXatHexokinase					
M	Hexokinase M	3.15	1		
AB005900	oxidized low-density lipoprotein (LOX-1)	3.62	8		
X94769	choline dehydrogenase.	6.67	12		
AF061971	palmitoyl-protein thioesterase (PPT-2)	4.61	12		
M35270	mitochondrial serine:pyruvate aminotransferase precursor (mSPT)	4.2	12		
U11275	phenylethanolamine N-methyltransferase (PNMT)	4.29	12		
D10874	H(+)-transporting ATPase	3.49	12		
M00002	apolipoprotein A-IV prepeptide	3.13	12		
AA893213	apolipoprotein M	3.11	12		
AB003478	beta1,3-galactosyltransferase	3.11	12		
AB015637	alpha(1,2) fucosyltransferase	3.11	12		
AF049344	UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferase	3.01	12		
D29646	ADP-ribosyl cyclase / cyclic ADP-ribose hydrolase (CD38)			-4.3	0
AA893242	fatty acid Coenzyme A ligase, long chain 2			-3.1	2
D13122	ATPase inhibitor protein			-19	12
U23407	cellular retinoic acid-binding protein II (CRABP II) (regulates genes responsible for lipid metabolism and adipocyte differentiation)			-18.26	12
X02610	non-neuronal enolase (NNE)			-9.85	12
AI102814	lysyl oxidase, Lox			-9.77	12
M64755	cysteine sulfinic acid decarboxylase			-8.43	12
D87991	UDP-galactose transporter related isozyme 1			-7.09	12
AI230247	selenoprotein P, plasma, 1, Sepp1			-4.72	12
AI171506	Malic enzyme 1, soluble			-4.67	12
AI231807	ferritin light chain 1, Ft11			-4.58	12
D82928	phosphatidylinositol synthase			-4.52	12
D00636	NADH-cytochrome b5 reductase			-4.39	12
AI104399	Triosephosphate isomerase 1, Tpi1			-4.27	12
AA892012	aspartate aminotransferase 2			-4.07	12
AI172293	sterol-C4-methyl oxidase-like			-3.96	12
AA891872	ESTs, NAD(P)+ transhydrogenase (highly similar)			-3.87	12
M74494, M28647	Na,K-ATPase alpha-1 subunit			-3.8	12
AI169417	Phosphoglycerate mutase 1			-3.74	12
AA924326	Aldolase A, fructose-bisphosphate			-3.73	12
U81186	smooth muscle-specific 17beta-hydroxysteroid dehydrogenase type 3			-3.73	12
AI105448	Hydroxysteroid dehydrogenase, 11 beta type 1			-3.61	12

Table7.Functional Classification

X97772	D-3-phosphoglycerate dehydrogenase			-3.53		12
AI013861	3-hydroxyisobutyrate dehydrogenase			-3.52		12
L22294	pyruvate dehydrogenase kinase			-3.4		12
U75393	succinyl-CoA synthetase alpha subunit {nuclear gene encoding mitochondrial protein}			-3.34		12
D13921	mitochondrial acetoacetyl-CoA thiolase			-3.03		12
AI014135	beta-carotene 15, 15-dioxygenase			3.03		0
J04791	ornithine decarboxylase (ODC)			14.81		12
AI043631	ornithine decarboxylase antizyme inhibitor			7.09		12
AB000717, J05571	S-adenosylmethionine synthetase			6.59		12
U60063	aldehyde dehydrogenase			6.41		12
M25350	cAMP phosphodiesterase			5.83		12
AB010635	carboxylesterase 2			5.25		12
AI008131	S-Adenosylmethionine decarboxylase 1A, Amd1a			5.13		12
X58294	carbonic anhydrase II			4.59		12
AA956930	Endothelin-converting enzyme 1 (key enzyme in the biosynthesis of endothelin 1)			4.54		12
L32601	alpha-hydroxysteroid dehydrogenase			4.13		12
AI179613	Glutamate dehydrogenase			3.94		12
AA894273	dimethylarginine dimethylaminohydrolase 1			3.75		12
U30813	aspartyl-tRNA synthetase			3.74		12
D63704	dihydropyrimidinase			3.7		12
L22339	N-hydroxy-2-acetylaminofluorene (ST1C1)			3.52		12
AB010429	acyl-CoA hydrolase-like protein			3.36		12
X55286	HMG-CoA reductase.			3.2		12
X56747	fetal intestinal lactase-phlorizin hydrolase precursor			3.16		12
D10853	amidophosphoribosyltransferase			3.15		12
D50580	carboxylesterase			3.05		12
AF062741	pyruvate dehydrogenase phosphatase isoenzyme 2			3.04		12
Z27513	carbamoylphosphate synthase I	-12.08	1	7.02, -9.43	0, 2	
X57565	UDP-glucuronosyltransferase 2A1	3.78	12	3.99		12
AA926193	sulfotransferase family, cytosolic, 1C, member 2, Sult1c2	-5.15	3	3.89, 3.39		12
M82845	peptidylglycine alpha-amidating monooxygenase-5 (PAM)	-3.58, -4.28,	0, 3, 6,			
J04197, M27886,		-3.24, 3.62	12	5.56		12
S67900, X83735	6-phosphofructo-2-kinase/fructose-2, 6-bisphosphatase	-3.05, 12.86	5, 12	-4.39, 4.48	8, 12	
X54510	coupling factor 6 of mitochondrial ATP synthase complex.	-5.76	12	-6.67		12
AI231500	phosphoribosyl pyrophosphate synthetase-associated protein 2	-4.75	12	3.29		12
AB016800	7-dehydrocholesterol reductase	-4.57	12	-3.44		12
AA800851	carboxylesterase 3	4.48, 6.26	1, 8	3.39, -17.27	8, 12	
M27440	apolipoprotein B	3.68	6	3.39		12
AI104882	cytosolic epoxide hydrolase	4.16	12	-3.04		8
AI177096	Adenine phosphoribosyltransferase (APRT)	3.89	12	-3.55		12
L27059	phosphodiesterase	-6.1	12	5.08		12
D84450	Na+,K+-ATPase beta-3 subunit	-3.77	12	-4.17		12
X02284	aldolase B	3.86	12	3.12		12
M89945	farnesyl diphosphate synthase	-9.8	12	-35.71		12
M95591	squalene synthetase (Farnesyl diphosphate farnesyl transferase 1)	-10.2	12	-11.11		12
AI170911	pyruvate dehydrogenase E1 alpha-like, Pdhal	-10.64	12	-10.99		12
M60322	aldose reductase	-24.39	12	-10.1		12
AF065387	vitamin K-dependent gamma-glutamyl carboxylase	-7.52	12	-8.13		12
AA899320	ubiquinone oxidoreductase complex	-4.08	12	-7.63		12
X95986	carbonyl reductase (NADPH) CBR	-3.95	12	-7.35		12
L16532	putative 2',3'-cyclic nucleotide 3'-phosphodiesterase	-6.37	12	-6.37		12
L01115	adenylyl cyclase type VI	-8.07	12	-5.75		12
AJ002940	retinoic acid receptor alpha1	-3.13	12	-5.71		12
D00569	2,4-dienoyl-CoA reductase precursor	-3.28	12	-5.59		12
AA851223	enolase 3 , beta, muscle	-8.85	12	-5.44		12

Table7.Functional Classification

AA818593	phosphatidate phosphohydrolase type 2a	-14.29	12	-5.41	12
S76779	apolipoprotein E	-9.52	12	-5.41	12
AI180442	faresnyl diphosphate synthase	-13.16	12	-5.41	12
M26594	malic enzyme (MAL)	-4.67	12	-5.35	12
AA685903	Glucose regulated protein, 94 kDa (GRP94)	-6.25	12	-4.81	12
M26125	epoxide hydrolase	-14.09	12	-4.67	12
U60882	protein arginine N-methyltransferase, PRMT1 (TIS21 & BTG1 gene products modulate PRMT1 activity)	-6.37	12	-4.41	12
AA945583	hydroxysteroid (17-beta) dehydrogenase 10	-6.41	12	-4.22	12
AA874784	lipase A, lysosomal acid, Lipa	-6.41	12	-3.83	12
X74593	sorbitol dehydrogenase	-4.27	12	-3.69	12
L25331	lysyl hydroxylase	-3.75	12	-3.24	12
S81497	lysosomal acid lipase	-23.41	12	-3.19	12
AF048687	UDP-Gal:glucosylceramide beta-1,4-galactosyltransferase	-4.17	12	-3.02	12
U07971	L-arginine:glycine amidinotransferase	4.38	4	5.69	4
X06357	serine pyruvate aminotransferase	16.68	12	5.67	12
AF063302	carnitine palmitoyltransferase Ibeta 1	3.05	12	4.46	12
<u>Prostaglandin-related</u>					
U38376	cytosolic phospholipase A2	-3.12	12		
D28966	prostacyclin receptor.	3.74	12		
S87522	leukotriene A4 hydrolase			-8.46	12
AF051895	lipocortin V (aka annexin V; binds phosphatidylserine)			-4.07	12
AI171962	Annexin 1 (p35) (Lipocortin 1)			-3.54	12
AI170268	Prostaglandin F receptor			-3.2	12
AI169372	arachidonic acid epoxygenase			7.32	12
AI175764	stearoyl-Coenzyme A desaturase 1 (Scd1)	3.46, -4.41, -	0, 1, 3,	9.32, -3.82, -	0, 3,
AF000901	p23 (HSP90 chaperone; cytosolic prostaglandin E synthase)	3.11, -4.9	8	4.05, -3.29	8, 12
S67722	COX-2	3.6, -5.66	8, 12	-3.85	1
AI145502, U26595	prostaglandin F2 receptor negative regulator, Ptgfrn	11.21	8	3.92	12
AF036761,		-4	12	-20	12
AA875269, M15114	stearoyl-CoA desaturase 2 (SCD2)	-10.53	12	-7.04	12
<u>Cytokine/ Chemokine</u>					
AA892854	ESTs, cytokine B13 precursor (weakly similar) {B lymphocyte chemoattractant; CXC chemokine BLC}	3.74, -4.27	0, 5		
U69272	interleukin-15	-3.83	12		
U17035	chemokine mob-1	29.1	12		
AF030358	chemokine CX3C mRNA (fractalkine)	3.42	12		
U70988	macrophage inflammatory peptide-2 (CXC chemokine) receptor	3.31	12		
AI178135	complement component 1q binding protein, C1qbp	3.04	12		
U14647	interleukin-1 beta converting enzyme b			3.13, -3.92	0, 8
U14010	soluble IL-1 receptor type I			-3.25	12
U48592	interleukin-1 receptor accessory protein (IL-1)			7.39	12
Z50052	C4BP beta chain protein (regulates complement)			5.82	12
M98820	interleukin 1-beta propeptide (active form)			5.04	12
X53087	interleukin 4, exons 1 and 2			4.39	12
AF053312	CC chemokine MIP3 alpha			3.13	12
AFFX-MurLL4	Murine IL4	-3.22	0	-3.65	1
AA891209	ESTs, interleukin 25 (Highly similar)	-4.26	12	-5	12
<u>Hormone-related</u>					
Z83757	growth hormone receptor	-4.86	1		
J03819	thyroid (T3) hormone receptor (clone erb62)	-4.41	12		
L31394	parathyroid hormone receptor	-3.29	12		
S69160	thyrotropin-releasing hormone receptor (TRH-R)	4.32	12		
S83025	TSH receptor suppressor element-binding protein-1 (TSEP-1)	3	12		
L24207	testosterone 6-beta-hydroxylase (CYP3A1)			-4.44, 3.5	0, 12

Table7.Functional Classification

L07281	carboxypeptidase E (regulated secretory pathway sorting receptor for several prohormones)			-3.05	12
AF036335	prolactin- and FGF-2-responsive			6.72	12
M36804	follicle stimulating hormone beta-subunit			3.07	12
Z34004	growth hormone-releasing hormone			3.05	12
AA946542	prolactin-like protein D, Prlpd	-10.61, 4.33	1, 2	3.73	12
M86758	estrogen sulfotransferase	-6.54	3	3.56	12
J00777	fat prostatic steroid-binding protein, C3 peptide	-3.84	6	-3.72	3
		5.38, 3.48,			
		3.75, 7.19, -	3, 5, 6,		
L26292	FSH-regulated protein (clone 59)	5.19	8, 12	-3.16	2
D84487	PMSG-induced ovarian mRNA	-3.76	12	3.05, -3.54	8, 12
AA892251	arginine vasopressin receptor 1A	-6.06	12	-6.1	12
M64733	testosterone-repressed prostate message 2 (TRPM-2)	-10.31	12	-5.92	12
M23643	thyrotropin-releasing hormone (THR)	6.61	12	4.48	12
S64044	progesterone receptor steroid-binding domain	4.77	12	4.27	12
M25646	vasopressin	4.29	12	4.17	12
D00575	pituitary glycoprotein hormone alpha-subunit	3.77	12	3.37	12
S80127	hypothalamic parathyroid hormone	3.09	12	4.14	12
<u>Electron transport</u>					
AA799778	ATP synthase, H ⁺ transporting, mitochondrial F0 complex, subunit b, isoform 1; Atp5f1	-5.37	12		
AA894174	ESTs, electron transfer flavoprotein alpha chain (highly similar)	-3.65	12		
H31232	cytochrome c oxidase, subunit 4b	4.95, 4.98	8, 12		
D13124	ATP synthase subunit c	3.66	12		
X12554	heart cytochrome c oxidase subunit 6a.	3.37	12		
AI171844	ATP synthase, H ⁺ transporting, mitochondrial F1 complex, epsilon subunit			-3.2	12
M24542	Rieske iron-sulfur protein			-3.18	12
M20623	testis-specific cytochrome c			-3.34	8
AA875531	mitochondrial cytochrome B			-5.21	12
L48209	liver cytochrome c oxidase subunit 8			-4.43	12
AA926137	smallest subunit of ubiquinol-cytochrome c reductase			-3.31	12
U43175	vacuolar ATPase subunit F (vatf)			-3.25	12
Y12635	vacuolar ATPase subunit B			3.99	12
S48325	RLM6; diabetes-inducible cytochrome P450RLM6			3.1	12
AI013297, AI175973	ESTs, NADH dehydrogenase (ubiquinone) Fe-S protein 4 (highly similar)	-4.93	12	3.78	12
		-3.98, 3.13, .			
M14775, AA866240	cytochrome P-450	4.27, -3.56, -	0, 4, 6,		
		3.29	8, 12	4.6, 5.24	1, 12
J02679, AA963839	Diaphorase (NADH) (cytochrome b-5 reductase), Dia1	-7.04	12	-10.75	12
AA945054, Y12517	cytochrome b5	-4.61	12	-4.1	12
K00750	cytochrome c nuclear-encoded mitochondrial gene	-4.07	12	-3.91	12
D13120	ATP synthase subunit d	-6.29	12	-3.09	12
M58495	NAD(P)H: quinone reductase	-9.26	12	-4.12	2
<u>Nucleus/Nuclear Matrix</u>					
U18314	lamina associated polypeptide 2 (LAP2)	-19.15	12		
H31914	Nucleolin	-7.24	12		
U01914	AKAP95 {role in chromatin condensation}	-7.09	12		
U82623	Ral-binding protein (cytacentrin)	-5.12	12		
	ESTs, SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily b, member 1 (highly similar)	-4.83	12		
H33459	chromatin, subfamily b, member 1 (highly similar)	-4.83	12		
X82445	nuclear distribution gene C homolog	-4.73	12		
AI145490	lamin B receptor	-4.39	12		
M37584	histone (H2A.Z)	-4.01	12		
D14048	SP120 (involved in anchorage of nuclear DNA to the nuclear scaffold)	-3.99	12		

Table7.Functional Classification

D64059	helicase II	-3.96	12		
D14045	DNA topoisomerase IIA	-3.51	12		
AA874887	ESTs, segregation of mitotic chromosomes b (SMC)	-3.32	12		
U72353	lamin B1 mRNA	-3.12	12		
AF043642	matrin cyclophilin			-4.04	0
D84418	chromosomal protein HMG2			-3.15	0
AF062594	nucleosome assembly protein			-4.58	12
X52583	nuclear pore glycoprotein P62			-3.25	12
D32209	leucine-rich acidic nuclear protein			-3.13	12
U20796	nuclear receptor Rev-ErbA-beta			-3.04	12
AF063447	nuclear RNA helicase			22.72	12
AA892919	nucleolar phosphoprotein p130			4.39	12
M27433	germinal histone H4 gene			4.31	12
AA859632	replication factor C, large subunit			4.08	12
U76635	DNase I			3.65	12
AA848218	DNA topoisomerase I			3.58	12
L01267	helicase (RAP30)			3.36	12
U19614	lamina-associated polypeptide 1C (LAP1C)			3.05	12
AA818240	Nuclear pore complex protein	-3.99	12	-3.46	0
AI232374,					
AA874802	Histone H1-0	-8.27	12	-4.12	12
AA818982	Thymopoietin (lamina associated polypeptide 2), Tmpo	-6.21	12	-4.76	12
AA957777	ESTs, GDPRan-Ntf2 Complex (highly similar) -- nuclear import	-3.21	12	-3.57	12
AI176710	nuclear receptor subfamily 4, group A, member 3	4.5, 21.32	8, 12	14.42	12
U95162	nuclear protein E3-3 orf3	3.55	12	4.09	12
AF056324	scaffold attachment factor B (estrogen receptor corepressor, potential tumor suppressor)	3.45	12	4.47	12
<u>Peroxisome-related</u>					
U47315	peroxisome assembly factor-3 (PAF-3)	-7.19	12		
AI639438	peroxisomal enoyl hydratase-like protein (PXEL)	-6.55	12		
X70223	22kDa integral peroxisomal membrane protein	3.56	12		
S83279	peroxisome proliferator-inducible gene			-8.32	12
E03344	peroxisome forming factor			-4.28	12
D90038	70-kDa peroxisomal membrane protein (PMP70)			-3.77	12
AA800315	ESTs, peroxisomal farnesylated protein (Highly similar)	-4.83	12	-3.27	12
M88592	peroxisome proliferator activated receptor (PPAR)	3.56	12	3.43	12
<u>Ribosomal proteins</u>					
X62145	ribosomal protein L8.	-4.49	12		
AI639157	ribosomal protein L13	-3.77	12		
AA859921	28S ribosomal RNA	-3.41	12		
AA799995	ribosomal protein L14	-3.27	12		
X94242	ribosomal protein L14.	5.75	12		
D25224	40kDa ribosomal protein	4.94	12		
AA892895	ribosomal protein S15	4.3	12		
AI233749	ribosomal protein L30	4.16	12		
X14210	ribosomal protein S4.	4.12	12		
X51706	ribosomal protein L9.	4.09	12		
X62482	ribosomal protein S25.	3.98	12		
M17419	ribosomal protein L5	3.49	12		
rc_AI104544	ribosomal protein S17	3.48	12		
AI008641	ribosomal protein L22	3.32	12		
X58389	ribosomal protein L17.	3.28	12		
X14671	ribosomal protein L26.	3.15	12		
X06423	ribosomal protein S8.	3.10	12		
X51536	ribosomal protein S3.	3.08	12		
X58200	ribosomal protein L23.	3.04	12		
X62146	ribosomal protein L11.	3.02	12		
X59375	ribosomal protein S27			-7.27	12
AA799672	ribosomal protein L6			-3.31	12

Table7.Functional Classification

AI639224	ribosomal protein S13	3.36	12	5.98	12
AA799571	ribosomal protein L35	-10.20	12	-4.07	12
U62635	Mitochondrial ribosomal protein L23	-6.25	12	-3.4	12
<u>Unclassified</u>					
L06804	LIM homeodomain protein (LH-2)	-3.24	0		
U32681	ebnerin	-3.67	3		
M58287, M60811	non-specific lipid transfer protein (nsL-TP)	-3.12	3		
AA892364	ESTs, WW domain binding protein 11 (highly similar)	-12.77	12		
AI639353	pleiotropic regulator 1, Plrg1	-10.69	12		
L02530	Drosophila polarity gene (frizzled) homologue	-8.29	12		
AB002111	brain protein 44-like	-7.68	12		
U08976	ESTs, Hermansky-Pudlak syndrome 3 homolog (Highly similar)	-6.99	12		
AB000098	MIPP65, mitochondrial phosphoprotein (candidate for PKN)	-6.51	12		
AA894037	ESTs, embryogenesis protein H beta 58 (highly similar)	-6	12		
X07648	amyloidogenic glycoprotein (rAG)	-5.81	12		
U21718	clone C426 intestinal epithelium proliferating cell-associated mRNA	-5.58	12		
AA892056	ESTs, REV1-like (highly similar)	-5.33	12		
AI171243	erythrocyte protein band 4.1-like 3, Epb4.113	-4.98	12		
M33025	parathymosin (acidic Zn-binding protein, binds histone H1 and glucocorticoid receptor)	-4.30	12		
AB014722	Sart-1; squamous cell carcinoma antigen recognized by T-cells 1	-4.07	12		
AB000199	cca2 (accumulates in growth-arrested confluent cells)	-4.03	12		
D26154	brain specific protein (RB109)	-3.97	12		
U11760	transitional endoplasmic reticulum ATPase	-3.8	12		
AF095741	MG87 mRNA	-3.46	12		
X07648	amyloidogenic glycoprotein (rAG)	-3.35	12		
AI059540	Diphtheria toxin receptor	3.32	12		
X80290	pituitary adenylate cyclase activating peptide.	3.12	12		
X61296	L1 retroposon, ORF2	3	12		
L07315	dipeptidase (dpep1)			-4.44	0
U78517	cAMP-regulated guanine nucleotide exchange factor II (cAMP-GEFII)			-3	2
D50558	Ig super family sequence analogue of CD86 (membrane glycoprotein)			-3.44	8
AI010581	diazepam binding inhibitor, Dbi			-23.06	12
AF037272	WAP four-disulfide core domain protein (ps20)			-18.65	12
J03627	S-100-related protein			-11.43	12
AA817892	guanine nucleotide binding protein, beta polypeptide 2, Gnb2			-9.53	12
AF097723	hematopoietic lineage switch 2 related protein (Hls2-rp)			-8.45	12
AF077354	ischemia responsive 94 kDa protein (IRP94)			-8.31	12
L03382	phospholamban			-6.7	12
AI234146	cysteine rich protein 1			-5.92	12
AJ007291	Contraception-associated protein CAP1			-5.54	12
D13127	oligomycin sensitivity conferring protein			-4.71	12
M90514	homologous to Drosophila pecanex locus			-4.08	12
D10233	renin-binding protein			-4.04	12
U75404	Src Suppressed C Kinase Substrate (Ssecks 322)			-3.85	12
Z22607	bone morphogenetic protein 4			-3.52	12
U89282	telomerase protein component 1 (TLP1)			-3.11	12
AF045564	development-related protein			-3.03	12
AI639311	probasin			4.1	4
U48828	retroviral-like ovarian specific transcript 30-1			10.17	12
AA799893	ESTs, DDRT helix-destabilizing protein (Highly similar)			9.37	12
AB020504	PMF31			5.84	12
M64792	proline-rich salivary protein RP13			5.11	12
L22788	putative 14 kDa bile acid-binding protein (I-BABP)			4.18	12
D90219	C-type natriuretic peptide (CNP)			3.88	12
U11071	polyadenylate-binding protein-related protein			3.86	12
AI235492	proline rich protein			3.83	12
M31176	gastrin-releasing peptide			3.51	12
M26247	factor IX			3.48	12

Table7.Functional Classification

M91234	VL30 element			3.42	12
AF041107	tulip 2			3.41	12
AF020618	progression elevated gene 3 protein			3.37	12
X53581	long interspersed repetitive DNA containing 7 ORFs			3.32	12
U72410	Kir3.1 alternative splice variant deltaB			3.15	12
L22190	serum amyloid A protein			3.14	12
D88586	eosinophil cationic protein			3.13	12
X62950	mRNA (pBUS30) with repetitive elements			3.12	12
AB015191	Rh blood group protein			3.1	12
X84997	Variable coding sequence A1, VCSA1			3.02	12
U06713	SM-20 mRNA			3.01	12
L81136	Rps2r1 preliminary DNA			3	12
AI639349	Neonatal submandibular gland protein B, Smgb	-7.3, 4.23	1, 4	4.48, 43.31	4, 12
AF034753	DC16 mRNA	-3.57, 3.29	1, 4	3.9, 3.59	5, 12
M60811	LINE 1 repeat element, ORF II	-3.44	8	-4.57	2
AI639448	A5D3 protein	-6.37	6	-4.65	6
U15734, AJ001929	reticulocalbin 2 (Ca-binding protein)	-6.54	12	-7.3	12
AA799566	incisor protein	-3.14	12	3.07	12
AF036537	homocysteine respondent protein HCYP2	4.93	2	3.12	12
AJ224680	glutamic-acid rich protein	3.25	4		
JO1878, K01677	brain-specific identifier sequence	5.6	12	3.19	12
M31032	contiguous repeat polypeptides (CRP)	4.93	12	4.24, 5.09	1, 12
AI639444	Sarcosin (sarcomeric muscle protein)	5.62	12	3.52, 3.52	1, 12
M11901	proline-rich salivary protein pRP25	3.93	12	4.06	12
X05472	2.4 kb repeat DNA right terminal region	3.19	12	3.35	12
M13100	long interspersed repetitive DNA sequence LINE3	3.14	12	3.15	12
AA800296	ESTs, Polynucleotide adenyltransferase alpha (highly similar)	-5.1	12	-8.48	12
AA799301	ESTs, Ligatin (highly similar)	-3.3	12	-8.26	12
AA945907	natriuretic peptide receptor 3, Npr3	-5.32	12	-7.14	12
AA893788	ESTs, Chromobox protein homolog 5 (Highly similar)	-3.55	12	-6.33	12
D63860	bone morphogenetic protein-3	-3.8	12	-5.99	12
AJ222724	small glutamine-rich tetratricopeptide repeat (TPR) containing protein	-3.33	12	-5.47	12
U11681	rapamycin and FKBP12 target-1 protein (rRAFT1)	-5.13	12	-5.41	12
AI008638	O-acetyltransferase Milk fat globule membrane protein, Mfge8	-10.42	12	-5.21	12
AA859954	vacuole Membrane Protein 1, Vmp1	-3.68	12	-5.05	12
AA891746	ESTs, endothelial differentiation-related factor 1 (Highly similar)	-3.37	12	-4.98	12
D50093	prion protein	-7.87	12	-4.88	12
AF061242	fracture callus 1 (FxC1)	-4.88	12	-4.37	12
AF029109	Amyloid beta (A4) precursor protein-binding (X11-like 2)	-3.5	12	-4.29	12
AA800745	aminolevulinic acid, delta-, dehydratase (Alad)	-3.22	12	-4.1	12
U77880	rolipram-insensitive phosphodiesterase type 7 (RPDE7-1)	-7.46	12	-3.97	12
AA891681	ESTs, UNR-interacting protein (Highly similar)	-4.9	12	-3.77	12
AB006880	PMF16	-8.85	12	-3.73	12
E12286	GM2 activator protein	-4.18	12	-3.7	12
AI228548	ESTs, S-100 protein, alpha chain (Highly similar)	-4.02	12	-3.68	12
U95001	developmentally-regulated cardiac factor (DRCF-5)	-5	12	-3.61	12
AA893515	ESTs, translocation protein 1; Dtrp1 protein (Highly similar)	-18.52	12	-3.5	12
A44407	unnamed protein product; Sequence 4 from Patent EP0655442.	-7.52	12	-3.47	12
AA892532	protein disulfide isomerase-related protein	-6.76	12	-3.31	12
AI111401	multiple inositol polyphosphate histidine phosphatase 1, Minpp1	-3.02	12	-3.21	12
AI230406	unknown Glu-Pro dipeptide repeat protein, LOC85383	-4.2	12	-3.19	12
U57097	Aortic preferentially expressed gene 1, APEG-1	-5.44	12	-3.15	12
M27151	muscle regulatory factor MRF4	3.32, 4.14	5, 12	3.33, 5.91	5, 12
X59864	Adult skeletal muscle probe, ASM15	10.1	12	3.42	12
U60977	RAREG-2.2 mRNA	7.8	12	8.09	12
AF104399	melanocyte-specific gene 1 protein (msg1)	5.71	12	4.51	12
U26356	S100A1 (maintenance of normal myocardial function)	5.58	12	5.17	12
AB019393	myocilin	4.01	12	3.14	12
M20721	proline-rich protein (PRP-1)	3.5	12	3.55	12

Table7.Functional Classification

M81855	P-glycoprotein/multidrug resistance 1, mdr	3.23	12	3.1	12
X70667	melanocortin-3 receptor	3.15	12	3.84	12
X89695	TPCR05 protein	3.05	12	6.46	12
X53052	main intrinsic protein (MIP)	3.03	12	3.01	12
<u>ESTs</u>					
AI639244	EST	-3.47	0		
AI639446	EST	-4.00	1		
AA892240	ESTs, 2008109A set gene (weakly similar)	-3.32	1		
AI176460	EST	-3.14, 3.08	1, 8		
AI639099	EST	-3.11	5		
AA875190	EST	-3.37	6		
AI639339	EST	-3.14	6		
AI639367	EST	-3.27	12		
AA799829	ESTs, mitochondrial ATP synthase regulatory component factor B	-3.07	8		
AA891140	EST	-3.14	12		
AA874832	ESTs, anaphase-promoting complex subunit 5 (moderately similar)	-38.35	12		
AI639411	EST	-19.96	12		
AA799523	ESTs, DDRT helix-destabilizing protein (weakly similar)	-17.46	12		
AA875045	ESTs, cGMP 3',5'-cyclic phosphodiesterase delta-subunit (weakly similar)	-14.69	12		
AA800882	EST	-14.23	12		
AA859776	ESTs, p135 ras-related homolog A2 (weakly similar)	-12.01	12		
AA892918	EST	-11.95	12		
AA800763	EST	-11.06	12		
AI236601	EST	-10.75	12		
AA859897	EST	-10.41	12		
AA799481	ESTs, similar to embryonic ectoderm development; lethal, Chr 7, Rinchik 5	-9.41	12		
AA944361	EST	-9.12	12		
AA894092	EST	-8.82	12		
AI237378	EST	-8.61	12		
AA893199	EST	-8.32	12		
AA874873	EST	-8.14	12		
AA800622	EST	-8.12	12		
AA851403	EST	-8.08	12		
AA800768	EST	-7.95	12		
AA800053	EST	-7.91	12		
AI180108	EST	-7.78	12		
AA874889	EST	-7.77	12		
AA799449	ESTs, Nucleosome assembly protein 1-like 1(weakly similar)	-7.37	12		
AA799336	ESTs, NADH dehydrogenase (ubiquinone) (moderately similar)	-7.29	12		
AI639042	EST	-7.23	12		
AA892422	EST	-7.21	12		
AA893082	EST	-7.19	12		
AI639343	EST	-7.14	12		
AA892813	ESTs, Muscleblind-like protein (weakly similar)	-7.03	12		
AA859597	EST	-7.02	12		
AA892557	EST	-6.92	12		
AI639324	EST	-6.81	12		
AA892284	EST	-6.79	12		
AA891733	EST	-6.41	12		
AA892602	EST	-6.34	12		
AI639324	EST	-6.16	12		
AA892940	ESTs, Elongation factor 2 (EF-2) (weakly similar)	-6.12	12		
AA891724	EST	-6.11	12		
AA892630	ESTs, NAD+ ADP-ribosyltransferase (weakly similar)	-6.09	12		
AA925252	EST	-6.06	12		
AA859832	EST	-5.87	12		
AA891851	EST	-5.86	12		
AA799449	ESTs, Nucleosome assembly protein 1-like 1 (NAP-1 related protein)	-5.80	12		

Table7.Functional Classification

AA891108	EST	-5.74	12
AA892842	ESTs, F-actin capping protein alpha-3 subunit (weakly similar)	-5.71	12
AA875327	EST	-5.55	12
AI639148	EST	-5.46	12
AA875275	EST	-5.46	12
AA799888	EST	-5.23	12
AI639256	EST	-5.21	12
AA892847	ESTs, N-acetyl galactosaminidase, alpha (moderately similar)	-5.14	12
AI231778	EST	-5.14	12
AA800853	EST	-5.13	12
AA875630	EST	-5.10	12
AI639176	EST	-5.06	12
AI229291	EST	-5.01	12
AI171542	ESTs, NADH dehydrogenase (ubiquinone) 1 beta subcomplex	-4.89	12
AA799691	ESTs, K-Cl cotransport protein 2 (moderately similar)	-4.82	12
AA891670	ESTs, lysosomal alpha-mannosidase (moderately similar)	-4.76	12
AA799804	EST	-4.73	12
AA799609	EST	-4.72	12
AA893217	EST	-4.71	12
AA892399	EST	-4.69	12
AA859919	EST	-4.62	12
AA800678	EST	-4.60	12
AA894193	EST	-4.58	12
AA875539	ESTs, protein kinase C binding protein 1 (moderately similar)	-4.54	12
AA891727	EST	-4.49	12
AA892860	EST	-4.48	12
AA893406	EST	-4.43	12
AI639001	EST	-4.40	12
H32977	EST	-4.38	12
AA875390	EST	-4.33	12
AA818726	(weakly similar)	-4.26	12
AA892300	EST	-4.24	12
AA866290	EST	-4.23	12
AA891950	EST	-4.19	12
AA892557	EST	-4.13	12
AA964320	EST	-4.07	12
AA893357	EST	-4.05	12
AA875040	EST	-4.03	12
AA892154	EST	4.02	12
AA894188	EST	-3.99	12
AA891931	EST	-3.98	12
AI232321	ESTs, CGI-150 protein (moderately similar)	-3.96	12
AI639495	EST	-3.96	12
AA859633	EST	-3.95	12
AA800853	EST	-3.94	12
AI235707	ESTs, C54354 calnexin precursor (moderately similar)	-3.93	12
AA892271	EST	-3.88	12
AA799448	EST	3.86	12
AA893202	EST	-3.78	12
AA892303	ESTs, scavenger receptor class B type 1 (weakly similar)	-3.77	12
AA875316	EST	-3.76	12
AA799472	EST	-3.75	12
AA893871	EST	-3.71	12
AA891902	EST	-3.71	12
AI639102	EST	-3.70	12
H33426	EST	-3.67	12
AA866426	EST	-3.63	12
AI639022	EST	-3.63	12
AA893982	EST	-3.62	12
AA892083	EST	-3.61	12

Table7.Functional Classification

D86711	EST	-3.59	12		
AA859835	EST	-3.59	12		
AA799511	ESTs, DDRT helix-destabilizing protein (weakly similar)	-3.55	12		
AA892789	EST	-3.55	12		
AA892859	ESTs, Lys hydroxylase (weakly similar)	3.52	12		
AI233365	EST	-3.52	12		
AI639410	EST	-3.49	12		
AA799538	ESTs, Cold-inducible RNA-binding protein (CIRP) (weakly similar)	-3.43	12		
AA800029	EST	-3.41	12		
AA799601	EST	-3.40	12		
AA892310	EST	-3.39	12		
AI639317	EST	-3.38	12		
AA891537	EST	-3.37	12		
AA894297	EST	-3.36	12		
AA875268	ESTs, NADH-ubiquinone oxidoreductase 20 kDa subunit	-3.36	12		
AA684631	ESTs, ankyrin (weakly similar)	-3.33	12		
AA859740	EST	-3.32	12		
AI639037	EST	-3.31	12		
AA799764	EST	-3.30	12		
AA800786	EST	-3.24	12		
AA799525	EST	-3.24	12		
AA859982	EST	-3.16	12		
AA892273	EST	-3.15	12		
H33149	EST	-3.13	12		
AI176546	ESTs, Heat shock protein HSP 90-beta, HSP 84 (moderately similar)	-3.12	12		
AA848268	ESTs, similar to DnaJ protein homolog 2	-3.12	12		
AA892986	EST	3.66	0		
AA799593	EST	3.72	1		
AA891576	ESTs, complement protein C1q beta chain (weakly similar)	7.44	12		
S46798	EST	5.66	12		
AI638974	EST	4.79	12		
AA891499	EST	4.63	12		
AA799671	EST	4.06	12		
AA859633	EST	3.94	12		
AA892572	EST	3.77	12		
AA874941	ESTs, ADIPOPHILIN (moderately similar)	3.73	12		
AA799551	ESTs, rab1B protein (weakly similar)	3.56	12		
AI230294	EST	3.37	12		
AI639002	EST	3.30	12		
AI639453	EST	3.25	12		
AI639138	EST, proline-rich proteoglycan 2 precursor (weakly similar)	3.22	12		
AA108308	ESTs, mdm2 protein (moderately similar)	3.13	12		
AA799594	EST	3.09	12		
AA891521	EST	3.46	5		
AA893205	EST	3.06	12		
AA800930	EST			-11.48	12
AA799488	EST			-6.16, 3.05	0, 5
AI639315	EST			-4.43	0
AI639301	EST			-4.00	0
AI639468	EST			-3.11	1
AA860015	EST			-3.24, 4.15	3, 12
AA893870	EST			-3.01, 4.13	3, 12
AA893693	EST			3.34	12
AA858570	EST			3.19	12
AA799340	EST			-12.45	12
AA874875	EST			-11.73	12
AA800844	ESTs, Lysyl oxidase (moderately similar)			-10.84	12
AA892486	ESTs, sucrose alpha-glucosidase (weakly similar)			-10.47	12

Table7.Functional Classification

AA892378	EST	-9.99	12
AA866443	EST	-8.66	12
AA892578	EST	-8.44	12
AA892498	ESTs, CD63 antigen (weakly similar)	-8.15	12
AI639501	EST	-8.13	12
AI639412	ESTs, Bone/cartilage proteoglycan I precursor (weakly similar)	-7.84	12
AA892462	EST	-7.74	12
AA891810	ESTs, g1-related zinc finger protein (moderately similar)	-7.54	12
AA799515	EST	-7.27	12
AA892768	EST	-6.75	12
AA891834	EST	-6.64	12
AA800303	ESTs, Ca2+ dependent phospholipid scramblase 1 (weakly similar)	-6.64	12
AA800034	EST	-6.48	12
AA893022	ESTs, Phospholipid hydroperoxide glutathione peroxidase	-6.46	12
AA800190	ESTs, glycogen phosphorylase (weakly similar)	-6.36	12
AA892505	ESTs, divalent cation tolerant protein (moderately similar)	-5.71	12
AA892520	EST	-5.60	12
AA894101	ESTs, Protein NH2-Terminal Asparagine Amidohydrolase	-5.54	12
AA891796	EST	-5.51	12
AA800258	ESTs, low density lipoprotein B (moderately similar)	-5.44	12
AA891207	EST	-5.32	12
AA799740	EST	-5.28	12
AA799740	ESTs, chromosome 1 C1orf9 protein (weakly similar)	-5.07	12
AA859885	EST	-4.92	12
AA893059	ESTs, CTP synthetase homolog (moderately similar)	-4.71	12
AA859672	EST	-4.64	12
AA799803	EST	-4.61	12
AA859877	EST	-4.59	12
AI639199	EST	-4.59	12
AI235707	ESTs, calnexin precursor (moderately similar)	-4.57	12
AI009132	EST	-4.39	12
AA893328	ESTs, calnexin precursor (moderately similar)	-4.34	12
AA866477	ESTs, cytochrome c oxidase subunit VIIb (moderately similar)	-4.16	12
AA859700	ESTs, PROTOPORPHYRINOGEN OXIDASE (moderately similar)	-3.95	12
AA894264	EST	-3.88	12
AA891222	EST	-3.79	12
AA891785	ESTs, ISOCITRATE DEHYDROGENASE (weakly similar)	-3.75	12
AA891769	ESTs, SC65 synaptonemal complex protein (weakly similar)	-3.74	12
AI102868	ESTs, phosphoserine aminotransferase, isoform 1 (Moderately similar)	-3.73	12
AI104528	ESTs, NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 6	-3.69	12
AI639208	EST	-3.68	12
AA892500	EST	-3.67	12
AA892754	EST	-3.65	12
AA892937	ESTs, inhibitor of growth family, member 3 (weakly similar)	-3.52	12
AA892642	EST	-3.51	12
AA891727	EST	-3.50	12
AA891171	ESTs, NADH dehydrogenase (ubiquinone) 1 (moderately similar)	-3.42	12
AA893280	ESTs, ADIPOPHILIN (ADIPOSE DIFFERENTIATION-RELATED PROTEIN) (ADRP) (moderately similar)	-3.42	12
AA892353	EST	-3.38	12
AA875425	EST	-3.37	12
AA894054	EST	-3.33	12
AI230228	ESTs, phosphoserine aminotransferase, isoform 1 (moderately similar)	-3.32	12
AI010725	ESTs, calnexin precursor (moderately similar)	-3.26	12
AA891785	ESTs, ISOCITRATE DEHYDROGENASE (weakly similar)	-3.25	12
AA893208	EST	-3.22	12
AA799762	ESTs, chromosome 20 open reading frame 149 (moderately similar)	-3.16	12
AA892942	EST	-3.04	12
AA684963	EST	-3.03	12
AA799442	EST	-3.02	12
AA800592	EST	-3.02	12

Table7.Functional Classification

AA800693	EST	3.42, 9.17	3, 12
AI638994	EST	7.28	12
AA894148	EST	7.13	12
H31955	EST	6.76	12
AA799406	EST	6.36	12
AI639331	EST	5.79	12
AI639431	EST	5.62	12
AI013074	ESTs, SRY-box containing gene 13 (Weakly similar)	5.61	12
AA800750	ESTs, Retrovirus-related POL polyprotein (moderately similar)	5.07	12
AA875420	EST	4.96	12
AA859372	EST	4.92	12
AA800679	ESTs, putative nucleotide binding protein, estradiol-induced	4.78	12
AI639401	ESTs, trichohyalin (Weakly similar)	4.66	12
AI071866	EST	4.51	12
AI639000	EST	4.48	12
AA892881	EST	4.37	12
AA800156	EST	4.04	12
AA874993	EST	4.02	12
AA894232	EST	3.96	12
AA875072	EST	3.94	12
AA893193	EST	3.91	12
AA892049	EST	3.88	12
AI007824	EST	3.86	12
AA859667	EST	3.85	12
AA892465	EST	3.82	12
AA892598	EST	3.80	12
AA893596	EST	3.78	12
AA892549	EST	3.77	12
AI639417	EST	3.77	12
AA892400	EST	3.76	12
AI639452	EST	3.65	12
AA799539	ESTs, Kelch-like ECH-associated protein 1 (Weakly similar) {Cytosolic inhibitor of Nrf2}	3.65	12
AA859966	EST	3.63	12
AA859983	EST	3.62	12
AI178267	ESTs, chromosome 1 C1orf9 protein (Weakly similar)	3.62	12
AA866250	EST	3.59	12
AI639361	EST	3.59	12
AA892027	EST	3.56	12
AA800737	ESTs, catenin delta 2; neurojungin (Weakly similar)	3.54	12
AA859552	ESTs, ELONGATION FACTOR 2 KINASE (Moderately similar)	3.54	12
AA893870	EST	3.52	12
U89745	EST	3.50	12
AI639130	EST	3.49	12
AI638998	EST	3.48	12
AA894210	EST	3.48	12
AI639089	EST, Neutrophil defensin 1 (weakly similar)	3.46	12
AI639172	EST	3.44	12
AA800186	EST	3.42	12
AA866293	EST	3.39	12
AI639076	EST	3.35	12
AI639206	EST	3.29	12
AA875217	EST	3.29	12
AA875527	EST	3.27	12
H31732	EST	3.23	12
AA892999	EST	3.22	12
AA858571	EST	3.22	12
AI007824	EST	3.20	12
AI639396	EST, 40S ribosomal protein S25 (moderately similar)	3.14	12
AA799681	EST	3.12	12
AI639226	EST	3.10	12

Table7.Functional Classification

AI639470	EST			3.09	12
H33651	EST			3.09	12
AA866345	EST			3.07	12
AA799347	EST			3.07	12
AI639125	EST	-3.09, 4.19	0, 12	8.4	12
AA875123	EST	-5.06	1	3.84	2
AA800456	EST	-4.14	1	3.47	3
AA892799	ESTs, 3-phosphoglycerate dehydrogenase (weakly similar)	-3.68	1	-3.37	1
AI639358	EST	6.11	12	4.79	12
AI639263	EST	-3.05	3	4.56	12
AI639146	EST	-4.04	6	-3.08	8
AA799538	ESTs, Cold-inducible RNA-binding protein CIRP (weakly similar) {Glycine-rich RNA-binding protein}	-3.75	6	-4.86	12
AA891650	EST	-3.14	6	-3.30	0
H31479	EST	-6.43	12	4.36	3
AI639155	EST	-6.33	12	-3.25	0
AA893753	ESTs, Nuclear valosin-containing protein-like (moderately similar)	-4.46	12	4.28	12
AA799518	EST	-4.01	12	-3.33	5
AA892538	EST	-3.73	12	-3.46	4
AA892598	ESTs, putative nucleotide binding protein, estradiol-induced	-3.67	12	3.52	12
AA891161	ESTs	3.97, -3.66	5, 12	3.97	5
AA800882	EST	3.59	1	3.24	8
H31859	EST	3.91	0	8.13, -3.94	0, 5
AI639439	EST	4.18	5	-4.29, 5.67	8, 12
AA891260	EST	3.55	5	4.05	12
AA799686	ESTs	3.11, -3.85	8, 12	-6.73	12
AA891774	EST	3.09	12	-6.07	12
AI639355	EST	3.04	12	-3.12	3
AA799475	EST	-3.31	12	-5.88	12
AI639471	EST	11.36	12	-3.25, 9.23	5, 12
AI639195	EST	3.07	12	-3.11, 3.2	8, 12
AA859627	ESTs	5.42	8	5.42, 32.33	8, 12
AI639423	EST	-4.07	8	-4.06, 6.05	8, 12
AA800719	ESTs	-3.86	12	-49.71	12
AA875665	ESTs, taipoxin-associated calcium binding protein-49 (Weakly similar)	-20.83	12	-31.64	12
AA799680	ESTs	-5.49	12	-14.65	12
AA892851	ESTs	-6.62	12	-13.42	12
AA799773	EST	-10.99	12	-12.47	12
AA799718	EST	-9.43	12	-11.47	12
AA891859	ESTs	-12.5	12	-9.63	12
AA799499	EST	-8	12	-7.99	12
AA894233	ESTs	-4.55	12	-7.95	12
AA859616	ESTs, FYVE zinc finger (Weakly similar)	-33.3	12	-7.55	12
AA892851	ESTs	-7.87	12	-7.01	12
AA799479	ESTs, NADH-ubiquinone oxidoreductase 23 kDa subunit	-4.17	12	-6.89	12
AI176308	ESTs, Coronin 2 (Weakly similar)	-6.02	12	-6.45	12
AA800735	ESTs, pervin (Weakly similar)	-8.69	12	-6.34	12
AI029183	EST, Gap junction protein, alpha 1, 43 kD (connexin 43)	-3	12	-6.31	12
S69316	EST	-3.9	12	-6.11	12
AA894009	EST	-5.53	12	-5.90	12
AA800686	ESTs	-15.63	12	-5.86	12
AI010725	ESTs, calnexin precursor (Moderately similar)	-3.58	12	-5.84	12
AA875665	ESTs, taipoxin-associated calcium binding protein-49 precursor	-4.35	12	-5.80	12
AA891789	EST	-6.45	12	-5.71	12
AA875098	ESTs, FK506 binding protein 2 (Weakly similar)	-4.53	12	-5.16	12
H33426	EST	-8.93	12	-5.14	12
AA891734	ESTs	-3.65	12	-5.14	12

Table7.Functional Classification

AA875506	EST	-5.62	12	-5.06	12
AI639149	ESTs	-4.74	12	-5.01	12
AA892376	ESTs	-3.15	12	-4.96	12
H33467	ESTs	-9.43	12	-4.79	12
AA800199	ESTs, proline-rich protein 15 (Weakly similar)	-10.1	12	-4.74	12
AA891920	EST	-5.85	12	-4.63	12
AA892570	ESTs	-4.33	12	-4.56	12
AA800291	ESTs, discs, large homolog 3 (Drosophila) (Weakly similar)	-4.69	12	-4.55	12
AA800795	ESTs	-3	12	-4.55	12
AI178267	ESTs, chromosome 1 C1orf9 protein (Weakly similar)	-4.41	12	-4.49	12
AA866460	ESTs, gp330 protein precursor (Weakly similar)	-3.08	12	-4.44	12
AA800222	ESTs	-3.31	12	-4.39	12
AI638965	EST	-6.67	12	-4.32	12
AA892779	EST	-6.85	12	-4.22	12
AA894304	ESTs	-12.82	12	-4.19	12
AA893124	ESTs	-4.83	12	-4.18	12
AA800803	EST	-3.52	12	-4.04	12
AA875633	ESTs	-3.08	12	-4.03	12
AA891255	ESTs	-4.65	12	-3.94	12
AA859719	ESTs	-5.68	12	-3.87	12
AI639039	ESTs, Insulin-induced growth response protein CL-4 (Weakly similar)	-6.85	12	-3.84	12
AA800735	ESTs, pervin (Weakly similar)	-5.88	12	-3.76	12
AA875132	ESTs	-32.26	12	-3.73	12
AA892339	ESTs	-7.09	12	-3.72	12
AI639167	ESTs	-5.88	12	-3.67	12
AA859931	EST	-3.25	12	-3.54	12
AA800712	ESTs	-4.67	12	-3.52	12
AA875002	ESTs	-4.33	12	-3.52	12
AA874943	ESTs	-4.65	12	-3.49	12
AI232012	ESTs, NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 8	-6.14	12	-3.44	12
AA893742	ESTs	-3.89	12	-3.44	12
AA891937	ESTs	-4.9	12	-3.44	12
AI639425	ESTs	-7.52	12	-3.37	12
AI009141	ESTs	-9.62	12	-3.35	12
AA799832	ESTs	-6.58	12	-3.24	12
AA893212	ESTs	-6.54	12	-3.22	12
AA892547	EST	-10.53	12	-3.19	12
AA800908	ESTs	3.91, -14.29	1, 12	4.26, -3.15	1, 12
AA875244	ESTs	-6.49	12	-3.12	12
AA894345	ESTs, MAT1 gene (Weakly similar)	-3.86	12	-3.11	12
AA684641	ESTs	-4.79	12	-3.11	12
AA874873	ESTs	-7.52	12	-3.07	12
AA799607	ESTs	-5.41	12	-3.04	12
AA891669	ESTs	-3.45	12	-3.01	12
AA892094	ESTs	-3.38	12	-3.01	12
AA799507	ESTs	-12.2	12	-3.01	12
AA875327	ESTs	-6.9	12	-3.00	12
AA892866	ESTs	5.58	5	5.58	5
AA799448	ESTs	4.21	6	4.21	6
AI639014	EST	19.53	12	11.33	12
AA891242	ESTs, Myosin regulatory light chain 2 (MLC-2) (Weakly similar)	5.54	12	3.05	12
AA859662	ESTs, Semaphorin 4F precursor (Weakly similar)	5.31	12	9.53	12
AI639347	EST	5.04	12	3.54	12
AI639536	ESTs	4.94	12	3.5	12
AI639471	EST	4.50	12	3.14	12
AA892248	EST	4.49	12	5.49	12
AI639307	EST	3.86	12	3.38	12
AA892248	EST	3.85	12	5.02	12
AI639248	EST	3.73	12	3.86	12
AI639056	EST	3.69	12	3	12

Table7.Functional Classification

AI639390	ESTs	3.61	12	3.72	12
AA859996	ESTs	3.60	12	4.02	12
AA891578	ESTs	3.58	12	6.39	12
AI639264	EST	3.55	12	3.7	12
AI639113	ESTs, multimerin (Moderately similar)	3.39	12	3.7	12
AI639395	ESTs	3.38	12	5.05	12
AA800808	EST	3.28	12	3.2	12
AI639534	ESTs, A disintegrin and metalloproteinase with thrombospondin motifs 4 (ADAM-TS 4) (Weakly similar)	3.18	12	5.32	12
AA891943	ESTs	3.13	12	3.15	12
AI639145	EST	3.09	12	4.01	12
AA859577	ESTs	3.05	12	4.6	12
AA891311	EST	3.03	12	3.61	12

Table 8a. Genes induced by HSV-1(F) infection in HFF cells but not REF cells

GenBank	Description	Max fold increase	Time (h)	Genbank	Description	Max fold increase	Time (h)
Stress response/cell defense				Y10313	interferon-related developmental regulator 1 (PC4)	9.5	12
M60974	GADD45 alpha	7.4	7	U02020	pre-B cell enhancing factor (PBEB)	7.9	12
AF078077	GADD45 beta	13.3	7	M23323	T-cell surface glycoprotein CD3 epsilon chain	4.9	12
N95168	GADD45 beta (cDNA clone)	8.0	7	AL031775	TNF receptor associated protein	6.7	12
S81914	IEX-1	4.6	7	X60592	TNF receptor superfamily member 5	3.3	12
AF013512	lipopolysaccharide binding protein (LBP)	6.7	7	Cell adhesion			
X92841	MHC-I polypeptide-related sequence A (MICA)	5.0	7	L34060	cadherin-8	4.5	3
AF069250	okadaic acid-inducible phosphoprotein	5.3	7	X78565	tenascin-C	3.1	3
Apoptosis				U79725	glycoprotein A33	3.7	7
Z23115	Bcl-xL	6.5	3	U77718	pinin, desmosome associated protein	5.3	12
X98172	caspase 8	4.4	3	DNA modification/replication			
AL049851	caspase recruitment domain protein 10	3.1	7	AF006513	chromodomain helicase DNA binding protein 1	8.2	7
AI950382	phosphatidyserine receptor	4.1	7	U73737	DNA mismatch repair protein MSH6	6.0	7
U18321	death associated protein 3 (DAP3)	9.1	12	X00737	nucleoside phosphorylase PNP	5.9	7
U45878	human inhibitor of apoptosis protein 1 (HIAP-1)	7.5	12	AB007949	centrosome-associated protein 350 (KIAA0480)	8.6	12
AB011157	phosphatidyserine receptor (KIAA0585)	60.0	12	U94703	DNA polymerase gamma subunit 2	21.7	12
Cell cycle-related				N25429	high-mobility group 20B	4.2	12
Y13115	serine/threonine protein kinase SAK	17.0	3	AL096744	REV3-like (DNA polymerase zeta)	5.9	12
U22398	cdk-inhibitor (p57 KIP2)	7.3	7	X99050	UV Radiation Resistance Associated Gene	4.9	12
U90551	histone H2A family member L	3.7	7	Transcription factor / regulator			
L19779	histone H2A family member O	8.5	7	M96577	E2F transcription factor 1 (pRB-binding protein)	11.3	1
AI885852	histone H2A family member O	11.6	7	W28567	myelin gene expression factor 2	7.4	1
X14850	histone H2A.X	12.3	7	AF038362	B-TFIID transcription factor-associated	16.5	3
X57985	histone H2B family member Q	5.6	7	M95809	general transcription factor IIH	7.1	3
AI076718	histone H2B family member R	90.8	7	U01877	p300 protein	4.2	3
X60484	histone H4 family, member E	5.1	7	AB002307	Snf2-related CBP activator protein	8.1	3
U50535	human breast cancer 2 (BRCA2)	4.2	7	U85658	transcription factor AP-2 gamma	6.6	3
U78305	protein phosphatase Wip1	7.0	7	U80457	transcription factor SIM2 short form	4.0	3
AF052102	cyclin D binding myb-like	9.8	12	M27691	cAMP responsive element binding protein 1	8.3	7
AF048730	cyclin T1 (associates with cdk9)	3.8	12	M37197	CCAAT-box-binding transcription factor	5.2	7
R59697	cyclin-dependent kinase 8 (cdk8)	6.9	12	X96381	ets variant gene 5	40.0	7
Z98744	histone H2A family member D	7.0	12	X64037	general transcription factor IIF, polypeptide 1	6.0	7
Z80776	histone H2A family member G	5.9	12	AL023584	HIV-1 enhancer binding protein 2 (HIVEP2)	6.3	7
Z98744	histone H2B family member N	7.0	12	AL022726	inhibitor of DNA binding 4 (Id4)	13.5	7
X98261	M-phase phosphoprotein, mpp5	4.0	12	M69043	MAD-3 Ikb-like activity	17.7	7
AB010419	MTG8-related protein MTG16a	14.9	12	M58603	NF-kappa-B p105	3.6	7
U01038	polo-like kinase (pLk)	19.6	12	AB020634	nuclear factor of activated T-cells 5	6.8	7
	retinoblastoma 1	6.1	12	AF001549	RNA polymerase I transcription factor RRN3	13.2	7
X85133	retinoblastoma binding protein 6 (RBQ-1)	13.7	12	X63564	RNA polymerase II largest subunit	7.2	7
X57348	stratifin	5.4	12	D15050	transcription factor 8	15.8	7
				M62831	transcription factor ETR101	10	7
Signaling				L19871	activating transcription factor 3 (ATF3)	3.2	12
S68134	CREM-beta	6.0	3	U71267	CCR4-NOT transcription complex, subunit 4	4.7	12
AF062529	diphosphoinositol polyphosphate phosphohydrolase	3.9	3	X63741	early growth response 3 (pilot)	6.2	12
Z34897	H1 histamine receptor	4.1	3	U90917	forkhead box M1	8.8	12
X58822	interferon-omega 1	44.0	3	X59268	general transcription factor IIB	16.5	12
AL022398	interferon regulatory factor 6	3.1	3	W37606	HCF-binding transcription factor Zhangfei	4.8	12
U19775	mitogen-activated protein kinase 14	3.3	3	AF012108	nuclear receptor co-activator	9.0	12
M31724	protein tyrosine phosphatase, non-receptor type 1	3.8	3	X84373	nuclear receptor interacting protein 1	5.8	12
U57094	RAB27A (small GTP-binding protein)	3.1	3	U15306	nuclear transcription factor, X-box binding 1	6.4	12
AB018249	small inducible cytokine subfamily A (Cys-Cys)	6.7	3	M93650	paired box gene (PAX6) homologue	21.6	12
U14187	ephrin A3	6.1	7	AJ238381	pax9 protein	8.6	12
M59371	ephrin receptor EphA2	12.2	7	L20433	POU domain, class 4, transcription factor 1	3.5	12
M36821	growth regulated protein gamma	4.2	7	Y18004	SCML2 protein	8.7	12
AF010193	MAD-related gene SMAD7	8.1	7	AJ010277	TFB19 protein	4.9	12
L24564	ras-associated with diabetes (RAD)	41.4	7	M76766	transcription factor (TFIIB)	27.2	12
S59184	receptor-like tyrosine kinase (RYK)	9.1	7	M62810	transcription factor A, mitochondrial	8.1	12
L13463	regulator of G-protein signalling 2 (RGS2)	8.1	7	Transcription factor: Zinc finger			
U77914	similar to transmembrane protein Jagged 1	11.2	7	AB002381	monocytic leukemia ZNF-related factor	6.2	3
D38305	transducer of ERBB2, 1 (Tob)	6.8	7	U22377	L-myc fusion sequence Zn-15 related ZNF	11.0	3
M99439	transducin-like enhancer protein (TLE4)	12.2	7	AB018285	ZNF (KIAA0742 protein)	5.6	3
X02910	tumor necrosis factor (TNF-alpha)	8.1	7	AB007874	ZNF 297B (KIAA0414)	3.4	3
M92357	TNF, alpha-induced protein 2	9.8	7	AB000277	DAP-1 alpha	15.8	7
M59465	A20 (TNF, alpha-induced protein 3)	9.3	12	U19523	GTP cyclohydrolase I	6.8	7
L36645	ephrin receptor EphA4	34.3	12	AI936758	neuropeptide FF-amide peptide precursor	3.6	7
D16827	fifth somatostatin receptor subtype	6.2	12	Oncogenesis			
AC005192	interferon-related developmental regulator 1 (PC4)	16	12	M33326	carcinoembryonic antigen-related molecule 8	41.3	3
Transcription factor: Zinc finger, continued				X15218	v-ski sarcoma viral oncogene homolog	4.9	3
AL096880	Zinc finger C2H2 type domains	4.0	3	AB023196	androgen-induced prostate prolif. shutoff ass. Prot.	6.3	7
U00115	BCL6 (ZNF51)	8.7	7	U76702	FLRG, follistatin-like 3	3.8	7
AB007447	TRAF-interacting ZNF (FLN29)	3.4	7	AB024401	inhibitor of growth family, member 1 (p33)	7.1	7
L04282	ZBP-89 (CACCC box-binding protein)	4.5	7	AF029729	neuralized mRNA	4.3	7
AL049942	ZNF337	4.7	7	U77735	pim-2 oncogene	16.1	7
AL080123	ZNF23 strong similarity to H-plk	5.2	12	M34309	v-erb-b2 erythroblastic leukemia v-onc homolog 3	16.5	7
L11672	ZNF91	13.8	12	S61953	v-erb-b2 erythroblastic leukemia v-onc homolog 3	12.3	7
U09410	ZNF131	4.1	12	U87459	autoimmunogenic cancer/testis antigen NY-ESO-1	12	12
U09848	ZNF139	5.2	12	AL050008	breast cancer metastasis-suppressor 1	4.5	12
D28118	ZNF161	8.9	12	M62397	colorectal cancer protein	6.7	12
AL050276	ZNF288	6.9	12	AB015345	cutaneous T-cell lymphoma-assoc.tumor antigen	5.5	12
Transcription factor: Homeobox				M64347	fibroblast growth factor receptor 3	13.5	12
U07664	homeobox HB9	6.9	3	AB014579	meningioma expressed antigen 5	4.2	12
AC004080	homeobox A10 m	4.2	7	L13773	myeloid/lymphoid or mixed-lineage leukemia (AF-4)	3.9	12
U41813	homeobox gene in HOXA gene cluster	9.2	7	D90070	phorbol-12-myristate-13-acetate-induced protein 1	19.7	12
M97676	homeobox protein (HOX7)	13.5	7	AJ132440	PLU-1 protein	7	12
X17360	homeobox protein (HOX 5.1)	9.8	12	AF051160	protein tyrosine phosphatase type IVA, member 1	4.2	12
Enzyme general				X75042	rel proto-oncogene	8.6	12
U77413	O-linked N-acetylglucosamine transferase	4.9	1	AA725102	v-maf musculoaponeurotic fibrosarcoma onc homolog	9.8	12
S46622	protein phosphatase 3 (calcineurin A gamma)	10.6	1	AF017257	v-ets erythroblastosis virus E26 onc homolog 2	6	12
D38524	5'-nucleotidase, cytosolic II	4.7	3	X66087	v-myb myeloblastosis viral oncogene homolog	16.5	12
U29615	chitinase 1	7.9	7	RNA processing/ RNA binding proteins			
M80254	cyclophilin F	7.3	7				

AJ003125	procollagen I-N proteinase	3.7	7	L10910	RNA-binding region (RNP1, RRM) containing 2	6.4	3
AB012229	fructose-6-phosphate 2-kinase	7.2	12	A1739308	splicing factor SC35	4.1	7
AJ012590	glucose 1-dehydrogenase	7.0	12	M74002	splicing factor, arginine/serine-rich 11	3.2	7
AB020645	glutaminase (KIAA0838 protein)	7.1	12	U15782	cleavage stimulation factor, subunit 3	8.3	12
AJ003147	metallopeptidase	9.0	12	AA675900	formin binding protein 3	9.7	12
AL049954	S-adenosyl homocysteine hydrolase homolog	4.4	12	Z78308	formin binding protein 3	6.4	12
X83301	SMA5 protein (glycosyl hydrolase)	8.8	12	S63912	heterogeneous nuclear ribonucleoprotein A3	7.5	12
N63574	sulfotransferase family 4A	5.4	12	L22009	heterogeneous nuclear ribonucleoprotein H1	12.2	12
Growth factor				W28483	heterogeneous nuclear ribonucleoprotein H1	7.4	12
M62302	growth differentiation factor 1	3.6	12	U97188	IGF-II mRNA-binding protein 3 (IMP-3)	3.1	12
Kinase				AF025654	mRNA capping enzyme (HCE)	12.6	12
L33881	protein kinase C, iota isoform	6.5	1	D83032	mRNA splicing	5.4	12
W26652	PTEN induced putative kinase 1 (PINK1)	4.9	3	AF042386	RNA-binding nuclear cyclophilin isoform B	11.8	12
D42040	bromodomain containing 2 homolog RING3	13.7	7	W26521	similar to splicing factor, arginine/serine-rich 4	4.3	12
S78771	CpG island-associated gene	25.4	7	L41887	splicing factor arginine/serine rich 7 (35kDa)	6.6	12
AF091395	similar to protein kinase	8.4	7	W27611	splicing factor proline/glutamine rich	14.9	12
X52213	leukocyte tyrosine kinase	5.6	12	AI827895	splicing factor proline/glutamine rich	13.4	12
X80590	phosphorylase kinase, gamma subunit	11.7	12	U68063	splicing factor, arginine/serine-rich 10	5.4	12
	protein kinase	10.9	12	X75755	splicing factor, arginine/serine-rich 2 (PR264)	6.5	12
M59287	protein kinase	5.9	12	Structural protein			
AB002342	protein kinase, lysine deficient 1 (KIAA0344)	22.6	12	AF006083	ARP3 actin-related protein 3 homolog	3.3	7
U26424	serine/threonine kinase 3 (Ste20-like)	6.3	12	D87468	cytoskeleton-associated protein	5.9	7
AB011108	serine/threonine-protein kinase PRP4 homolog	16.4	12	AI961040	gamma-tubulin complex protein 2	4.1	7
AF059617	serum inducible kinase	23.8	12	AI290660	SWI/SNF related, matrix associated	4.1	7
	tyrosine kinase	33.0	12	AF042166	actin-binding protein	9.0	12
Metabolism				AI935551	actin-related protein 2 homolog (ARP2)	3.9	12
AB003791	carbohydrate sulfotransferase 1	5.8	1	M64571	actin-related protein 2 homolog (ARP2)	14	12
X83573	arylsulfatase E (ARSE)	3.4	3	L14565	microtubule-associated protein 4 (MAP 4)	7.1	12
AB019036	geranylgeranyl diphosphate synthase 1	4.4	3	Translation			
L40027	glycogen synthase kinase 3 alpha	4.0	3	AI074025	eukaryotic translation initiation factor 5A	5.3	3
AF059214	cholesterol 25-hydroxylase	6.0	7	X55954	HL23 ribosomal protein homologue	3.3	3
X15334	creatine kinase B	4.6	7	X79563	ribosomal protein S21	20.7	3
J03826	ferredoxin reductase	4.6	7	M31520	ribosomal protein S24	4.2	3
L33801	glycogen synthase kinase 3 beta	4.9	7	AF064607	translation factor sui1 homolog	4.0	3
U57721	kynureninase	5.3	7	L19161	translation initiation factor eIF-2 gamma subunit	5.1	3
S70154	acetyl-Coenzyme A acetyltransferase 2	7.5	12	Z97353	60S Ribosomal Protein L15	4.5	7
U68111	protein phosphatase inhibitor 2 (PPP1R2)	10.8	12	U09002	N-methyl-D-aspartate receptor modulatory subunit 2A	8.9	3
Neuronal				AA996066	postmeiotic segregation increased 2-like	7.1	3
D26158	ELAV-like 3	5.5	3	Y13247	protein phosphatase 1	5.1	3
Translation, continued				U12128	protein tyrosine phosphatase, non-receptor type 13	3.3	3
D30655	eukaryotic translation initiation factor 4A	3.3	7	U63127	SEC7 homolog	5.1	3
AB007928	mitochondrial ribosomal protein S10	11	7	X52228	secreted epithelial tumour mucin antigen	7.4	3
Z48501	polyA binding protein II	4.9	7	L26081	semaphorin-III (Hsema-I)	4.8	3
W28170	eukaryotic translation elongation factor 1	8.4	12	M12792	steroid 21-hydroxylase (P-450(C21)) B	3.0	3
U29607	methionine aminopeptidase	12.8	12	U51269	stimulatory Gdp/Gtp Exchange Protein	3.4	3
Y00345	polyA binding protein	4.5	12	AL050089	armadillo repeat gene deletes in velocardiofacial syndrome	3.8	7
L06498	ribosomal protein S20	3.8	12	L03426	bromodomain adjacent to zinc finger domain, 1A	14.4	7
AI254524	translation initiation factor IF2	4.8	12	J03071	DNA segment on chromosome X and Y	3.4	7
Ubiquitin				U13897	growth hormone and chorionic somatomammotropin	4.9	7
AL031133	SMT3 suppressor of mif two 3 homolog 2 (yeast)	3.7	1	X03066	guanylate kinase-related domain	9.1	7
AJ010346	RING-H2 protein RNF6	6.8	7	X65633	major histocompatibility complex class II	7.7	7
M91670	ubiquitin carrier protein (E2-EPF)	4.0	7	AF072242	melanocortin 2 receptor	4.4	7
U90547	RNF15 (Ro/SSA ribonucleoprotein homolog)	11.1	12	U09284	methyl-CpG binding protein MBD2	4.5	7
M26880	ubiquitin C	3.1	12	X73079	PINCH protein	7.1	7
X63547	ubiquitin specific protease 6	12.6	12	Y09631	Polymeric immunoglobulin receptor	5.6	7
D29956	ubiquitin specific protease 8	5.9	12	U03105	progesterone-induced blocking factor 1	6.4	7
X98296	ubiquitin specific protease 9	8.2	12	AJ006835	proline rich 2 (B4-2 protein)	3.4	7
Transport				X67098	RNA transcript from U17 small nucleolar RNA	15.2	7
X78520	chloride channel 3 putative	30.7	3	AI052224	rTS beta protein	11.9	7
J04027	plasma membrane Ca2+ pumping ATPase	3.5	3	AJ012755	spheriperal-type benzodiazepine receptor	3.3	7
U39905	solute carrier family 18	46.9	3	D31885	TL132	19.1	7
M92302	voltage-dependent calcium channel beta-1	4.0	3	M10058	ADP-ribosylation factor-like 6 interacting protein	8.6	12
N74607	aquaporin 3	82.2	7	K03183	asialoglycoprotein receptor H1(endocytosis)	19.3	12
L78207	ATP-binding cassette, sub-family C	7.0	7	X81637	chorionic gonadotropin beta subunit gene	6.0	12
Y10032	serum/glucocorticoid regulated kinase	4.0	7	AB011148	clathrin light chain b	4.9	12
AB012130	sodium bicarbonate cotransporter 2 (SBC2)	9.7	7	D83702	coactivator for steroid receptors	4.2	12
U26209	solute carrier family 13	3.6	7	D55696	cryptochrome 1 (photolyase-like)	7.4	12
U83661	ABC transporter protein	7.0	12	M21536	cysteine protease	3.5	12
Y08614	exportin 1 (CRM1 protein)	4.1	12	AF048849	erg protein (ets-related gene)	5.8	12
Y09765	gamma-aminobutyric acid (GABA) A receptor	9.5	12	AB017788	erythroid differentiation and denucleation factor 1	10.5	12
AF047438	golgi SNAP receptor complex member 1	4.8	12	AB021179	dickkopf homolog 4 (hDkk-4)	84.2	12
L38951	importin beta subunit	6.8	12	U00943	HEXIM1 protein	17.8	12
U07364	inwardly rectifying potassium channel	9.2	12	X72790	HIV-1 rev binding protein 2	8.3	12
AJ132712	nuclear RNA export factor 1 (NXF1)	9.4	12	AI307607	human endogenous retrovirus ORF	9.4	12
L20852	solute carrier family 20	3.3	12	AJ010014	large proline-rich protein BAT2	4.7	12
S80864	X transporter protein 3	4.7	12	U80764	M96A protein, putative DNA binding protein	6.9	12
Miscellaneous				X74614	mariner transposon Hsmar1 sequence	4.5	12
AB002355	dynein, axonemal, heavy polypeptide 9 (KIAA0357)	75.0	1	AL046394	outer dense fiber protein ODF2 (allele 2)	3.5	12
AI624840	erythroid differentiation and denucleation factor 1	4.4	1	D45132	poly(rC) binding protein 3	3.4	12
X82209	meningioma (disrupted in balanced translocation) 1	3.8	1	M13057	PR domain containing 2	7.5	12
AF046059	cytokine receptor related protein 4 (CYTOR4)	3.4	3	X89602	PR domain containing 2	4.4	12
M16961	alpha-2-HS-glycoprotein	3.0	3	AI688640	proline-rich protein HaeIII subfamily 1	42.4	12
J02931	coagulation factor III tissue factor	15.6	3	AL080186	rTS beta protein	22.6	12
L09708	complement component 2 (C2)	6.5	3	W26496	similar to NK-Tumor recognition protein	7.4	12
U70728	cytohesin family member	3.0	3	X79204	similarity to nuclear proteins (SRK ritch)	7.5	12
AF080227	embryonic ectoderm development	4.6	3	Y08262	SOCS box-containing WD protein SWIP-1	8.1	12
Z26248	eosinophil granule major basic protein	14.6	3		spinocerebellar ataxia 1 (SCA1)	5.7	12
U41060	estrogen regulated	3.7	3		spinocerebellar ataxia 2 (SCA2)	7.6	12
AF050145	iduronate 2-sulfatase (Hunter syndrome)	5.1	3				
U93917	ligand gated ion channel	12.9	3				

Table 8b. Genes induced by HSV-1(F) infection in REF cells but not HFF cells

Genbank	Description	PRV		HSV		Genbank	Description	PRV		HSV	
		Max. fold incr.	Time (hpi)	Max. fold incr.	Time (hpi)			Max. fold incr.	Time (hpi)	Max. fold incr.	Time (hpi)
Stress Response											
Z75029	heat shock protein 70.2			31.02	12	AA799389	Rab3B protein			4.1	12
AA818604	Heat shock protein 70-1			23.12	12	L24897	myosin heavy chain			3.62	12
D15069	adrenomedullin			7.38	12	A1071399	vesicle transport-related, RA410			3.21	12
X15705	heat shock protein-related gene hst70.			7.27	12	D31962	RhoGAP			3.06	12
A1235747	Glutathione-S-transferase, alpha type Ya			7.06	12	AF083331	kinesin-like protein (KIF1B)			10.37	12
AA926149	Catalase			3.93	12	D50664	oligopeptide transporter			3.09	12
M62642	hemopexin			3.78	12	AF019043	dynamitin-like protein (DLP1)			3.05	12
AF058787	heme oxygenase-3 (HO-3)			3.58	12	AI104567	actin alpha cardiac 1	3.95	5	6.43	12
M83298	protein phosphatase 2A	3.33	4	4.79	8	U37099	small GTP-binding protein (rab3c)	5.16	12	4.66	12
AF055714	hypertension-reg. vascular factor-1C-4	3.4	12	4.24	12	L24776	tropomyosin 3, gamma	3.19	12	3.13	12
M64711	endothelin-1	9.13	12	4.97	12	Cell adhesion					
Transcription Factor											
U17837cds	Rb-interacting zinc-finger protein RIZ			4.53	12	M35602	beta-fibrinogen			3.53	1
M63282	leucine zipper protein			6.26	12	L11002	ankyrin binding glycoprotein-1 related			6.74	12
L13201	HNF-3/forkhead homolog-1 (HFH-1)			5.22	12	A1058601	ankyrin 3 (G), Ank3			5.8	12
M87634	brain factor-1 (member of HFH family)			4.37	12	A1072634	keratin complex 1, acidic, gene 18			5.08	12
U56732	KRAB/zinc finger suppressor protein 1			4.19	12	M57276	leukocyte antigen MRC-OX44			4.47	12
D82074	brain basic helix-loop-helix factor 1			3.88	12	U06752	mucin 4			4.19	12
L22760_at	DNA binding protein (GATA-GT1)			3.4	12	U76717	PG10.2			3.94	12
X54249	zinc finger protein AT-BP1			3.01	12	AB004278	protocadherin 2			3.88	12
AF039832	homeobox protein (rPtx2)			4.14	4	M76535	connexin (CXN-40)			3.73	12
X59993	putative zinc finger protein			6.85	12	X51615	connexin (Cx26)			3.61	12
L20913	VEGF-3			3.95	12	AF069775	L1-like cell adhesion molecule (CALL)			3.58	12
U07610	zinc finger protein (HF-1b)			3.23	12	AB017170	Slit-1			3.43	12
AA891717	ESTs, upstream transcription factor 1	5.24	12	9	12	X16072	beta B2 crystallin			3.29	12
S82627	pem	4.08	12	3.24	12	AJ011811	claudin-7 (tight junction protein)			3.24	12
U91679	ETS domain transcription factor Pet-1	3.51	12	3.43	12	L47281	collagen type IV alpha-3			3.23	12
Apoptosis											
X63594	RL/IF-1 (IkappaB)			5.94	12	X05861	gamma-fibrinogen			3.22	12
X66693	granzyme B			4.76	12	S79214	collagen type X alpha 1			3.19	12
U70268	mud-7			3.33	12	S79523	L-selectin			3.11	12
L24374	matrix metalloproteinase-7			3.03	12	M19359	gamma-crystallin gene cluster			3.05	12
Signaling											
A1030997	toll-like receptor 4			4.43	4	L17318	proline-rich proteoglycan (PRPG2)			3.04	12
M31837	IGF binding protein precursor IGF-BP3			8.17	12	U81037	ankyrin binding cell adh. molecule NrCAM			3.03	12
M17527	GTP-binding protein, alpha inhibiting 1			3.55	0	U75916	zonula occludens 2 protein (ZO-2)			3.03	12
S53987	nicotinic receptor alpha 7 subunit			8.09	12	U59801	integrin alpha-M (Itgam)	5.1	12	5.04	12
U01146	nuclear orphan receptor HZF-3			6.36	12	AA875097	EST, Fibrinogen alpha	8.7	5	5.08	5
U02320	neu differentiation factor			5.65	12	X59859	decorin	3.1	2	3.55	5
J05189	neuromedin K receptor			5.54	12	AA866466	cytokeratin 8 polypeptide	3.97	12	7.19	12
U31159	SH3 domain binding protein CR16			5.20	12	U07615_X59677	mucin	7.01	12	5.39	12
AA891764	LDL receptor-related protein 2			4.76	12	AA893216	kidney-specific membrane protein	3.44	12	3.23	2
AB009463	LDL receptor-related protein 3			4.63	12	AA963857	glypican 3	16.12	12	11.16	12
X95990	C5a anaphylatoxin receptor			4.19	12	AF020046	integrin alpha OX-62	3.34	5	3.12	5
U76206	orphan GPCR, VTR 15-20			3.86	12	U49062	CD24 (ligand of P-Selectin)	10	12	25.73	12
U37462	MAP kinase/ERK kinase 5 (MEK5)			3.83	12	U33553	Chondroitin sulfate proteoglycan 5	3.69	12	3.14	12
S48190	activin receptor type II			3.82	12	X13983	alpha-2-macroglobulin gene	3.06	12	5.17	12
AA924289	insulin-like growth factor binding protein			3.77	12	Channels/ Transporters					
AF013144	dual-specificity phosphatase (cpg21)			3.64	12	U10096	bumetanide-sens. Na-K-Cl cotransporter			3.81	5
M36074	mineralocorticoid receptor			3.58	12	U04937	Na-Ca exchanger isoform NACA1			3.78	1
L10073	5-hydroxytryptamine receptor (5HT5b)			3.57	12	M99223	calcium transporting ATPase			4.95	12
AF090692	CRES			3.55	12	AF021923	K-dependent Na-Ca exchanger			4.56	12
AA946488	protein tyrosine phosphatase 2E			3.52	12	AI145680	Solute carrier 16, member 1			3.96	12
U93306	VEGF receptor-2/FLK-1			3.46	12	L29573	NaCl-dep. norepinephrine transporter			3.37	12
S47609	adenosine receptor			3.29	12	L39018	sodium channel protein 6 (SCP6)			3.35	12
X89701	olfactory receptor TPCR13			3.29	12	L46873	proton-dependent peptide transporter			3.34	12
X59249	putative G-protein coupled receptor			3.26	12	M57682	brain calcium channel alpha-1 subunit			3.29	12
L14323	phospholipase C-beta1b			3.16	12	D21132	phosphatidylinositol transfer protein			3.32	12
AI138070	PTP non-receptor type 11			3.14	12	M30581	organellar Ca-2+ pump			3.11	12
U47014	pro-protein convertase 5 isoform B			3.11	12	AF022819	putative potassium channel TWIK			3.08	12
U92802	orphan GPCR, GPR41			3.10	12	AF020756	P2X2-3 receptor			3.07	12
J03572	alkaline phosphatase			3.10	12	AF087453	K+ channel	5.15	12	5.61	12
X89697	olfactory receptor TPCR07			3.10	12	D13906	Aquaporin 2	6.66	12	6.33	12
AF053988	putative pheromone receptor V2R1-1	3.12	12	3.2	12	Growth Factor					
AI101320	jagged 2, Jag2	4.45	12	3.15	12	Z35138	fibroblast growth factor receptor 2b			3.19	3
X91988	Stat5b	4.05	12	5.97	12	AB009246	Stem cell growth factor (SCGF)			3.39	4
L26110	TGF-beta type I receptor	8.87	12	6.94	12	Z83757	growth hormone receptor			7.8	12
M55250	inhibitory glycine receptor alpha subunit	3.41	5	3.89	4	L05489	heparin-binding EGF-like growth factor			5.2	12
M58040	transferrin receptor	3.33	5	6.99	12	Metabolism					
S46785	IGF-BP complex acid-labile subunit	3.11	12	3.42	12	AA926193	Sult1c2			3.39	12
X89699	olfactory receptor TPCR10	4.04	12	3.58	12	AI014135	beta-carotene 15, 15-dioxygenase			3.03	0
AB001576	NTAK	5.19	12	4.06	12	J04791	ornithine decarboxylase (ODC)			14.81	12
U36786	putative pheromone receptor VN7	3.21	12	3.08	12	AI043631	ODC antizyme inhibitor			7.09	12
S76466	serine-threonine kinase receptor	3.09	12	4.59	12	AB000717	S-adenosylmethionine synthetase			6.59	12
Neuronal											
M93669	secretogranin II			4.53	12	U60063	aldehyde dehydrogenase			6.41	12
M64867	serotonin receptor			3.13	12	M25350	cAMP phosphodiesterase			5.83	12
AA893471	Reelin (neuronal positioning)			6.88	12	AB010635	carboxylesterase 2			5.25	12
S82649	neuronal activity-regulated pentraxin			5.8	12	X58294	carbonic anhydrase II			4.59	12
U39549	synaptogyrin			5.35	12	AA956930	Endothelin-converting enzyme 1			4.54	12
M61099	metabotropic glutamate receptor			5.16	12	L32601	alpha-hydroxysteroid dehydrogenase			4.13	12
AA858626	synaptic vesicle glycoprotein 2 b			4.47	12	Y12635	vacuolar ATPase subunit B			3.99	12
J05232	neuronal nicotinic Ac receptor-rel. beta-4			3.8	12	AI179613	Glutamate dehydrogenase			3.94	12
S77863	mu-opioid receptor MOR			3.7	12	AA894273	dimethylarg. dimethylaminohydrolase 1			3.75	12
L35558	neuronal glut./aspart. transport protein			3.62	12	U30813	aspartyl-tRNA synthetase			3.74	12
AF093268	homer-1c			3.52	12	D63704	dihydropyrimidinase			3.7	12
D13125	neural visinin-like Ca2+-binding protein 2			3.16	12	L22339	N-hydroxy-2-acetylaminofluorene			3.52	12
M32061	adrenergic receptor (RNG-alpha-2)			3.11	12	AB010429	acyl-CoA hydrolase-like protein			3.36	12
U14398	synaptotagmin IV homolog			3.05	12	X55286	HMG-CoA reductase.			3.2	12
U19866	Arc	6.41	6	7.98	12	X56747	fetal intestinal lactase-phlorizin hydrolase			3.16	12
AF030088	ania-3	7.2	4	4.79	4	D10853	amidophosphoribosyltransferase			3.15	12
X96790	metabotropic glutamate receptor 7b	4.1	12	6.88	12	D50580	carboxylesterase			3.05	12
M36419	glutamate receptor (GluR-B)	7.44	12	9.63	12	AF062741	Pyruvate-DH phosphatase isoenzyme 2			3.04	12
S46131	dopamine D1 receptor	4.04	12	7.48	12	Z27513	carbamoylphosphate synthase I			7.02	0
D28512	Synaptotagmin III	3.9	12	3.92	12	X57565	UDP-glucuronosyltransferase 2A1	3.78	12	3.99	12
						M82845	PAM-5	3.62	12	5.56	12
						AA800851	carboxylesterase 3	6.26	8	3.39	8
						M27440	apolipoprotein B	3.68	6	3.39	12
						L27059	phosphodiesterase			5.08	12

AB016161	GABAB receptor 1d	7.42	12	4.71	12	AA875390	thioredoxin-like protein	8.29	0	4.95	12
Z49748	m4 cholinergic muscarinic receptor	4.53	12	3.07	12	X02284	aldolase B	3.86	12	3.12	12
S56679	AMPA-selective glutamate receptor-A	4.13	12	4.06	12	U07971	L-arginine:glycine amidinotransferase	4.38	4	5.69	4
Z11558	glia maturation factor beta (GMF-beta)	3.55	12	3.37	12	X06357	serine pyruvate aminotransferase	16.68	12	5.67	12
M89953	5-HT1D serotonin receptor	3.1	12	4.39	12	AF063302	carbitine palmitoyltransferase Ibeta 1	3.05	12	4.46	12
Kinase											
AI044254	pyridoxal kinase, Pdxk			8.24	12	AI169372	arachidonic acid epoxygenase			7.32	12
U50412	PI3K regulatory subunit, p85 alpha			5.08	12	AI175764	stearoyl-Coenzyme A desaturase 1, Scd1	3.46	0	9.32	0
U40819	5'-AMP-activated protein kinase alpha-1			4.36	12	S67722	COX-2	11.21	8	3.92	12
X63675	Pim-1 kinase			3.8	12	Cytokine/ Chemokine					
AI104012	Dual Specificity Yak1-related kinase			3.68	12	U14647	interleukin-1 beta converting enzyme b			3.13	0
X57986	cAMP-dependent protein kinase C alpha			3.34	12	U48592	interleukin-1 receptor accessory protein			7.39	12
U63971	rhodopsin kinase			3.19	12	Z50052	C4BP beta chain protein			5.82	12
E01789	C-kinase type-II (beta-2)			3.12	12	M98820	interleukin 1-beta propeptide			5.04	12
M31788	phosphoglycerate kinase			3.12	12	X53087	interleukin 4, exons 1 and 2			4.39	12
D10262	choline kinase R1	3.54	12	8.24	12	AF053312	CC chemokine MIP3 alpha			3.13	12
AI059291	Prkar2a	5.49	12	4.99	12	Hormone-related					
Cell-cycle related											
AA957218	cyclin D1			3.37	12	D84487	PMSG-induced ovarian mRNA			3.05	8
U18419	nonmuscle caldesmon			3.00	12	AF036335	prolactin- and FGF-2-responsive			6.72	12
AF030091	cyclin L			3.00	12	M86758	estrogen sulfotransferase			3.56	12
M24604	PCNA/cyclin			3.11	12	L24207	testosterone 6-beta-hydroxylase			3.5	12
X75785	synaptonemal complex protein 3 (SCP3)	4.11	5	4.91	5	M36804	follicle stimulating hormone beta-subunit			3.07	12
Oncogene											
D37951	MIBP1 (c-myc intron binding protein 1)			3.08	12	Z34004	growth hormone-releasing hormone			3.05	12
AI639318	Ret proto-oncogene	4.06	1	6.45	1	AA946542	prolactin-like protein D, Pripd	4.33	2	4.31	2
X03347	P75 gag-fos fusion protein	6.43	6	4.72	12	M23643	thyrotropin-releasing hormone (THR)	6.61	12	4.48	12
D11445	Gro	3.93	12	4.19	5	S64044	progester. receptor steroid-binding domain	4.77	12	4.27	12
RNA processing/RNA binding proteins											
U77931	rRNA promoter binding protein	3.75	12	4.7	12	M25646	vasopressin	4.29	12	4.17	12
Translation											
Protein folding/degradation											
AA893127	signal sequence receptor 4			4.65	12	D00575	pituitary glycoprotein hormone alpha	3.77	12	3.37	12
U55765	RASP1 (serine protease inhibitor)			3.9	12	S80127	hypothalamic parathyroid hormone	3.09	12	4.14	12
M24353	alpha-mannosidase II			3.31	12	Electron transport					
M83745	Protein convertase subtilisin/kexin, type	3.28	12	5.94	12	AI013297	ESTs, NADH Fe-S protein 4			3.78	12
Immune-related											
M23889	T-cell receptor beta chain			9.19	12	S48325	diabetes-inducible cytochrome RLM6			3.1	12
S80118	nude			4.41	12	M14775	cytochrome P-450	3.13	4	5.24	12
X73371	Fc gamma receptor			4.08	12	Nucleus/Nuclear Matrix					
M84149	IgH chain VJ region			4.06	12	AF063447	nuclear RNA helicase			22.72	12
AF082533	NK receptor KILR-1			3.76	12	AA892919	nucleolar phosphoprotein p130			4.39	12
AF029240	MHC class Ib RT1.S3			3.67	12	M27433	germinal histone H4 gene			4.31	12
D87919	interferon beta			3.59	12	AA859632	replication factor C, large subunit			4.08	12
AA892259	ESTs, IFN consensus-binding protein			3.5	12	U76635	DNase I			3.65	12
AF024712	MHC class Ib M4			3.07	12	L01267	helicase (RAP30)			3.36	12
U67888	mast cell protease 3 (RMCP-3)	3.88	12	13.39	12	U19614	lamina-associated polypeptide 1C			3.05	12
L37966	T-cell receptor alpha-chain	9.67	12	3.65	12	U95162	nuclear protein E3-3 orf3	3.55	12	4.09	12
U57063	natural killer cell protease 7 (RNKP-7)	3.16	12	4.22	12	AF056324	scaffold attachment factor B	3.45	12	4.47	12
Z68145	immunoglobulin lambda-5 chain	4.93	12	4.43	12	Ribosomal proteins					
X04310	CD8 antigen, beta-chain	4.27	12	3.21	12	AI639224	ribosomal protein S13	3.36	12	5.98	12
U75411	anti-idiotypic IgM light chain	3.57	12	4.59	12						
M21622	high-affinity IgE receptor	3.32	12	3.06	12						