

Table S1. Gene listing of MCF-IM inducible gene expression microarray profile.

Probeset	Symbol	ENSEMBL	Description	Induced by PMA	Induced by TGF	More in CSC than NCSC	Induced by PMA (CSC)
7898663	PINK1	ENSG00000158828	PTEN induced putative kinase 1	yes	yes	---	---
7899018	TMEM57	ENSG00000204178	transmembrane protein 57	yes	yes	---	---
7899310	TMEM222	ENSG00000186501	transmembrane protein 222	yes	yes	---	---
7903507	FAM102B	ENSG00000162636	family with sequence similarity 102, member B	yes	yes	---	---
7906061	SYT11	ENSG00000132718	synaptotagmin XI	yes	yes	---	---
7923378	CSRP1	ENSG00000159176	cysteine and glycine-rich protein 1	yes	yes	---	---
7909890	HLX	ENSG00000136630	H2.0-like homeobox	yes	yes	---	---
7912257	CLSTN1	ENSG00000171603	calyntenin 1	yes	yes	---	---
7913655	ID3	ENSG00000117318	inhibitor of DNA binding 3, dominant negative helix-loop-helix protein	yes	yes	---	---
7916304	GLIS1	ENSG00000174332	GLIS family zinc finger 1	yes	yes	---	---
7917885	CNN3	ENSG00000117519	calponin 3, acidic	yes	yes	---	---
7920258	S100A6	ENSG00000197956	S100 calcium binding protein A6	yes	yes	---	---
7928944	PAPSS2	ENSG00000198682	3'-phosphoadenosine 5'-phosphosulfate synthase 2	yes	yes	---	---
7931455	LRRC27	ENSG00000148814	leucine rich repeat containing 27	yes	yes	---	---
7938485	MICAL2	ENSG00000133816	microtubule associated monooxygenase, calponin and LIM domain containing 2	yes	yes	---	---
7939052	FIBIN	ENSG00000176971	fin bud initiation factor homolog (zebrafish)	yes	yes	---	---
7942342	INPPL1	ENSG00000165458	inositol polyphosphate phosphatase-like 1	yes	yes	---	---
7942957	PRSS23	ENSG00000150687	protease, serine, 23	yes	yes	---	---
7948987	PLA2G16	ENSG00000176485	phospholipase A2, group XVI	yes	yes	---	---
7950391	PGM2L1	ENSG00000165434	phosphoglucomutase 2-like 1	yes	yes	---	---
7958989	PLBD2	ENSG00000151176	phospholipase B domain containing 2	yes	yes	---	---
7961514	MGP	ENSG00000111341	matrix Gla protein	yes	yes	---	---
7972936	TMEM255B	ENSG00000184497	transmembrane protein 255B	yes	yes	---	---
7975324	GALNT16	ENSG00000100626	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase	yes	yes	---	---
7980152	LTBP2	ENSG00000119681	latent transforming growth factor beta binding protein 2	yes	yes	---	---
7975787	JDP2	ENSG00000140044	Jun dimerization protein 2	yes	yes	---	---
7977397	CRIP2	ENSG00000182809	cysteine-rich protein 2	yes	yes	---	---
7984079	TPM1	ENSG00000140416	tropomyosin 1 (alpha)	yes	yes	---	---
7990736	ADAMTS7	ENSG00000136378	ADAM metallopeptidase with thrombospondin type 1 motif, 7	yes	yes	---	---
7992474	TSC2	ENSG00000103197	tuberous sclerosis 2	yes	yes	---	---
7995976	CPNE2	ENSG00000140848	copine II	yes	yes	---	---
7996490	TMEM208	ENSG00000168701	transmembrane protein 208	yes	yes	---	---
7997662	KIAA0513	ENSG00000135709	KIAA0513	yes	yes	---	---
8002975	CDYL2	ENSG00000166446	chromodomain protein, Y-like 2	yes	yes	---	---
8004385	NLGN2	ENSG00000169992	neuroligin 2	yes	yes	---	---

8004571	EFNB3	ENSG00000108947	ephrin-B3	yes	yes	---	---
8005865	SARM1	ENSG00000004139	sterile alpha and TIR motif containing 1	yes	yes	---	---
8007323	CNTNAP1	ENSG00000108797	contactin associated protein 1	yes	yes	---	---
8012883	HS3ST3A1	ENSG00000153976	heparan sulfate (glucosamine) 3-O-sulfotransferase 3A1	yes	yes	---	---
8019149	SLC38A10	ENSG00000157637	solute carrier family 38, member 10	yes	yes	---	---
8025633	PDE4A	ENSG00000065989	phosphodiesterase 4A, cAMP-specific	yes	yes	---	---
8029236	MEGF8	ENSG00000105429	multiple EGF-like-domains 8	yes	yes	---	---
8040473	RHOB	ENSG00000143878	ras homolog family member B	yes	yes	---	---
8040698	SLC35F6	ENSG00000213699	solute carrier family 35, member F6	yes	yes	---	---
8057898	HECW2	ENSG00000138411	HECT, C2 and WW domain containing E3 ubiquitin protein ligase 2	yes	yes	---	---
8062312	MYL9	ENSG00000101335	myosin, light chain 9, regulatory	yes	yes	---	---
8068496	SIM2	ENSG00000159263	single-minded homolog 2 (Drosophila)	yes	yes	---	---
8070632	CBS	ENSG00000160200	cystathionine-beta-synthase	yes	yes	---	---
8072108	ASPHD2	ENSG00000128203	aspartate beta-hydroxylase domain containing 2	yes	yes	---	---
8075182	XBP1	ENSG00000100219	X-box binding protein 1	yes	yes	---	---
8076673	LDOC1L	ENSG00000188636	leucine zipper, down-regulated in cancer 1-like	yes	yes	---	---
8083240	AGTR1	ENSG00000144891	angiotensin II receptor, type 1	yes	yes	---	---
8086985	COL7A1	ENSG00000114270	collagen, type VII, alpha 1	yes	yes	---	---
8087461	AMIGO3	ENSG00000176020	adhesion molecule with Ig-like domain 3	yes	yes	---	---
8090162	ITGB5	ENSG00000082781	integrin, beta 5	yes	yes	---	---
8090823	SLCO2A1	ENSG00000174640	solute carrier organic anion transporter family, member 2A1	yes	yes	---	---
8092839	LRRC15	ENSG00000172061	leucine rich repeat containing 15	yes	yes	---	---
8094056	HTRA3	ENSG00000170801	HtrA serine peptidase 3	yes	yes	---	---
8098995	MXD4	ENSG00000123933	MAX dimerization protein 4	yes	yes	---	---
8099340	WDR1	ENSG00000071127	WD repeat domain 1	yes	yes	---	---
8099912	SMIM14	ENSG00000163683	small integral membrane protein 14	yes	yes	---	---
8106986	RHOBTB3	ENSG00000164292	Rho-related BTB domain containing 3	yes	yes	---	---
8113726	PPIC	ENSG00000168938	peptidylprolyl isomerase C (cyclophilin C)	yes	yes	---	---
8122982	ZDHC14	ENSG00000175048	zinc finger, DHHC-type containing 14	yes	yes	---	---
8123181	IGF2R	ENSG00000197081	insulin-like growth factor 2 receptor	yes	yes	---	---
8126574	YIPF3	ENSG00000137207	Yip1 domain family, member 3	yes	yes	---	---
8130598	LPAL2	ENSG00000213071	lipoprotein, Lp(a)-like 2, pseudogene	yes	yes	---	---
8132031	PRR15	ENSG00000176532	proline rich 15	yes	yes	---	---
8134880	MOSPD3	ENSG00000106330	motile sperm domain containing 3	yes	yes	---	---
8135990	FLNC	ENSG00000128591	filamin C, gamma	yes	yes	---	---
8136918	ZYX	ENSG00000159840	zyxin	yes	yes	---	---
8143307	HIPK2	ENSG00000064393	homeodomain interacting protein kinase 2	yes	yes	---	---
8144786	SLC7A2	ENSG00000003989	solute carrier family 7 (cationic amino acid transporter, y+ system), member 2	yes	yes	---	---

8144802	PDGFRL	ENSG00000104213	platelet-derived growth factor receptor-like	yes	yes	---	---
8149877	PNMA2	ENSG00000240694	paraneoplastic Ma antigen 2	yes	yes	---	---
8155096	CREB3	ENSG00000107175	cAMP responsive element binding protein 3	yes	yes	---	---
8155169	RECK	ENSG00000122707	reversion-inducing-cysteine-rich protein with kazal motifs	yes	yes	---	---
8164343	FAM102A	ENSG00000167106	family with sequence similarity 102, member A	yes	yes	---	---
8165077	NACC2	ENSG00000148411	NACC family member 2, BEN and BTB (POZ) domain containing	yes	yes	---	---
8162117	GOLM1	ENSG00000135052	golgi membrane protein 1	yes	yes	---	---
8164217	FAM129B	ENSG00000136830	family with sequence similarity 129, member B	yes	yes	---	---
8165258	AGPAT2	ENSG00000169692	1-acylglycerol-3-phosphate O-acyltransferase 2	yes	yes	---	---
8170009	FAM127A	ENSG00000134590	family with sequence similarity 127, member A	yes	yes	---	---
8170704	ABCD1	ENSG00000101986	ATP-binding cassette, sub-family D (ALD), member 1	yes	yes	---	---
8175574	SLITRK4	ENSG00000179542	SLIT and NTRK-like family, member 4	yes	yes	---	---
8176026	FLNA	ENSG00000196924	filamin A, alpha	yes	yes	---	---
7939237	KIAA1549L	ENSG00000110427	KIAA1549-like	yes	yes	---	---
8141791	POLR2J3	ENSG00000168255	polymerase (RNA) II (DNA directed) polypeptide J3	yes	yes	---	---
8013157	TOM1L2	ENSG00000175662	target of myb1-like 2 (chicken)	yes	yes	---	---
7898693	ALPL	ENSG00000162551	alkaline phosphatase, liver/bone/kidney	yes	yes	---	---
7916493	PPAP2B	ENSG00000162407	phosphatidic acid phosphatase type 2B	yes	yes	---	---
7930208	INA	ENSG00000148798	internexin neuronal intermediate filament protein, alpha	yes	yes	---	---
8145865	GPR124	ENSG00000020181	G protein-coupled receptor 124	yes	yes	---	---
8147777	CTHRC1	ENSG00000164932	collagen triple helix repeat containing 1	yes	yes	---	---
7904158	HIPK1	ENSG00000163349	homeodomain interacting protein kinase 1	yes	yes	---	yes
7906469	DUSP23	ENSG00000158716	dual specificity phosphatase 23	yes	yes	---	yes
7908041	LAMC1	ENSG00000135862	laminin, gamma 1 (formerly LAMB2)	yes	yes	---	yes
7908125	RGL1	ENSG00000143344	ral guanine nucleotide dissociation stimulator-like 1	yes	yes	---	yes
7909789	TGFB2	ENSG00000092969	transforming growth factor, beta 2	yes	yes	---	yes
7913237	CAMK2N1	ENSG00000162545	calcium/calmodulin-dependent protein kinase II inhibitor 1	yes	yes	---	yes
7913566	HTR1D	ENSG00000179546	5-hydroxytryptamine (serotonin) receptor 1D, G protein-coupled	yes	yes	---	yes
7914467	SPOCD1	ENSG00000134668	SPOC domain containing 1	yes	yes	---	yes
7923183	ZNF281	ENSG00000162702	zinc finger protein 281	yes	yes	---	yes
7923991	PLXNA2	ENSG00000076356	plexin A2	yes	yes	---	yes
7932985	NRP1	ENSG00000099250	neuropilin 1	yes	yes	---	yes
7927747	ZNF365			yes	yes	---	yes
7927827	MYPN	ENSG00000138347	myopalladin	yes	yes	---	yes
7934690	ZCCHC24	ENSG00000165424	zinc finger, CCHC domain containing 24	yes	yes	---	yes
7930106	TMEM180	ENSG00000243628		yes	yes	---	yes
7930194	CNNM2	ENSG00000148842	cyclin M2	yes	yes	---	yes
7931097	HTRA1	ENSG00000166033	HtrA serine peptidase 1	yes	yes	---	yes

7932453	NEBL	ENSG00000078114	nebulette	yes	yes	---	yes
7934906	ACTA2	ENSG00000107796	actin, alpha 2, smooth muscle, aorta	yes	yes	---	yes
7936242	ITPRIP	ENSG00000148841	inositol 1,4,5-trisphosphate receptor interacting protein	yes	yes	---	yes
7938834	NAV2	ENSG00000166833	neuron navigator 2	yes	yes	---	yes
7940904	VEGFB	ENSG00000173511	vascular endothelial growth factor B	yes	yes	---	yes
7945680	H19	ENSG00000130600	H19, imprinted maternally expressed transcript (non-protein coding)	yes	yes	---	yes
7945688	IGF2	ENSG00000167244	insulin-like growth factor 2 (somatomedin A)	yes	yes	---	yes
7947462	ABTB2	ENSG00000166016	ankyrin repeat and BTB (POZ) domain containing 2	yes	yes	---	yes
7949412	LTBP3	ENSG00000168056	latent transforming growth factor beta binding protein 3	yes	yes	---	yes
7950374	P4HA3	ENSG00000149380	prolyl 4-hydroxylase, alpha polypeptide III	yes	yes	---	yes
7952268	THY1	ENSG00000154096	Thy-1 cell surface antigen	yes	yes	---	yes
7958174	TXNRD1	ENSG00000198431	thioredoxin reductase 1	yes	yes	---	yes
7958202	CHST11	ENSG00000171310	carbohydrate (chondroitin 4) sulfotransferase 11	yes	yes	---	yes
7959957	ULK1	ENSG00000177169	unc-51 like autophagy activating kinase 1	yes	yes	---	yes
7962659	HDAC7	ENSG00000061273	histone deacetylase 7	yes	yes	---	yes
7963054	TUBA1A	ENSG00000167552	tubulin, alpha 1a	yes	yes	---	yes
7963235	CSRNP2	ENSG00000110925	cysteine-serine-rich nuclear protein 2	yes	yes	---	yes
7965359	ATP2B1	ENSG00000070961	ATPase, Ca++ transporting, plasma membrane 1	yes	yes	---	yes
7965573	NTN4	ENSG00000074527	netrin 4	yes	yes	---	yes
7966003	APPL2	ENSG00000136044	adaptor protein, phosphotyrosine interaction, PH domain and leucine zipper containing	yes	yes	---	yes
7966035	CKAP4	ENSG00000136026	cytoskeleton-associated protein 4	yes	yes	---	yes
7970301	TMCO3	ENSG00000150403	transmembrane and coiled-coil domains 3	yes	yes	---	yes
7975799	FLVCR2	ENSG00000119686	feline leukemia virus subgroup C cellular receptor family, member 2	yes	yes	---	yes
7976556	C14orf132	ENSG00000227051	chromosome 14 open reading frame 132	yes	yes	---	yes
7977294	ZBTB42	ENSG00000179627	zinc finger and BTB domain containing 42	yes	yes	---	yes
7977965	SLC22A17	ENSG00000092096	solute carrier family 22, member 17	yes	yes	---	yes
7984771	LOXL1	ENSG00000129038	lysyl oxidase-like 1	yes	yes	---	yes
7990345	SEMA7A	ENSG00000138623	semaphorin 7A, GPI membrane anchor (John Milton Hagen blood group)	yes	yes	---	yes
7993349	NPIPP1	ENSG00000188599	nuclear pore complex interacting protein pseudogene 1	yes	yes	---	yes
7999614	PKD1P5	ENSG00000254681	polycystic kidney disease 1 (autosomal dominant) pseudogene 5	yes	yes	---	yes
7993458	C16orf45	ENSG00000166780	chromosome 16 open reading frame 45	yes	yes	---	yes
7995895	HERPUD1	ENSG00000051108	homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain	yes	yes	---	yes
8003180	ZDHC7	ENSG00000153786	zinc finger, DHHC-type containing 7	yes	yes	---	yes
8003639	WDR81	ENSG00000167716	WD repeat domain 81	yes	yes	---	yes
8005097	HS3ST3B1	ENSG00000125430	heparan sulfate (glucosamine) 3-O-sulfotransferase 3B1	yes	yes	---	yes
8008933	BCAS3	ENSG00000141376	breast carcinoma amplified sequence 3	yes	yes	---	yes
8010061	SPHK1	ENSG00000176170	sphingosine kinase 1	yes	yes	---	yes
8010770	SLC16A3	ENSG00000141526	solute carrier family 16, member 3 (monocarboxylic acid transporter 4)	yes	yes	---	yes

8010897	METRNL	ENSG00000176845	meteorin, glial cell differentiation regulator-like	yes	yes	---	yes
8011924	ACKR6	ENSG00000091622	atypical chemokine receptor 6	yes	yes	---	yes
8018966	TIMP2	ENSG00000035862	TIMP metalloproteinase inhibitor 2	yes	yes	---	yes
8018972	0	ENSG00000178404	Protein DDC8 homolog	yes	yes	---	yes
8021707	SOCS6	ENSG00000170677	suppressor of cytokine signaling 6	yes	yes	---	yes
8023995	FSTL3	ENSG00000070404	folliculin-like 3 (secreted glycoprotein)	yes	yes	---	yes
8024003	PALM	ENSG00000099864	paralemmin	yes	yes	---	yes
8025183	MCOLN1	ENSG00000090674	mucopolysaccharin 1	yes	yes	---	yes
8026047	JUNB	ENSG00000171223	jun B proto-oncogene	yes	yes	---	yes
8027049	KLHL26	ENSG00000167487	kelch-like family member 26	yes	yes	---	yes
8032214	GAMT	ENSG00000130005	guanidinoacetate N-methyltransferase	yes	yes	---	yes
8033241	CD70	ENSG00000125726	CD70 molecule	yes	yes	---	yes
8035506	CRLF1	ENSG00000060616	cytokine receptor-like factor 1	yes	yes	---	yes
8037737	NOVA2	ENSG00000104967	neuro-oncological ventral antigen 2	yes	yes	---	yes
8040365	TRIB2	ENSG00000071575	tribbles homolog 2 (Drosophila)	yes	yes	---	yes
8042576	NAGK	ENSG00000124357	N-acetylglucosaminase	yes	yes	---	yes
8044258	LIMS1	ENSG00000169756	LIM and senescent cell antigen-like domains 1	yes	yes	---	yes
8046861	ITGAV	ENSG00000138448	integrin, alpha V	yes	yes	---	yes
8052803	AAK1	ENSG00000115977	AP2 associated kinase 1	yes	yes	---	yes
8053449	TMEM150A	ENSG00000168890	transmembrane protein 150A	yes	yes	---	yes
8054377	FHL2	ENSG00000115641	four and a half LIM domains 2	yes	yes	---	yes
8054945	BIN1	ENSG00000136717	bridging integrator 1	yes	yes	---	yes
8055038	LIMS2	ENSG00000072163	LIM and senescent cell antigen-like domains 2	yes	yes	---	yes
8059650	SP110	ENSG00000135899	SP110 nuclear body protein	yes	yes	---	yes
8061542	HM13	ENSG00000101294	histocompatibility (minor) 13	yes	yes	---	yes
8062034	TP53INP2	ENSG00000078804	tumor protein p53 inducible nuclear protein 2	yes	yes	---	yes
8063796	CDH4	ENSG00000179242	cadherin 4, type 1, R-cadherin (retinal)	yes	yes	---	yes
8066905	ZNF1	ENSG00000124201	zinc finger, NFX1-type containing 1	yes	yes	---	yes
8067233	PMEPA1	ENSG00000124225	prostate transmembrane protein, androgen induced 1	yes	yes	---	yes
8067652	EEF1A2	ENSG00000101210	eukaryotic translation elongation factor 1 alpha 2	yes	yes	---	yes
8069269	COL6A1	ENSG00000142156	collagen, type VI, alpha 1	yes	yes	---	yes
8069301	COL6A2	ENSG00000142173	collagen, type VI, alpha 2	yes	yes	---	yes
8070194	RUNX1	ENSG00000159216	runt-related transcription factor 1	yes	yes	---	yes
8074063	ADM2	ENSG00000128165	adrenomedullin 2	yes	yes	---	yes
8074617	SCARF2	ENSG00000244486	scavenger receptor class F, member 2	yes	yes	---	yes
8075720	APOL2	ENSG00000128335	apolipoprotein L, 2	yes	yes	---	yes
8076241	MKL1	ENSG00000196588	megakaryoblastic leukemia (translocation) 1	yes	yes	---	yes
8077441	BHLHE40	ENSG00000134107	basic helix-loop-helix family, member e40	yes	yes	---	yes

8078014	SLC6A6	ENSG00000131389	solute carrier family 6 (neurotransmitter transporter, taurine), member 6	yes	yes	---	yes
8083901	FNDC3B	ENSG00000075420	fibronectin type III domain containing 3B	yes	yes	---	yes
8085138	OXTR	ENSG00000180914	oxytocin receptor	yes	yes	---	yes
8086051	SUSD5	ENSG00000173705	sushi domain containing 5	yes	yes	---	yes
8099897	UGDH	ENSG00000109814	UDP-glucose 6-dehydrogenase	yes	yes	---	yes
8101158	SCARB2	ENSG00000138760	scavenger receptor class B, member 2	yes	yes	---	yes
8104601	BASP1	ENSG00000176788	brain abundant, membrane attached signal protein 1	yes	yes	---	yes
8109612	ADRA1B	ENSG00000170214	adrenoceptor alpha 1B	yes	yes	---	yes
8110569	SQSTM1	ENSG00000161011	sequestosome 1	yes	yes	---	yes
8110783	TERT	ENSG00000164362	telomerase reverse transcriptase	yes	yes	---	yes
8115814	SH3PXD2B	ENSG00000174705	SH3 and PX domains 2B	yes	yes	---	yes
8116051	DBN1	ENSG00000113758	drebrin 1	yes	yes	---	yes
8117054	CAP2	ENSG00000112186	CAP, adenylate cyclase-associated protein, 2 (yeast)	yes	yes	---	yes
8120043	RUNX2	ENSG00000124813	runt-related transcription factor 2	yes	yes	---	yes
8122099	ENPP1	ENSG00000197594	ectonucleotide pyrophosphatase/phosphodiesterase 1	yes	yes	---	yes
8124413	HIST1H4D	ENSG00000188987	histone cluster 1, H4d	yes	yes	---	yes
8124448	HIST1H4H	ENSG00000158406	histone cluster 1, H4h	yes	yes	---	yes
8179819	DDAH2	ENSG00000213722	dimethylarginine dimethylaminohydrolase 2	yes	yes	---	yes
8125139	NEU1	ENSG00000204386	sialidase 1 (lysosomal sialidase)	yes	yes	---	yes
8129418	PTPRK	ENSG00000152894	protein tyrosine phosphatase, receptor type, K	yes	yes	---	yes
8130739	RPS6KA2	ENSG00000071242	ribosomal protein S6 kinase, 90kDa, polypeptide 2	yes	yes	---	yes
8135069	SERPINE1	ENSG00000106366	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1	yes	yes	---	yes
8149774	LOXL2	ENSG00000134013	lysyl oxidase-like 2	yes	yes	---	yes
8150036	KIF13B	ENSG00000197892	kinesin family member 13B	yes	yes	---	yes
8152703	FBXO32	ENSG00000156804	F-box protein 32	yes	yes	---	yes
8154491	ADAMTSL1	ENSG00000178031	ADAMTS-like 1	yes	yes	---	yes
8156278	C9orf47	ENSG00000186354	chromosome 9 open reading frame 47	yes	yes	---	yes
8158240	TMSB4XP1	ENSG00000236876	thymosin beta 4, X-linked pseudogene 1	yes	yes	---	yes
8161044	TPM2	ENSG00000198467	tropomyosin 2 (beta)	yes	yes	---	yes
8164269	ENG	ENSG00000106991	endoglin	yes	yes	---	yes
8168424	SLC16A2	ENSG00000147100	solute carrier family 16, member 2 (thyroid hormone transporter)	yes	yes	---	yes
8172043	SRPX	ENSG00000101955	sushi-repeat containing protein, X-linked	yes	yes	---	yes
8175288	MOSPD1	ENSG00000101928	motile sperm domain containing 1	yes	yes	---	yes
8175593	IDS	ENSG00000010404	iduronate 2-sulfatase	yes	yes	---	yes
8115732				yes	yes	---	yes
8052798		0 ENSG00000188971		0 yes	yes	---	yes
7989037	CCPG1	ENSG00000260916	cell cycle progression 1	yes	yes	---	yes
7993359	NPIPP1	ENSG00000188599	nuclear pore complex interacting protein pseudogene 1	yes	yes	---	yes

8178590	DDAH2	ENSG00000213722	dimethylarginine dimethylaminohydrolase 2	yes	yes	---	yes
7999634	PKD1P5	ENSG00000254681	polycystic kidney disease 1 (autosomal dominant) pseudogene 5	yes	yes	---	yes
8125048	DDAH2	ENSG00000213722	dimethylarginine dimethylaminohydrolase 2	yes	yes	---	yes
8152491	EXT1	ENSG00000182197	exostosin glycosyltransferase 1	yes	yes	---	yes
8013307	FOXO3B	ENSG00000240445	forkhead box O3B pseudogene	yes	yes	---	yes
8044295	SH3RF3	ENSG00000172985	SH3 domain containing ring finger 3	yes	yes	---	yes
7997765	ZNF469	ENSG00000225614	zinc finger protein 469	yes	yes	---	yes
8179851	NEU1	ENSG00000204386	sialidase 1 (lysosomal sialidase)	yes	yes	---	yes
8178676	NEU1	ENSG00000204386	sialidase 1 (lysosomal sialidase)	yes	yes	---	yes
8006779	ARHGAP23	ENSG00000225485	Rho GTPase activating protein 23	yes	yes	---	yes
8067007	TMSB4XP1	ENSG00000236876	thymosin beta 4, X-linked pseudogene 1	yes	yes	---	yes
8052204	RTN4	ENSG00000115310	reticulon 4	yes	yes	---	yes
7917232	GNG5	ENSG00000174021	guanine nucleotide binding protein (G protein), gamma 5	yes	yes	---	yes
7946245	DCHS1	ENSG00000166341	dachsous 1 (Drosophila)	yes	yes	---	yes
8093413	TMEM175	ENSG00000127419	transmembrane protein 175	yes	yes	---	yes
8165492	RNF208	ENSG00000212864	ring finger protein 208	yes	yes	---	yes
7993404	NPIPP1	ENSG00000188599	nuclear pore complex interacting protein pseudogene 1	yes	yes	---	yes
8165637	RNF208	ENSG00000212864	ring finger protein 208	yes	yes	---	yes
7927146	CSGALNACT2	ENSG00000169826	chondroitin sulfate N-acetylgalactosaminyltransferase 2	yes	yes	yes	yes
7927631	DKK1	ENSG00000107984	dickkopf WNT signaling pathway inhibitor 1	yes	yes	yes	yes
7934570	KCNMA1	ENSG00000156113	potassium large conductance calcium-activated channel, subfamily M, alpha member	yes	yes	yes	yes
7963786	ITGA5	ENSG00000161638	integrin, alpha 5 (fibronectin receptor, alpha polypeptide)	yes	yes	yes	yes
7968417	FRY	ENSG00000073910	furry homolog (Drosophila)	yes	yes	yes	yes
7969060	FNDC3A	ENSG00000102531	fibronectin type III domain containing 3A	yes	yes	yes	yes
8000574	NUPR1	ENSG00000176046	nuclear protein, transcriptional regulator, 1	yes	yes	yes	yes
8007141	EIF1	ENSG00000173812	eukaryotic translation initiation factor 1	yes	yes	yes	yes
8056005	ACVR1	ENSG00000115170	activin A receptor, type I	yes	yes	yes	yes
8059376	SERPINE2	ENSG00000135919	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 2	yes	yes	yes	yes
8077458	EDEM1	ENSG00000134109	ER degradation enhancer, mannosidase alpha-like 1	yes	yes	yes	yes
8085665	RFTN1	ENSG00000131378	raftlin, lipid raft linker 1	yes	yes	yes	yes
8102800	SLC7A11	ENSG00000151012	solute carrier family 7 (anionic amino acid transporter light chain, xc- system), member 1	yes	yes	yes	yes
8101828	TSPAN5	ENSG00000168785	tetraspanin 5	yes	yes	yes	yes
8106098	MAP1B	ENSG00000131711	microtubule-associated protein 1B	yes	yes	yes	yes
8124040	ATXN1	ENSG00000124788	ataxin 1	yes	yes	yes	yes
8135480	DNAJB9	ENSG00000128590	DnaJ (Hsp40) homolog, subfamily B, member 9	yes	yes	yes	yes
8139656	GRB10	ENSG00000106070	growth factor receptor-bound protein 10	yes	yes	yes	yes
8141150	ASNS	ENSG00000070669	asparagine synthetase (glutamine-hydrolyzing)	yes	yes	yes	yes
8151816	GEM	ENSG00000164949	GTP binding protein overexpressed in skeletal muscle	yes	yes	yes	yes

Induced with TGF and P1

Induced with TGF

8163002	KLF4	ENSG00000136826	Kruppel-like factor 4 (gut)	yes	yes	yes	yes	MA	and more in CSC than NS or NCSC
8136807	PRSS3P1	ENSG00000250591	protease, serine, 3 pseudogene 1	yes	yes	yes	yes		
8085867	NEK10	ENSG00000163491	NIMA-related kinase 10	---	yes	yes	yes		
7958200	EID3	ENSG00000255150	EP300 interacting inhibitor of differentiation 3	---	yes	yes	yes		
7968577	NBEA	ENSG00000172915	neurobeachin	---	yes	yes	yes		
7979204	FERMT2	ENSG00000073712	fermitin family member 2	---	yes	yes	yes		
8047097	GLS	ENSG00000115419	glutaminase	---	yes	yes	yes		
8057700	ORMDL1	ENSG00000128699	ORM1-like 1 (<i>S. cerevisiae</i>)	---	yes	yes	yes		
8069487	BAGE2	ENSG00000187172	B melanoma antigen family, member 2	---	yes	yes	yes		
8069532	HSPA13	ENSG00000155304	heat shock protein 70kDa family, member 13	---	yes	yes	yes		
8091283	PLOD2	ENSG00000152952	procollagen-lysine, 2-oxoglutarate 5-dioxygenase 2	---	yes	yes	yes		
8102619	ANXA5	ENSG00000164111	annexin A5	---	yes	yes	yes		
8103951	ACSL1	ENSG00000151726	acyl-CoA synthetase long-chain family member 1	---	yes	yes	yes		
8108217	TGFBI	ENSG00000120708	transforming growth factor, beta-induced, 68kDa	---	yes	yes	yes		
8113914	FNIP1	ENSG00000217128	folliculin interacting protein 1	---	yes	yes	yes		
8132070	GARS	ENSG00000106105	glycyl-tRNA synthetase	---	yes	yes	yes		
8135514	IFRD1	ENSG00000006652	interferon-related developmental regulator 1	---	yes	yes	yes		
8150988	ASPH	ENSG00000198363	aspartate beta-hydroxylase	---	yes	yes	yes		
8158242	URM1	ENSG00000167118	ubiquitin related modifier 1	---	yes	yes	yes		
8164165	HSPA5	ENSG00000044574	heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa)	---	yes	yes	yes		
8074734		ENSG00000188424		0 ---	yes	yes	yes		
8174654	KLHL13	ENSG00000003096	kelch-like family member 13	yes	---	yes	yes		
8141206	BAIAP2L1	ENSG00000006453	BAI1-associated protein 2-like 1	yes	---	yes	yes		
8143341	JHDM1D	ENSG00000006459	jumonji C domain containing histone demethylase 1 homolog D (<i>S. cerevisiae</i>)	yes	---	yes	yes		
8037374	PLAUR	ENSG00000011422	plasminogen activator, urokinase receptor	yes	---	yes	yes		
8150757	RB1CC1	ENSG00000023287	RB1-inducible coiled-coil 1	yes	---	yes	yes		
7943413	BIRC3	ENSG00000023445	baculoviral IAP repeat containing 3	yes	---	yes	yes		
7939341	CD44	ENSG00000026508	CD44 molecule (Indian blood group)	yes	---	yes	yes		
8129861	IFNGR1	ENSG00000027697	interferon gamma receptor 1	yes	---	yes	yes		
8085914	SLC4A7	ENSG00000033867	solute carrier family 4, sodium bicarbonate cotransporter, member 7	yes	---	yes	yes		
8021301	RAB27B	ENSG00000041353	RAB27B, member RAS oncogene family	yes	---	yes	yes		
8091385	CP	ENSG00000047457	ceruloplasmin (ferroxidase)	yes	---	yes	yes		
8122317	HEBP2	ENSG00000051620	heme binding protein 2	yes	---	yes	yes		
8098195	MSMO1	ENSG00000052802	methylsterol monooxygenase 1	yes	---	yes	yes		
7908072	LAMC2	ENSG00000058085	laminin, gamma 2	yes	---	yes	yes		
8042503	MXD1	ENSG00000059728	MAX dimerization protein 1	yes	---	yes	yes		
8092134	PLD1	ENSG00000075651	phospholipase D1, phosphatidylcholine-specific	yes	---	yes	yes		
8091715	LXN	ENSG00000079257	latexin	yes	---	yes	yes		
8030128	PPP1R15A	ENSG00000087074	protein phosphatase 1, regulatory subunit 15A	yes	---	yes	yes		
8118734	ITPR3	ENSG00000096433	inositol 1,4,5-trisphosphate receptor, type 3	yes	---	yes	yes		
7927082	HSD17B7P2	ENSG00000099251	hydroxysteroid (17-beta) dehydrogenase 7 pseudogene 2	yes	---	yes	yes		

7974851	HIF1A	ENSG00000100644	hypoxia inducible factor 1, alpha subunit (basic helix-loop-helix transcription factor)	yes	---	yes	yes
7996022	CCL22	ENSG00000102962	chemokine (C-C motif) ligand 22	yes	---	yes	yes
7985317	KIAA1199	ENSG00000103888	KIAA1199	yes	---	yes	yes
7987454	BMF	ENSG00000104081	Bcl2 modifying factor	yes	---	yes	yes
8153002	NDRG1	ENSG00000104419	N-myc downstream regulated 1	yes	---	yes	yes
8029086	CEACAM5	ENSG00000105388	carcinoembryonic antigen-related cell adhesion molecule 5	yes	---	yes	yes
8142120	NAMPT	ENSG00000105835	nicotinamide phosphoribosyltransferase	yes	---	yes	yes
8131614	AHR	ENSG00000106546	aryl hydrocarbon receptor	yes	---	yes	yes
8161747	ZFAND5	ENSG00000107372	zinc finger, AN1-type domain 5	yes	---	yes	yes
8005765	WSB1	ENSG00000109046	WD repeat and SOCS box containing 1	yes	---	yes	yes
8095736	AREG	ENSG00000109321	amphiregulin	yes	---	yes	yes
8095744	AREG	ENSG00000109321	amphiregulin	yes	---	yes	yes
8094599	KLF3	ENSG00000109787	Kruppel-like factor 3 (basic)	yes	---	yes	yes
7954388	GOLT1B	ENSG00000111711	golgi transport 1B	yes	---	yes	yes
8130556	SOD2	ENSG00000112096	superoxide dismutase 2, mitochondrial	yes	---	yes	yes
8119898	VEGFA	ENSG00000112715	vascular endothelial growth factor A	yes	---	yes	yes
8114572	HBEGF	ENSG00000113070	heparin-binding EGF-like growth factor	yes	---	yes	yes
8043283	KDM3A	ENSG00000115548	lysine (K)-specific demethylase 3A	yes	---	yes	yes
8044021	IL1RL1	ENSG00000115602	interleukin 1 receptor-like 1	yes	---	yes	yes
8055688	RND3	ENSG00000115963	Rho family GTPase 3	yes	---	yes	yes
8041781	EPAS1	ENSG00000116016	endothelial PAS domain protein 1	yes	---	yes	yes
7912157	ERRFI1	ENSG00000116285	ERBB receptor feedback inhibitor 1	yes	---	yes	yes
7902227	GADD45A	ENSG00000116717	growth arrest and DNA-damage-inducible, alpha	yes	---	yes	yes
7918902	CD58	ENSG00000116815	CD58 molecule	yes	---	yes	yes
7906819	ATF6	ENSG00000118217	activating transcription factor 6	yes	---	yes	yes
8113220	ELL2	ENSG00000118985	elongation factor, RNA polymerase II, 2	yes	---	yes	yes
7929052	IFIT3	ENSG00000119917	interferon-induced protein with tetratricopeptide repeats 3	yes	---	yes	yes
7929047	IFIT2	ENSG00000119922	interferon-induced protein with tetratricopeptide repeats 2	yes	---	yes	yes
8060850	BMP2	ENSG00000125845	bone morphogenetic protein 2	yes	---	yes	yes
8014956	NR1D1	ENSG00000126368	nuclear receptor subfamily 1, group D, member 1	yes	---	yes	yes
8003571	PRDM7	ENSG00000126856	PR domain containing 7	yes	---	yes	yes
8011270	METTL16	ENSG00000127804	methyltransferase like 16	yes	---	yes	yes
8133788	PTPN12	ENSG00000127947	protein tyrosine phosphatase, non-receptor type 12	yes	---	yes	yes
8075981	C22orf23	ENSG00000128346	chromosome 22 open reading frame 23	yes	---	yes	yes
8027002	GDF15	ENSG00000130513	growth differentiation factor 15	yes	---	yes	yes
8173299	EDA2R	ENSG00000131080	ectodysplasin A2 receptor	yes	---	yes	yes
7940775	RARRES3	ENSG00000133321	retinoic acid receptor responder (tazarotene induced) 3	yes	---	yes	yes
8077450	ARL8B	ENSG00000134108	ADP-ribosylation factor-like 8B	yes	---	yes	yes
8040080	RSAD2	ENSG00000134321	radical S-adenosyl methionine domain containing 2	yes	---	yes	yes
8156228	CTSL	ENSG00000135047	cathepsin L	yes	---	yes	yes
7967117	OASL	ENSG00000135114	2'-5'-oligoadenylate synthetase-like	yes	---	yes	yes
7956989	MDM2	ENSG00000135679	MDM2 oncogene, E3 ubiquitin protein ligase	yes	---	yes	yes
7971461	LCP1	ENSG00000136167	lymphocyte cytosolic protein 1 (L-plastin)	yes	---	yes	yes
8146550	SDCBP	ENSG00000137575	syndecan binding protein (syntenin)	yes	---	yes	yes
7951309	MMP13	ENSG00000137745	matrix metalloproteinase 13 (collagenase 3)	yes	---	yes	yes
7930413	DUSP5	ENSG00000138166	dual specificity phosphatase 5	yes	---	yes	yes

8096361	HERC5	ENSG00000138646	HECT and RLD domain containing E3 ubiquitin protein ligase 5	yes	---	yes	yes
7962375	PRICKLE1	ENSG00000139174	prickle homolog 1 (Drosophila)	yes	---	yes	yes
7962559	SLC38A4	ENSG00000139209	solute carrier family 38, member 4	yes	---	yes	yes
7965040	PHLDA1	ENSG00000139289	pleckstrin homology-like domain, family A, member 1	yes	---	yes	yes
7965335	DUSP6	ENSG00000139318	dual specificity phosphatase 6	yes	---	yes	yes
7981290	WARS	ENSG00000140105	tryptophanyl-tRNA synthetase	yes	---	yes	yes
7990391	CYP1A1	ENSG00000140465	cytochrome P450, family 1, subfamily A, polypeptide 1	yes	---	yes	yes
8021470	PMAIP1	ENSG00000141682	phorbol-12-myristate-13-acetate-induced protein 1	yes	---	yes	yes
8030823	IGLON5	ENSG00000142549	IgLON family member 5	yes	---	yes	yes
7917338	BCL10	ENSG00000142867	B-cell CLL/lymphoma 10	yes	---	yes	yes
8044499	SLC20A1	ENSG00000144136	solute carrier family 20 (phosphate transporter), member 1	yes	---	yes	yes
8058708	ABCA12	ENSG00000144452	ATP-binding cassette, sub-family A (ABC1), member 12	yes	---	yes	yes
8107520	TNFAIP8	ENSG00000145779	tumor necrosis factor, alpha-induced protein 8	yes	---	yes	yes
8132860	EGFR	ENSG00000146648	epidermal growth factor receptor	yes	---	yes	yes
8147145	ATP6V0D2	ENSG00000147614	ATPase, H+ transporting, lysosomal 38kDa, V0 subunit d2	yes	---	yes	yes
8148184	FAM83A	ENSG00000147689	family with sequence similarity 83, member A	yes	---	yes	yes
8158167	LCN2	ENSG00000148346	lipocalin 2	yes	---	yes	yes
7932966	ITGB1	ENSG00000150093	integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, yes	yes	---	yes	yes
7951686	IL18	ENSG00000150782	interleukin 18 (interferon-gamma-inducing factor)	yes	---	yes	yes
7931832	AKR1C2	ENSG00000151632	aldo-keto reductase family 1, member C2	yes	---	yes	yes
8022559	ANKRD29	ENSG00000154065	ankyrin repeat domain 29	yes	---	yes	yes
8068593	ETS2	ENSG00000157557	v-ets avian erythroblastosis virus E26 oncogene homolog 2	yes	---	yes	yes
8117382	HIST1H2BD	ENSG00000158373	histone cluster 1, H2bd	yes	---	yes	yes
8042942	HK2	ENSG00000159399	hexokinase 2	yes	---	yes	yes
8014316	CCL5	ENSG00000161570	chemokine (C-C motif) ligand 5	yes	---	yes	yes
7912537	DHRS3	ENSG00000162496	dehydrogenase/reductase (SDR family) member 3	yes	---	yes	yes
7908793	ELF3	ENSG00000163435	E74-like factor 3 (ets domain transcription factor, epithelial-specific)	yes	---	yes	yes
8091658	CCNL1	ENSG00000163660	cyclin L1	yes	---	yes	yes
8084627	C3orf65	ENSG00000163915	chromosome 3 open reading frame 65	yes	---	yes	yes
8093950	S100P	ENSG00000163993	S100 calcium binding protein P	yes	---	yes	yes
8110032	CREBRF	ENSG00000164463	CREB3 regulatory factor	yes	---	yes	yes
8151457	HEY1	ENSG00000164683	hairy/enhancer-of-split related with YRPW motif 1	yes	---	yes	yes
8152512	TNFRSF11B	ENSG00000164761	tumor necrosis factor receptor superfamily, member 11b	yes	---	yes	yes
8162276	NFIL3	ENSG00000165030	nuclear factor, interleukin 3 regulated	yes	---	yes	yes
7958262	TCP11L2	ENSG00000166046	t-complex 11, testis-specific-like 2	yes	---	yes	yes
7951259	MMP10	ENSG00000166670	matrix metalloproteinase 10 (stromelysin 2)	yes	---	yes	yes
8006531	SLFN5	ENSG00000166750	schlafen family member 5	yes	---	yes	yes
7984364	SMAD3	ENSG00000166949	SMAD family member 3	yes	---	yes	yes
7928308	DDIT4	ENSG00000168209	DNA-damage-inducible transcript 4	yes	---	yes	yes
8091411	TM4SF1	ENSG00000169908	transmembrane 4 L six family member 1	yes	---	yes	yes
8060758	PRNP	ENSG00000171867	prion protein	yes	---	yes	yes
8063386	CEBPB	ENSG00000172216	CCAAT/enhancer binding protein (C/EBP), beta	yes	---	yes	yes
8126629	GTPBP2	ENSG00000172432	GTP binding protein 2	yes	---	yes	yes
7962884	RND1	ENSG00000172602	Rho family GTPase 1	yes	---	yes	yes
8014298	C17orf66	ENSG00000172653	chromosome 17 open reading frame 66	yes	---	yes	yes
7942118	MYEOV	ENSG00000172927	myeloma overexpressed	yes	---	yes	yes

8113214	GLRX	ENSG00000173221	glutaredoxin (thioltransferase)	yes	---	yes	yes
8005473		0 ENSG00000174977		0 yes	---	yes	yes
7964460	DDIT3	ENSG00000175197	DNA-damage-inducible transcript 3	yes	---	yes	yes
7999440	PRM1	ENSG00000175646	protamine 1	yes	---	yes	yes
8151679	DCAF4L2	ENSG00000176566	DDB1 and CUL4 associated factor 4-like 2	yes	---	yes	yes
8084206	B3GNT5	ENSG00000176597	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 5	yes	---	yes	yes
8063337	ZFAS1	ENSG00000177410	ZNFX1 antisense RNA 1	yes	---	yes	yes
7965112	PAWR	ENSG00000177425	PRKC, apoptosis, WT1, regulator	yes	---	yes	yes
8017555	ERN1	ENSG00000178607	endoplasmic reticulum to nucleus signaling 1	yes	---	yes	yes
8049722	GPR35	ENSG00000178623	G protein-coupled receptor 35	yes	---	yes	yes
7969472	C13orf45	ENSG00000178734	chromosome 13 open reading frame 45	yes	---	yes	yes
8117372	HIST1H2AC	ENSG00000180573	histone cluster 1, H2ac	yes	---	yes	yes
8083457	RAP2B	ENSG00000181467	RAP2B, member of RAS oncogene family	yes	---	yes	yes
8066574	WFDC10B	ENSG00000182931	WAP four-disulfide core domain 10B	yes	---	yes	yes
7905067	HIST2H4A	ENSG00000183941	histone cluster 2, H4a	yes	---	yes	yes
7919627	HIST2H4A	ENSG00000183941	histone cluster 2, H4a	yes	---	yes	yes
7989493	RPS27L	ENSG00000185088	ribosomal protein S27-like	yes	---	yes	yes
7981514	AHNAK2	ENSG00000185567	AHNAK nucleoprotein 2	yes	---	yes	yes
8120992	ZNF292	ENSG00000188994	zinc finger protein 292	yes	---	yes	yes
7909332	CD55	ENSG00000196352	CD55 molecule, decay accelerating factor for complement (Cromer blood group)	yes	---	yes	yes
7951271	MMP1	ENSG00000196611	matrix metalloproteinase 1 (interstitial collagenase)	yes	---	yes	yes
8019798	MAFG	ENSG00000197063	v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog G	yes	---	yes	yes
8056222	DPP4	ENSG00000197635	dipeptidyl-peptidase 4	yes	---	yes	yes
7979179	ERO1L	ENSG00000197930	ERO1-like (S. cerevisiae)	yes	---	yes	yes
8118310	HSPA1A	ENSG00000204389	heat shock 70kDa protein 1A	yes	---	yes	yes
8179322	HSPA1A	ENSG00000204389	heat shock 70kDa protein 1A	yes	---	yes	yes
8178070	LY6G6F	ENSG00000204424	lymphocyte antigen 6 complex, locus G6F	yes	---	yes	yes
8179309	LY6G6F	ENSG00000204424	lymphocyte antigen 6 complex, locus G6F	yes	---	yes	yes
7937709	KRTAP5-6	ENSG00000205864	keratin associated protein 5-6	yes	---	yes	yes
8094165	HSP90AB2P	ENSG00000205940	heat shock protein 90kDa alpha (cytosolic), class B member 2, pseudogene	yes	---	yes	yes
8084739		0 ENSG00000213132	Uncharacterized protein	yes	---	yes	yes
8063531	FAM209B	ENSG00000213714	family with sequence similarity 209, member B	yes	---	yes	yes
7999360	RPL21P28	ENSG00000220749	ribosomal protein L21 pseudogene 28	yes	---	yes	yes
8166509	SUPT20HL2	ENSG00000223611	suppressor of Ty 20 homolog (S. cerevisiae)-like 2	yes	---	yes	yes
8171844	SUPT20HL2	ENSG00000223611	suppressor of Ty 20 homolog (S. cerevisiae)-like 2	yes	---	yes	yes
7921344	ELL2P1	ENSG00000227295	elongation factor, RNA polymerase II, 2 pseudogene 1	yes	---	yes	yes
8105908		0 ENSG00000230847		0 yes	---	yes	yes
8005689	USP32P2	ENSG00000233327	ubiquitin specific peptidase 32 pseudogene 2	yes	---	yes	yes
7948211		0 ENSG00000238692	Small nucleolar RNA U13	yes	---	yes	yes
7919584	HIST2H2BB	ENSG00000240929	histone cluster 2, H2bb (pseudogene)	yes	---	yes	yes
8156905	MSANTD3-TM	ENSG00000251349	MSANTD3-TMEFF1 readthrough	yes	---	yes	yes
8000217		0 ENSG00000254634		0 yes	---	yes	yes
7998405	SSTR5-AS1	ENSG00000261713	SSTR5 antisense RNA 1	yes	---	yes	yes
7948092	LOC441601			yes	---	yes	yes
8135585				yes	---	yes	yes
8127158	GCLC	ENSG00000001084	glutamate-cysteine ligase, catalytic subunit	---	---	yes	yes

8016745	SPAG9	ENSG00000008294	sperm associated antigen 9	---	---	yes	yes
8129953	HIVP2	ENSG00000010818	human immunodeficiency virus type I enhancer binding protein 2	---	---	yes	yes
8051707	MAP4K3	ENSG00000011566	mitogen-activated protein kinase kinase kinase 3	---	---	yes	yes
8058127	CLK1	ENSG00000013441	CDC-like kinase 1	---	---	yes	yes
7974870	SNAPC1	ENSG00000023608	small nuclear RNA activating complex, polypeptide 1, 43kDa	---	---	yes	yes
8128123	RRAGD	ENSG00000025039	Ras-related GTP binding D	---	---	yes	yes
8104788	RAI14	ENSG00000039560	retinoic acid induced 14	---	---	yes	yes
8166104	OFD1	ENSG00000046651	oral-facial-digital syndrome 1	---	---	yes	yes
7939434	TTC17	ENSG00000052841	tetratricopeptide repeat domain 17	---	---	yes	yes
8122672	TAB2	ENSG00000055208	TGF-beta activated kinase 1/MAP3K7 binding protein 2	---	---	yes	yes
7965652	CDK17	ENSG00000059758	cyclin-dependent kinase 17	---	---	yes	yes
7930276	SLK	ENSG00000065613	STE20-like kinase	---	---	yes	yes
8127854	ME1	ENSG00000065833	malic enzyme 1, NADP(+)-dependent, cytosolic	---	---	yes	yes
7980940	ATXN3	ENSG00000066427	ataxin 3	---	---	yes	yes
7983763	MAPK6	ENSG00000069956	mitogen-activated protein kinase 6	---	---	yes	yes
7950838	PICALM	ENSG00000073921	phosphatidylinositol binding clathrin assembly protein	---	---	yes	yes
8128977	TUBE1	ENSG00000074935	tubulin, epsilon 1	---	---	yes	yes
8092348	LAMP3	ENSG00000078081	lysosomal-associated membrane protein 3	---	---	yes	yes
7926565	MLLT10	ENSG00000078403	myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translo	---	---	yes	yes
8089062	CLDND1	ENSG00000080822	claudin domain containing 1	---	---	yes	yes
8081055	CHMP2B	ENSG00000083937	charged multivesicular body protein 2B	---	---	yes	yes
8095163	EXOC1	ENSG00000090989	exocyst complex component 1	---	---	yes	yes
8130394	RGS17	ENSG00000091844	regulator of G-protein signaling 17	---	---	yes	yes
7973770	SCFD1	ENSG00000092108	sec1 family domain containing 1	---	---	yes	yes
7926851	WAC	ENSG00000095787	WW domain containing adaptor with coiled-coil	---	---	yes	yes
8074364	DGCR14	ENSG00000100056	DiGeorge syndrome critical region gene 14	---	---	yes	yes
8076436	TCF20	ENSG00000100207	transcription factor 20 (AR1)	---	---	yes	yes
7980833	SMEK1	ENSG00000100796	SMEK homolog 1, suppressor of mek1 (Dictyostelium)	---	---	yes	yes
7980923	TRIP11	ENSG00000100815	thyroid hormone receptor interactor 11	---	---	yes	yes
8062890	PABPC1L	ENSG00000101104	poly(A) binding protein, cytoplasmic 1-like	---	---	yes	yes
8063453	PFDN4	ENSG00000101132	prefoldin subunit 4	---	---	yes	yes
8020068	ANKRD12	ENSG00000101745	ankyrin repeat domain 12	---	---	yes	yes
8020508	RIOK3	ENSG00000101782	RIO kinase 3	---	---	yes	yes
8174448	GUCY2F	ENSG00000101890	guanylate cyclase 2F, retinal	---	---	yes	yes
7988687	GABPB1	ENSG00000104064	GA binding protein transcription factor, beta subunit 1	---	---	yes	yes
8151561	ZFAND1	ENSG00000104231	zinc finger, AN1-type domain 1	---	---	yes	yes
8147351	ESRP1	ENSG00000104413	epithelial splicing regulatory protein 1	---	---	yes	yes
8038309	KCNA7	ENSG00000104848	potassium voltage-gated channel, shaker-related subfamily, member 7	---	---	yes	yes
8026398	CASP14	ENSG00000105141	caspase 14, apoptosis-related cysteine peptidase	---	---	yes	yes
7933084	NAMPT	ENSG00000105835	nicotinamide phosphoribosyltransferase	---	---	yes	yes
8135601	MET	ENSG00000105976	met proto-oncogene	---	---	yes	yes
8131475	C1GALT1	ENSG00000106392	core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase, 1	---	---	yes	yes
8016832	MMD	ENSG00000108960	monocyte to macrophage differentiation-associated	---	---	yes	yes
7950983	CHORDC1	ENSG00000110172	cysteine and histidine-rich domain (CHORD) containing 1	---	---	yes	yes
7958425	DAO	ENSG00000110887	D-amino-acid oxidase	---	---	yes	yes
8121734	ASF1A	ENSG00000111875	anti-silencing function 1A histone chaperone	---	---	yes	yes

8120431	PTP4A1	ENSG00000112245	protein tyrosine phosphatase type IVA, member 1	---	---	yes	yes
8120758	SENP6	ENSG00000112701	SUMO1/sentrin specific peptidase 6	---	---	yes	yes
8111941	HMGCS1	ENSG00000112972	3-hydroxy-3-methylglutaryl-CoA synthase 1 (soluble)	---	---	yes	yes
8083063	SLC25A36	ENSG00000114120	solute carrier family 25 (pyrimidine nucleotide carrier), member 36	---	---	yes	yes
8088958	GBE1	ENSG00000114480	glucan (1,4-alpha-), branching enzyme 1	---	---	yes	yes
8078962	EIF1B	ENSG00000114784	eukaryotic translation initiation factor 1B	---	---	yes	yes
8048864	CCL20	ENSG00000115009	chemokine (C-C motif) ligand 20	---	---	yes	yes
8056977	NFE2L2	ENSG00000116044	nuclear factor (erythroid-derived 2)-like 2	---	---	yes	yes
7914603	RNF19B	ENSG00000116514	ring finger protein 19B	---	---	yes	yes
7915160	RRAGC	ENSG00000116954	Ras-related GTP binding C	---	---	yes	yes
7910950	KMO	ENSG00000117009	kynurenine 3-monooxygenase (kynurenine 3-hydroxylase)	---	---	yes	yes
8122265	TNFAIP3	ENSG00000118503	tumor necrosis factor, alpha-induced protein 3	---	---	yes	yes
8041273	YIPF4	ENSG00000119820	Yip1 domain family, member 4	---	---	yes	yes
8042291	AFTPH	ENSG00000119844	aftiphilin	---	---	yes	yes
8017711	GNA13	ENSG00000120063	guanine nucleotide binding protein (G protein), alpha 13	---	---	yes	yes
8149733	TNFRSF10B	ENSG00000120889	tumor necrosis factor receptor superfamily, member 10b	---	---	yes	yes
8146921	RDH10	ENSG00000121039	retinol dehydrogenase 10 (all-trans)	---	---	yes	yes
7954382	PYROXD1	ENSG00000121350	pyridine nucleotide-disulphide oxidoreductase domain 1	---	---	yes	yes
7957186	TBC1D15	ENSG00000121749	TBC1 domain family, member 15	---	---	yes	yes
8079392	CCR2	ENSG00000121807	chemokine (C-C motif) receptor 2	---	---	yes	yes
8099850	TMEM156	ENSG00000121895	transmembrane protein 156	---	---	yes	yes
7918467	LRIF1	ENSG00000121931	ligand dependent nuclear receptor interacting factor 1	---	---	yes	yes
8174979	ACTRT1	ENSG00000123165	actin-related protein T1	---	---	yes	yes
8064868	GPCPD1	ENSG00000125772	glycerophosphocholine phosphodiesterase GDE1 homolog (S. cerevisiae)	---	---	yes	yes
8136645	TAS2R4	ENSG00000127364	taste receptor, type 2, member 4	---	---	yes	yes
8140840	STEAP4	ENSG00000127954	STEAP family member 4	---	---	yes	yes
8095139	SRD5A3	ENSG00000128039	steroid 5 alpha-reductase 3	---	---	yes	yes
8062461	LBP	ENSG00000129988	lipopolysaccharide binding protein	---	---	yes	yes
7919305	PRKAB2	ENSG00000131791	protein kinase, AMP-activated, beta 2 non-catalytic subunit	---	---	yes	yes
7991598	SNRPA1	ENSG00000131876	small nuclear ribonucleoprotein polypeptide A'	---	---	yes	yes
8066402	OSER1	ENSG00000132823	oxidative stress responsive serine-rich 1	---	---	yes	yes
7970428	ZMYM5	ENSG00000132950	zinc finger, MYM-type 5	---	---	yes	yes
7968199	CDK8	ENSG00000132964	cyclin-dependent kinase 8	---	---	yes	yes
8174239	BEX2	ENSG00000133134	brain expressed X-linked 2	---	---	yes	yes
7965423	BTG1	ENSG00000133639	B-cell translocation gene 1, anti-proliferative	---	---	yes	yes
8022356	SPIRE1	ENSG00000134278	spire homolog 1 (Drosophila)	---	---	yes	yes
8112139	IL6ST	ENSG00000134352	interleukin 6 signal transducer (gp130, oncostatin M receptor)	---	---	yes	yes
8161857	RFK	ENSG00000135002	riboflavin kinase	---	---	yes	yes
7939314	EHF	ENSG00000135373	ets homologous factor	---	---	yes	yes
7958414	ISCU	ENSG00000136003	iron-sulfur cluster scaffold homolog (E. coli)	---	---	yes	yes
7968931	COG3	ENSG00000136152	component of oligomeric golgi complex 3	---	---	yes	yes
8131803	IL6	ENSG00000136244	interleukin 6 (interferon, beta 2)	---	---	yes	yes
7988767	CYP19A1	ENSG00000137869	cytochrome P450, family 19, subfamily A, polypeptide 1	---	---	yes	yes
7989013	RSL24D1	ENSG00000137876	ribosomal L24 domain containing 1	---	---	yes	yes
7917754	BCAR3	ENSG00000137936	breast cancer anti-estrogen resistance 3	---	---	yes	yes
8051583	CYP1B1	ENSG00000138061	cytochrome P450, family 1, subfamily B, polypeptide 1	---	---	yes	yes

7929012	STAMBPL1	ENSG00000138134	STAM binding protein-like 1	---	---	yes	yes
7936809	CUZD1	ENSG00000138161	CUB and zona pellucida-like domains 1	---	---	yes	yes
8096004	BMP2K	ENSG00000138756	BMP2 inducible kinase	---	---	yes	yes
8102162	INTS12	ENSG00000138785	integrator complex subunit 12	---	---	yes	yes
7955117	ANP32D	ENSG00000139223	acidic (leucine-rich) nuclear phosphoprotein 32 family, member D	---	---	yes	yes
7968132	NUPL1	ENSG00000139496	nucleoporin like 1	---	---	yes	yes
7975406	ADAM21	ENSG00000139985	ADAM metallopeptidase domain 21	---	---	yes	yes
7989315	GTF2A2	ENSG00000140307	general transcription factor IIA, 2, 12kDa	---	---	yes	yes
8022803	GAREM	ENSG00000141441	GRB2 associated, regulator of MAPK1	---	---	yes	yes
8022473	ESCO1	ENSG00000141446	establishment of sister chromatid cohesion N-acetyltransferase 1	---	---	yes	yes
8022531	NPC1	ENSG00000141458	Niemann-Pick disease, type C1	---	---	yes	yes
7921786	PFDN2	ENSG00000143256	prefoldin subunit 2	---	---	yes	yes
8051605	HNRNPLL	ENSG00000143889	heterogeneous nuclear ribonucleoprotein L-like	---	---	yes	yes
8078214	RAB5A	ENSG00000144566	RAB5A, member RAS oncogene family	---	---	yes	yes
8105040	OSMR	ENSG00000145623	oncostatin M receptor	---	---	yes	yes
8106504	BHMT	ENSG00000145692	betaine--homocysteine S-methyltransferase	---	---	yes	yes
8166956	KDM6A	ENSG00000147050	lysine (K)-specific demethylase 6A	---	---	yes	yes
8149574	CSGALNACT1	ENSG00000147408	chondroitin sulfate N-acetylgalactosaminyltransferase 1	---	---	yes	yes
8160297	PLIN2	ENSG00000147872	perilipin 2	---	---	yes	yes
8163896	STOM	ENSG00000148175	stomatin	---	---	yes	yes
8063019	SPINT4	ENSG00000149651	serine peptidase inhibitor, Kunitz type 4	---	---	yes	yes
8050190	ADAM17	ENSG00000151694	ADAM metallopeptidase domain 17	---	---	yes	yes
7962185	AMN1	ENSG00000151743	antagonist of mitotic exit network 1 homolog (S. cerevisiae)	---	---	yes	yes
8046408	PDK1	ENSG00000152256	pyruvate dehydrogenase kinase, isozyme 1	---	---	yes	yes
8106516	JMY	ENSG00000152409	junction mediating and regulatory protein, p53 cofactor	---	---	yes	yes
8041644	PLEKHH2	ENSG00000152527	pleckstrin homology domain containing, family H (with MyTH4 domain) member 2	---	---	yes	yes
8041422	RASGRP3	ENSG00000152689	RAS guanyl releasing protein 3 (calcium and DAG-regulated)	---	---	yes	yes
8102877	CLGN	ENSG00000153132	calmegin	---	---	yes	yes
8056206	RBMS1	ENSG00000153250	RNA binding motif, single stranded interacting protein 1	---	---	yes	yes
8154381	LURAP1L	ENSG00000153714	leucine rich adaptor protein 1-like	---	---	yes	yes
8027566	CEBPG	ENSG00000153879	CCAAT/enhancer binding protein (C/EBP), gamma	---	---	yes	yes
8152222	AZIN1	ENSG00000155096	antizyme inhibitor 1	---	---	yes	yes
7918474	DRAM2	ENSG00000156171	DNA-damage regulated autophagy modulator 2	---	---	yes	yes
8022488	ABHD3	ENSG00000158201	abhydrolase domain containing 3	---	---	yes	yes
8054192	MITD1	ENSG00000158411	MIT, microtubule interacting and transport, domain containing 1	---	---	yes	yes
8066939	B4GALT5	ENSG00000158470	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 5	---	---	yes	yes
7905154	C1orf51	ENSG00000159208	chromosome 1 open reading frame 51	---	---	yes	yes
8086689	MYL3	ENSG00000160808	myosin, light chain 3, alkali; ventricular, skeletal, slow	---	---	yes	yes
7901720	PRKAA2	ENSG00000162409	protein kinase, AMP-activated, alpha 2 catalytic subunit	---	---	yes	yes
7917331	C1orf52	ENSG00000162642	chromosome 1 open reading frame 52	---	---	yes	yes
8058108	TYW5	ENSG00000162971	tRNA-yW synthesizing protein 5	---	---	yes	yes
8047854	CCNYL1	ENSG00000163249	cyclin Y-like 1	---	---	yes	yes
8089584	C3orf17	ENSG00000163608	chromosome 3 open reading frame 17	---	---	yes	yes
8080419	GNL3	ENSG00000163938	guanine nucleotide binding protein-like 3 (nucleolar)	---	---	yes	yes
8111698	RICTOR	ENSG00000164327	RPTOR independent companion of MTOR, complex 2	---	---	yes	yes
8106534	PAPD4	ENSG00000164329	PAP associated domain containing 4	---	---	yes	yes

8112596	ANKRA2	ENSG00000164331	ankyrin repeat, family A (RFXANK-like), 2	---	---	yes	yes
8109597	UBLCP1	ENSG00000164332	ubiquitin-like domain containing CTD phosphatase 1	---	---	yes	yes
8171418	PIGA	ENSG00000165195	phosphatidylinositol glycan anchor biosynthesis, class A	---	---	yes	yes
7951008	TAF1D	ENSG00000166012	TATA box binding protein (TBP)-associated factor, RNA polymerase I, D, 41kDa	---	---	yes	yes
7984641	ARIH1	ENSG00000166233	ariadne homolog, ubiquitin-conjugating enzyme E2 binding protein, 1 (Drosophila)	---	---	yes	yes
8021453	SEC11C	ENSG00000166562	SEC11 homolog C (S. cerevisiae)	---	---	yes	yes
8161164	OR13J1	ENSG00000168828	olfactory receptor, family 13, subfamily J, member 1	---	---	yes	yes
8101126	CXCL10	ENSG00000169245	chemokine (C-X-C motif) ligand 10	---	---	yes	yes
8113873	HINT1	ENSG00000169567	histidine triad nucleotide binding protein 1	---	---	yes	yes
8078262	UBE2E1	ENSG00000170142	ubiquitin-conjugating enzyme E2E 1	---	---	yes	yes
8078397	CMTM8	ENSG00000170293	CKLF-like MARVEL transmembrane domain containing 8	---	---	yes	yes
8041902	FOXN2	ENSG00000170802	forkhead box N2	---	---	yes	yes
7968928	TPT1-AS1	ENSG00000170919	TPT1 antisense RNA 1	---	---	yes	yes
7942889	TMEM126A	ENSG00000171202	transmembrane protein 126A	---	---	yes	yes
8166919	GPR82	ENSG00000171657	G protein-coupled receptor 82	---	---	yes	yes
7933877	JMJD1C	ENSG00000171988	jumonji domain containing 1C	---	---	yes	yes
8040211	KLF11	ENSG00000172059	Kruppel-like factor 11	---	---	yes	yes
7927513	FAM21C	ENSG00000172661	family with sequence similarity 21, member C	---	---	yes	yes
8092230	ZMAT3	ENSG00000172667	zinc finger, matrin-type 3	---	---	yes	yes
8070557	ZBTB21	ENSG00000173276	zinc finger and BTB domain containing 21	---	---	yes	yes
8078272	NR1D2	ENSG00000174738	nuclear receptor subfamily 1, group D, member 2	---	---	yes	yes
8169603	LONRF3	ENSG00000175556	LON peptidase N-terminal domain and ring finger 3	---	---	yes	yes
8136979	CTAGE15	ENSG00000176227	CTAGE family, member 15	---	---	yes	yes
8129560	CTAGE15	ENSG00000176227	CTAGE family, member 15	---	---	yes	yes
7914550	ZBTB8OS	ENSG00000176261	zinc finger and BTB domain containing 8 opposite strand	---	---	yes	yes
8043105	KCMF1	ENSG00000176407	potassium channel modulatory factor 1	---	---	yes	yes
8171762	RPS6KA3	ENSG00000177189	ribosomal protein S6 kinase, 90kDa, polypeptide 3	---	---	yes	yes
7971563	PCNPP5	ENSG00000177197	PEST containing nuclear protein pseudogene 5	---	---	yes	yes
7929562	ZNF518A	ENSG00000177853	zinc finger protein 518A	---	---	yes	yes
8137709	ZFAND2A	ENSG00000178381	zinc finger, AN1-type domain 2A	---	---	yes	yes
7968883	LACC1	ENSG00000179630	laccase (multicopper oxidoreductase) domain containing 1	---	---	yes	yes
7993999	0	ENSG00000180747		0	---	yes	yes
7946025	OR52A1	ENSG00000182070	olfactory receptor, family 52, subfamily A, member 1	---	---	yes	yes
8078252	UBE2E2	ENSG00000182247	ubiquitin-conjugating enzyme E2E 2	---	---	yes	yes
7978739	TRAPPC6B	ENSG00000182400	trafficking protein particle complex 6B	---	---	yes	yes
8010624	TSPAN10	ENSG00000182612	tetraspanin 10	---	---	yes	yes
8000167	0	ENSG00000183604		0	---	yes	yes
8132725	UPP1	ENSG00000183696	uridine phosphorylase 1	---	---	yes	yes
8129120	FAM162B	ENSG00000183807	family with sequence similarity 162, member B	---	---	yes	yes
7972239	SLITRK6	ENSG00000184564	SLIT and NTRK-like family, member 6	---	---	yes	yes
7956785	XPOT	ENSG00000184575	exportin, tRNA	---	---	yes	yes
8006336	LRRC37B	ENSG00000185158	leucine rich repeat containing 37B	---	---	yes	yes
7974146	PRPF39	ENSG00000185246	PRP39 pre-mRNA processing factor 39 homolog (S. cerevisiae)	---	---	yes	yes
7983704	GLDN	ENSG00000186417	gliomedin	---	---	yes	yes
8091764	KPNA4	ENSG00000186432	karyopherin alpha 4 (importin alpha 3)	---	---	yes	yes
8069838	KRTAP19-5	ENSG00000186977	keratin associated protein 19-5	---	---	yes	yes

8044450	ZC3H6	ENSG00000188177	zinc finger CCCH-type containing 6	---	---	yes	yes
8000028	DCUN1D3	ENSG00000188215	DCN1, defective in cullin neddylation 1, domain containing 3	---	---	yes	yes
7962194	H3F3C	ENSG00000188375	H3 histone, family 3C	---	---	yes	yes
8017259	0	ENSG00000196861		0	---	yes	yes
7951372	CASP4	ENSG00000196954	caspase 4, apoptosis-related cysteine peptidase	---	---	yes	yes
7937079	BNIP3P1	ENSG00000197358	BCL2/adenovirus E1B 19kDa interacting protein 3 pseudogene 1	---	---	yes	yes
8102988	GYPE	ENSG00000197465	glycophorin E (MNS blood group)	---	---	yes	yes
8112409	SGTB	ENSG00000197860	small glutamine-rich tetratricopeptide repeat (TPR)-containing, beta	---	---	yes	yes
7914202	SNHG12	ENSG00000197989	small nucleolar RNA host gene 12 (non-protein coding)	---	---	yes	yes
7909011	MDM4	ENSG00000198625	Mdm4 p53 binding protein homolog (mouse)	---	---	yes	yes
8174972	DCAF12L1	ENSG00000198889	DDB1 and CUL4 associated factor 12-like 1	---	---	yes	yes
8163341	LRRRC37A5P	ENSG00000204173	leucine rich repeat containing 37, member A5, pseudogene	---	---	yes	yes
8000651	0	ENSG00000205534		0	---	yes	yes
8000834	0	ENSG00000205534		0	---	yes	yes
8105104	C5orf51	ENSG00000205765	chromosome 5 open reading frame 51	---	---	yes	yes
8149350	DEFB134	ENSG00000205882	defensin, beta 134	---	---	yes	yes
8105862	0	ENSG00000213194		0	---	yes	yes
8177462	0	ENSG00000213194		0	---	yes	yes
8017704	AMZ2P1	ENSG00000214174	archaelysin family metallopeptidase 2 pseudogene 1	---	---	yes	yes
8023252	RPL17-C18orf1	ENSG00000215472	RPL17-C18orf32 readthrough	---	---	yes	yes
7968226	RPL21P28	ENSG00000220749	ribosomal protein L21 pseudogene 28	---	---	yes	yes
8049961	0	ENSG00000220804		0	---	yes	yes
8145440	PPP2R2A	ENSG00000221914	protein phosphatase 2, regulatory subunit B, alpha	---	---	yes	yes
8039075	VN1R4	ENSG00000228567	vomeroneasal 1 receptor 4	---	---	yes	yes
8126952	0	ENSG00000232702		0	---	yes	yes
7979904	ADAM21P1	ENSG00000235812	ADAM metallopeptidase domain 21 pseudogene 1	---	---	yes	yes
7952126	RPL23AP64	ENSG00000240970	ribosomal protein L23a pseudogene 64	---	---	yes	yes
7994006	0	ENSG00000254634		0	---	yes	yes
8000156	0	ENSG00000254634		0	---	yes	yes
7975645	0	ENSG00000258653	Uncharacterized protein	---	---	yes	yes
8009255	CEP95	ENSG00000258890	centrosomal protein 95kDa	---	---	yes	yes
7989885	0	ENSG00000259924		0	---	yes	yes
7995258	0	ENSG00000262657		0	---	yes	yes
8004510	SNORA67	ENSG00000264772	small nucleolar RNA, H/ACA box 67	---	---	yes	yes
7926609	COMMD3-BMI1	ENSG00000269897	COMMD3-BMI1 readthrough	---	---	yes	yes
8168387	FAM226A	ENSG00000269911	family with sequence similarity 226, member A (non-protein coding)	---	---	yes	yes
8101501				---	---	yes	yes

More in CSC than Nonstimulated and NCSC

Table S2. GSEA report for stimulated (ST) vs non-stimulated (NS)

NAME	SIZE	ES	NES	NOM p-val	FDR q-val	FWER p-val
MISSIAGLIA_REGULATED_BY_METHYLATION_UP	106	0.7575327	3.2196376	0	0	0
DUTERTRE ESTRADIOL_RESPONSE_24HR_DN	470	0.58940184	2.9775474	0	0	0
MOSERLE_IFNA_RESPONSE	30	0.89596575	2.9335487	0	0	0
HECKER_IFNB1_TARGETS	87	0.7185145	2.9276676	0	0	0
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_1	42	0.82571083	2.9120982	0	0	0
ZHANG_RESPONSE_TO_IKK_INHIBITOR_AND_TNF_UP	200	0.61385417	2.8384557	0	0	0
LIANG_SILENCED_BY_METHYLATION_2	50	0.7730708	2.825356	0	0	0
STAMBOLSKY_TARGETS_OF_MUTATED_TP53_DN	43	0.792124	2.8105314	0	0	0
DAUER_STAT3_TARGETS_DN	46	0.75971293	2.7886515	0	0	0
DER_IFN_ALPHA_RESPONSE_UP	69	0.70287746	2.7558482	0	0	0
BROWNE_INTERFERON_RESPONSIVE_GENES	63	0.7138035	2.7402694	0	0	0
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_3D_UP	157	0.6060114	2.7139838	0	0	0
SANA_TNF_SIGNALING_UP	78	0.6696812	2.7132013	0	0	0
JOHNSTONE_PARVB_TARGETS_3_UP	386	0.5515398	2.7037892	0	0	0
DER_IFN_BETA_RESPONSE_UP	96	0.64201415	2.6793425	0	0	0
ELVIDGE_HYPOXIA_BY_DMOG_UP	116	0.61944276	2.671809	0	0	0
BENNETT_SYSTEMIC_LUPUS_ERYTHEMATOSUS	28	0.82565093	2.6568213	0	0	0
PEDERSEN_TARGETS_OF_611CTF_ISOFORM_OF_ERBB2	71	0.68479246	2.6521013	0	0	0
ZHANG_INTERFERON_RESPONSE	23	0.843808	2.6491656	0	0	0
EINAV_INTERFERON_SIGNATURE_IN_CANCER	26	0.841185	2.6461213	0	0	0
SEITZ NEOPLASTIC_TRANSFORMATION_BY_8P_DELETION_UP	68	0.66818714	2.6313422	0	0	0
GAJATE_RESPONSE_TO TRABECTEDIN_UP	61	0.66629833	2.6239002	0	0	0
KINSEY_TARGETS_OF_EWSR1_FLII_FUSION_DN	289	0.53816754	2.6119616	0	0	0
HENDRICKS_SMARCA4_TARGETS_UP	54	0.7149049	2.6046743	0	0	0
PODAR_RESPONSE_TO_ADAPHOSTIN_UP	132	0.6016681	2.5921633	0	0	0
SARRIO_EPITHELIAL_MESENCHYMAL_TRANSITION_DN	137	0.5846353	2.5842204	0	0	0
ONDER_CDH1_TARGETS_2_DN	433	0.5084539	2.5557318	0	0	0
KIM_LRRC3B_TARGETS	28	0.783433	2.5460315	0	0	0
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_8D_UP	137	0.5840697	2.545877	0	0	0
BOWIE_RESPONSE_TO_TAMOXIFEN	18	0.8731276	2.5363333	0	0	0
FARMER_BREAST_CANCER_CLUSTER_1	38	0.7317757	2.53344	0	0	0
DER_IFN_GAMMA_RESPONSE_UP	66	0.6423198	2.5312881	0	0	0
BECKER_TAMOXIFEN_RESISTANCE_UP	47	0.6951153	2.524051	0	0	0
DELYS_THYROID_CANCER_UP	410	0.49447244	2.5035548	0	0	0
NAGASHIMA_NRG1_SIGNALING_UP	164	0.5568401	2.499764	0	0	0
FURUKAWA_DUSP6_TARGETS_PCI35_UP	62	0.64329255	2.496092	0	0	0
TSAI_RESPONSE_TO_RADIATION_THERAPY	31	0.74149334	2.4901378	0	0	0
GALINDO_IMMUNE_RESPONSE_TO_ENTEROTOXIN	78	0.62155706	2.484655	0	0	0
AMIT_EGF_RESPONSE_480_HELA	147	0.5659984	2.4805572	0	0	0
SANA_RESPONSE_TO_IFNG_UP	63	0.6452311	2.465172	0	0	0
BOSCO_INTERFERON_INDUCED_ANTIVIRAL_MODULE	68	0.6263192	2.4637656	0	0	0
HUPER_BREAST_BASAL_VS_LUMINAL_DN	56	0.64836055	2.4567425	0	0	0
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_ERYTHROCYTE_UP	145	0.5570548	2.4496841	0	0	0
APPEL_IMATINIB_RESPONSE	31	0.7438213	2.4490073	0	0	0
ELVIDGE_HYPOXIA_UP	151	0.54986197	2.4489572	0	0	0
NIKOLSKY_BREAST_CANCER_16P13_AMPLICON	88	0.5942371	2.4454079	0	0	0
LIN_SILENCED_BY_TUMOR_MICROENVIRONMENT	101	0.57912105	2.4435372	0	0	0
JOHNSTONE_PARVB_TARGETS_2_UP	128	0.56143826	2.438389	0	0	0
KRASNOSELSKAYA_ILF3_TARGETS_UP	35	0.7220519	2.4381742	0	0	0
RODRIGUES_THYROID_CARCINOMA_DN	66	0.6236411	2.4301884	0	0	0
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_10D_UP	172	0.5318044	2.4030454	0	0	0
MAHADEVAN_RESPONSE_TO_MP470_DN	18	0.8221337	2.368514	0	0	0
RADAEVA_RESPONSE_TO_IFNA1_UP	49	0.64401054	2.365806	0	0	0
MASRI_RESISTANCE_TO_TAMOXIFEN_AND_AROMATASE_INHIBITORS_DN	18	0.8227468	2.3599927	0	0	0
BOWIE_RESPONSE_TO_EXTRACELLULAR_MATRIX	16	0.8680786	2.3594434	0	0	0
MARKEY_RB1_ACUTE_LOF_UP	191	0.50214	2.3285055	0	2.69E-05	0.001
RICKMAN_METASTASIS_DN	220	0.4998286	2.3356307	0	2.74E-05	0.001
RASHI_RESPONSE_TO_IONIZING_RADIATION_2	111	0.5445986	2.340206	0	2.78E-05	0.001
ALTEMEIER_RESPONSE_TO_LPS_WITH_MECHANICAL_VENTILATION	114	0.54775256	2.3411148	0	2.83E-05	0.001
ZWANG_CLASS_3_TRANSIENTLY_INDUCED_BY_EGF	196	0.5134745	2.3432279	0	2.88E-05	0.001
CHANG_CORE_SERUM_RESPONSE_DN	175	0.51950866	2.3485572	0	2.93E-05	0.001
ICHIBA_GRAFT_VERSUS_HOST_DISEASE_D7_UP	89	0.57400745	2.3494427	0	2.98E-05	0.001
KRIGE_AMINO_ACID_DEPRIVATION	29	0.71669376	2.317877	0	8.15E-05	0.003
AMIT_SERUM_RESPONSE_240_MCF10A	53	0.61518806	2.2889814	0	9.88E-05	0.004
MURATA_VIRULENCE_OF_H_PILORI	24	0.757331	2.290532	0	1.00E-04	0.004
ODONNELL_TARGETS_OF_MYC_AND_TFRC_UP	73	0.57581383	2.293401	0	1.02E-04	0.004
REN_ALVEOLAR_RHABDOMYOSARCOMA_DN	379	0.4581439	2.2970507	0	1.03E-04	0.004
LINDSTEDT_DENDRITIC_CELL_MATURATION_A	61	0.59402543	2.3009984	0	1.05E-04	0.004
WINZEN_DEGRADED_VIA_KHSRP	92	0.54170454	2.2567239	0	1.06E-04	0.005
HAHTOLA_MYCOSIS_FUNGOIDES_CD4_UP	60	0.613198	2.3013783	0	1.06E-04	0.004
CERVERA_SDHB_TARGETS_1_UP	98	0.55222034	2.2626235	0	1.07E-04	0.005
PASINI_SUZ12_TARGETS_DN	297	0.4755338	2.305953	0	1.08E-04	0.004
GROSS_HYPOXIA_VIA_ELK3_ONLY_UP	32	0.67870146	2.2668731	0	1.09E-04	0.005
AMIT_EGF_RESPONSE_120_HELA	60	0.5898571	2.267323	0	1.10E-04	0.005
PETROVA_ENDOTHELIUM_LYMPHATIC_VS_BLOOD_DN	156	0.51507545	2.269474	0	1.11E-04	0.005
PHONG_TNF_TARGETS_UP	60	0.596065	2.269863	0	1.13E-04	0.005
NADLER_OBESITY_UP	58	0.59530526	2.2303247	0	1.13E-04	0.006

SEKI_INFLAMMATORY_RESPONSE_LPS_UP	70	0.56195676	2.2314155	0	1.14E-04	0.006
XU_AKT1_TARGETS_6HR	26	0.7194544	2.2706835	0	1.14E-04	0.005
NAKAMURA_ADIPOGENESIS_EARLY_DN	37	0.65027505	2.2331877	0	1.16E-04	0.006
JAEGER_METASTASIS_DN	238	0.47823355	2.2719688	0	1.16E-04	0.005
PHONG_TNF_RESPONSE_VIA_P38_PARTIAL	148	0.50850976	2.2344234	0	1.17E-04	0.006
RODWELL_AGING_KIDNEY_UP	389	0.46173692	2.2755399	0	1.18E-04	0.005
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED_IN_MONOCYTE_UP	19	0.76047724	2.2369332	0	1.18E-04	0.006
PROVENZANI_METASTASIS_DN	128	0.50512034	2.2040114	0	1.19E-04	0.007
CHARAFE_BREAST_CANCER_BASAL_VS_MESENCHYMAL_UP	110	0.53505325	2.2779725	0	1.19E-04	0.005
WU_CELL_MIGRATION	172	0.49969092	2.2412307	0	1.20E-04	0.006
HINATA_NFKB_TARGETS KERATINOCYTE_UP	85	0.5482921	2.2042303	0	1.20E-04	0.007
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_16D_UP	154	0.5083354	2.2783363	0	1.21E-04	0.005
GRAHAM_CML_DIVIDING_VS_NORMAL QUIESCENT_DN	87	0.5500455	2.2438192	0	1.21E-04	0.006
HOFMANN_MYELODYSPLASTIC_SYNDROM_LOW_RISK_DN	27	0.6807773	2.206232	0	1.21E-04	0.007
HAN_JNK_SIGNALING_UP	34	0.6622097	2.2087975	0	1.22E-04	0.007
GRAHAM_CML QUIESCENT_VS_NORMAL QUIESCENT_DN	42	0.6194006	2.2439706	0	1.22E-04	0.006
AZARE NEOPLASTIC_TRANSFORMATION_BY_STAT3_DN	110	0.5112777	2.2095742	0	1.24E-04	0.007
ZHU_CMV_8_HR_UP	43	0.63681257	2.2545505	0	1.24E-04	0.006
NAGASHIMA_EGF_SIGNALING_UP	54	0.6140817	2.2106383	0	1.25E-04	0.007
PLASARI_TGFB1_TARGETS_10HR_UP	184	0.49289063	2.255583	0	1.25E-04	0.006
MCLACHLAN_DENTAL_CARIES_UP	214	0.4683886	2.2106895	0	1.26E-04	0.007
KOBAYASHI_EGFR_SIGNALING_24HR_UP	87	0.54260045	2.2118568	0	1.27E-04	0.007
GRAESSMANN_RESPONSE_TO_MC_AND_SERUM_DEPRIVATION_UP	181	0.48390785	2.215208	0	1.29E-04	0.007
ELVIDGE_HIF1A_AND_HIF2A_TARGETS_DN	92	0.5304791	2.2189083	0	1.30E-04	0.007
YAN_ESCAPE_FROM_ANOIKIS	20	0.7461564	2.1970735	0	1.34E-04	0.008
GROSS_HYPOXIA_VIA_ELK3_DN	144	0.49250498	2.1964855	0	1.50E-04	0.009
VERHAAK_GLIOMASTOMA_NEURAL	187	0.46564093	2.181103	0	1.53E-04	0.01
DELPUECH_FOXO3_TARGETS_UP	64	0.5677779	2.1811447	0	1.54E-04	0.01
CHANG_IMMORTALIZED_BY_HPV31_DN	61	0.56211007	2.1815653	0	1.55E-04	0.01
PRAMOONJAGO_SOX4_TARGETS_UP	49	0.583161	2.1830235	0	1.57E-04	0.01
CHARAFE_BREAST_CANCER_LUMINAL_VS_BASAL_DN	412	0.4371991	2.1831477	0	1.58E-04	0.01
FERRANDO_T_ALL_WITH_MLL_ENL_FUSION_UP	81	0.5354423	2.1834314	0	1.60E-04	0.01
DUTERTRE ESTRADIOL_RESPONSE_6HR_DN	84	0.5485074	2.1847484	0	1.61E-04	0.01
MUELLER METHYLATED_IN_GLIOMASTOMA	36	0.64036083	2.1862545	0	1.63E-04	0.01
BOYLAN_MULTIPLE_MYELOMA_PCA1_UP	95	0.5243611	2.1958058	0	1.64E-04	0.01
SIMBULAN_PARP1_TARGETS_UP	31	0.65348834	2.1765664	0	1.66E-04	0.011
WUNDER_INFLAMMATORY_RESPONSE_AND_CHOLESTEROL_UP	47	0.59456664	2.1723647	0	1.78E-04	0.012
MEISSNER_BRAIN_HCP_WITH_H3K27ME3	230	0.45701182	2.173227	0	1.80E-04	0.012
LIU_VAV3_PROSTATE_CARCINOGENESIS_UP	79	0.53622323	2.1571233	0	1.99E-04	0.014
FRASOR_RESPONSE_TO ESTRADIOL_DN	76	0.5423046	2.163517	0	2.00E-04	0.014
GAVIN_PDE3B_TARGETS	21	0.7174318	2.1660624	0	2.02E-04	0.014
WIEDERSCHAIN_TARGETS_OF_BMI1_AND_PCGF2	53	0.5834365	2.1667643	0	2.04E-04	0.014
BILD_HRAS_ONCOGENIC_SIGNATURE	229	0.4579762	2.1708772	0	2.06E-04	0.014
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_HSC_UP	169	0.47748387	2.1473613	0	2.32E-04	0.017
JECHLINGER_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_UP	66	0.5559945	2.147612	0	2.34E-04	0.017
RICKMAN_TUMOR_DIFFERENTIATED_WELL_VS_POORLY_DN	335	0.43521303	2.147667	0	2.36E-04	0.017
NAKAYAMA_SOFT_TISSUE_TUMORS_PCA1_UP	66	0.5517411	2.1479897	0	2.38E-04	0.017
RUIZ_TNC_TARGETS_UP	137	0.49069202	2.1520205	0	2.40E-04	0.017
JI_METASTASIS_REPRESSED_BY_STK11	26	0.68064874	2.1440916	0	2.44E-04	0.018
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED_IN_ERYTHROCYTE_UP	43	0.59654593	2.141974	0	2.69E-04	0.02
PARK_APL_PATHOGENESIS_DN	45	0.6058055	2.1359363	0	2.76E-04	0.021
HIRSCH_CELLULAR_TRANSFORMATION_SIGNATURE_UP	220	0.4622152	2.136984	0	2.78E-04	0.021
DEMAGALHAES_AGING_UP	50	0.5822762	2.1384237	0	2.80E-04	0.021
AIYAR_COBRA1_TARGETS_UP	34	0.6386619	2.1327837	0	3.00E-04	0.023
RODWELL_AGING_KIDNEY_NO_BLOOD_UP	189	0.46798623	2.1324275	0	3.10E-04	0.024
HAMAI_APOPTOSIS_VIA_TRAIL_DN	157	0.4758844	2.1312423	0	3.20E-04	0.025
JISON_SICKLE_CELL_DISEASE_UP	170	0.47640413	2.1255198	0	3.31E-04	0.026
COLIN_PILOCYTIC_ASTROCYTOMA_VS_GLIOMASTOMA_UP	35	0.63633466	2.1244948	0	3.41E-04	0.027
HELLEBREKERS_SILENCED_DURING_TUMOR_ANGIOGENESIS	75	0.5393204	2.12262	0	3.51E-04	0.028
GUENTHER_GROWTH_SPHERICAL_VS_ADHERENT_DN	25	0.6610327	2.1122394	0	3.65E-04	0.03
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_9	69	0.53848356	2.1127837	0	3.68E-04	0.03
NEMETH_INFLAMMATORY_RESPONSE_LPS_UP	83	0.5251709	2.113452	0	3.70E-04	0.03
LIANG_SILENCED_BY METHYLATION_UP	28	0.66625285	2.1141496	0	3.73E-04	0.03
LIAN_NEUTROPHIL_GRANULE_CONSTITUENTS	24	0.67830724	2.109071	0	3.75E-04	0.03
ZHAN_MULTIPLE_MYELOMA_LB_DN	36	0.6177069	2.1012945	0	4.21E-04	0.034
DASU_IL6_SIGNALING_UP	55	0.5535253	2.0956793	0	4.51E-04	0.037
BURTON_ADIPOGENESIS_7	47	0.5819035	2.0967522	0	4.54E-04	0.037
COATES_MACROPHAGE_M1_VS_M2_DN	60	0.558115	2.0932422	0	4.80E-04	0.039
WANG_BARRETTES_ESOPHAGUS_UP	40	0.59201	2.0939667	0	4.83E-04	0.039
CASTELLANO_NRAS_TARGETS_UP	60	0.5494275	2.0896251	0	4.88E-04	0.04
ZHANG_ANTIVIRAL_RESPONSE_TO_RIBAVIRIN_UP	26	0.6704639	2.0887477	0	4.97E-04	0.041
HUANG_FOXA2_TARGETS_DN	35	0.61564445	2.0866747	0	5.05E-04	0.042
KAAB_FAILED_HEART_VENTRICLE_DN	35	0.6130022	2.070523	0	5.19E-04	0.046
SMID_BREAST_CANCER_ERBB2_UP	126	0.48225307	2.0705807	0	5.23E-04	0.046
MARSON_FOXP3_TARGETS_UP	61	0.5533455	2.071895	0	5.26E-04	0.046
BOSCO_EPITHELIAL_DIFFERENTIATION_MODULE	57	0.551242	2.069138	0	5.27E-04	0.047
ZHAN_MULTIPLE_MYELOMA_SPIKED	20	0.6992107	2.0721054	0	5.29E-04	0.046
QI_HYPOXIA_TARGETS_OF_HIF1A_AND_FOXA2	36	0.60543156	2.0779402	0	5.32E-04	0.045
BURTON_ADIPOGENESIS_1	32	0.6051996	2.0743957	0	5.33E-04	0.046

ZUCCHI_METASTASIS_DN	41	0.5972896	2.0810902	0	5.36E-04	0.045
LEI_MYB_TARGETS	298	0.42957202	2.0756254	0	5.36E-04	0.046
FERREIRA_EWINGS_SARCOMA_UNSTABLE_VS_STABLE_DN	80	0.5203834	2.0759633	0	5.40E-04	0.046
HUPER_BREAST_BASAL_VS_LUMINAL_UP	51	0.5617432	2.066769	0	5.45E-04	0.049
TAVOR_CEBPA_TARGETS_DN	28	0.63783836	2.060892	0	6.26E-04	0.057
SATO_SILENCED_BY_METHYLATION_IN_PANCREATIC_CANCER_1	375	0.41368696	2.0561216	0	6.42E-04	0.06
KEEN_RESPONSE_TO_ROSIGLITAZONE_DN	96	0.49603128	2.0581543	0	6.46E-04	0.06
MIKKELSEN_IPS_LCP_WITH_H3K4ME3	138	0.46803522	2.0585828	0	6.50E-04	0.06
ENK_UV_RESPONSE_KERATINOCYTE_UP	486	0.40602797	2.059411	0	6.54E-04	0.06
SATO_SILENCED_BY_DEACETYLATION_IN_PANCREATIC_CANCER	39	0.5716595	2.0491786	0	7.21E-04	0.067
GAVIN_FOXP3_TARGETS_CLUSTER_P7	78	0.507908	2.047471	0	7.58E-04	0.071
FRIDMAN_SENESCENCE_UP	72	0.5192101	2.0413	0	8.43E-04	0.08
VERRECCHIA_EARLY_RESPONSE_TO_TGFB1	53	0.5441138	2.0410876	0	8.59E-04	0.082
SAGIV_CD24_TARGETS_DN	43	0.5820791	2.0396707	0	8.64E-04	0.083
MCBRYAN_PUBERTAL_BREAST_4_5WK_UP	250	0.4268999	2.0375047	0	9.08E-04	0.087
ZHANG_TLX_TARGETS_36HR_UP	207	0.43711784	2.035886	0	9.32E-04	0.09
MAHADEVAN_RESPONSE_TO_MP470_UP	19	0.71814394	2.0357141	0	9.36E-04	0.091
FULCHER_INFLAMMATORY_RESPONSE_LLECTIN_VS_LPS_DN	391	0.4086167	2.0325003	0	9.39E-04	0.093
XU_HGF_SIGNALING_NOT_VIA_AKT1_48HR_UP	31	0.6146287	2.0329664	0	9.40E-04	0.093
MIKKELSEN_MCV6_HCP_WITH_H3K27ME3	379	0.41214988	2.0349169	0	9.41E-04	0.092
PHONG_TNF_RESPONSE_NOT_VIA_P38	317	0.4184202	2.0325131	0	9.44E-04	0.093
MANALO_HYPOXIA_UP	187	0.44453603	2.0337877	0	9.45E-04	0.093
ZHANG_TLX_TARGETS_60HR_UP	269	0.42524993	2.0310314	0	9.52E-04	0.095
MIKKELSEN_NPC_HCP_WITH_H3K4ME3_AND_H3K27ME3	193	0.4403945	2.0269186	0	9.89E-04	0.099
GRAHAM_NORMAL_QUIESCENT_VS_NORMAL_DIVIDING_UP	61	0.5293056	2.027531	0	9.94E-04	0.099
BURTON_ADIPOGENESIS_8	76	0.50683147	2.0216577	0	0.00103961	0.104
UROSEVIC_RESPONSE_TO_IMIQUIMOD	21	0.6816274	2.020763	0	0.00104309	0.105
GU_PDEF_TARGETS_DN	35	0.5979395	2.0194077	0	0.00106503	0.108
AIGNER_ZEB1_TARGETS	32	0.60024774	2.0187483	0	0.00109658	0.112
HUMMERICH_SKIN_CANCER_PROGRESSION_UP	84	0.49662608	2.0161242	0	0.00112184	0.116
HUANG_DASATINIB_RESISTANCE_UP	72	0.50686014	2.0162473	0	0.00112788	0.116
LIU_SMARCA4_TARGETS	56	0.53227466	2.013655	0	0.00117892	0.121
ROZANOV_MMP14_TARGETS_UP	235	0.42501345	2.0099065	0	0.00123534	0.126
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_KRAS_CDC25_UP	51	0.5472883	2.008028	0	0.00124225	0.127
AMIT_EGF_RESPONSE_60_MCF10A	36	0.5894771	2.008202	0	0.00124875	0.127
HOFFMANN_PRE_BI_TO_LARGE_PRE_BII_LYMPHOCYTE_DN	64	0.51689166	2.0085135	0	0.00125533	0.127
LI_AMPLIFIED_IN_LUNG_CANCER	160	0.4499257	2.0041442	0	0.00131497	0.135
CROONQUIST_IL6_DEPRIVATION_UP	18	0.70276916	2.0019073	0	0.00134294	0.138
CROMER_TUMORIGENESIS_UP	58	0.52800995	2.0017502	0	0.00134485	0.139
LI_INDUCED_T_TO_NATURAL_KILLER_UP	271	0.4161125	1.994811	0	0.00134833	0.145
BASSO_CD40_SIGNALING_UP	95	0.47768593	1.9973916	0	0.00135504	0.145
KIM_RESPONSE_TO_TSA_AND_DECITABINE_UP	113	0.4701203	2.0014255	0	0.00135507	0.141
BROWN_MYELOID_CELL_DEVELOPMENT_UP	145	0.45310965	1.9975412	0	0.00136181	0.145
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_CDC25_DN	137	0.4545374	1.9987465	0	0.00136865	0.145
HINATA_NFKB_TARGETS_KERATINOCYTE_DN	22	0.6538606	1.9987885	0	0.00137557	0.145
TARTE_PLASMA_CELL_VS_PLASMABLAST_UP	346	0.40401727	1.9991639	0	0.00138255	0.145
LEE_LIVER_CANCER_ACOX1_UP	61	0.52394754	1.9904345	0	0.00144375	0.155
ELVIDGE_HIF1A_TARGETS_DN	79	0.4923666	1.9912844	0	0.00145086	0.155
PACHER_TARGETS_OF_IGF1_AND_IGF2_UP	35	0.5888134	1.988802	0	0.00146267	0.158
KERLEY_RESPONSE_TO_CISPLATIN_UP	40	0.56724507	1.9879392	0	0.00146402	0.159
ZHANG_TLX_TARGETS_DN	101	0.47974476	1.9889054	0	0.0014698	0.158
WANG_BARRETTES_ESOPHAGUS_DN	25	0.63709235	1.985672	0	0.00150577	0.165
BRUECKNER_TARGETS_OF_MIRLET7A3_DN	72	0.50188315	1.9840701	0	0.00151531	0.167
YAMAZAKI_TCEB3_TARGETS_UP	162	0.43292063	1.9842719	0	0.00152256	0.167
KOHOUTEK_CCNT1_TARGETS	42	0.56694543	1.9818066	0	0.00152396	0.169
NOJIMA_SFRP2_TARGETS_DN	23	0.6425267	1.9799802	0	0.00155081	0.173
LEIN_ASTROCYTE_MARKERS	39	0.5774429	1.9795852	0	0.0015592	0.175
HUMMERICH_MALIGNANT_SKIN_TUMOR_UP	15	0.72617567	1.9783219	0	0.00159129	0.178
WINTER_HYPOXIA_METAGENE	218	0.41765454	1.9777567	0	0.00159957	0.18
WANG_ESOPHAGUS_CANCER_VS_NORMAL_UP	105	0.46661377	1.977002	0	0.00160824	0.182
TARTE_PLASMA_CELL_VS_B_LYMPHOCYTE_UP	70	0.50598025	1.9747173	0	0.0016411	0.187
COLDREN_GEFITINIB_RESISTANCE_DN	203	0.42620158	1.9749429	0	0.00164862	0.187
GENTILE_UV_LOW_DOSE_UP	23	0.62804884	1.9726107	0	0.00165684	0.19
MIKKELSEN_MCV6_LCP_WITH_H3K4ME3	135	0.4487092	1.9729822	0	0.00165695	0.189
DIRMEIER_LMP1_RESPONSE_EARLY	65	0.5083239	1.9717991	0	0.00166453	0.192
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_GREY_DN	55	0.5199415	1.9677945	0	0.00174908	0.201
GESERICK_TERT_TARGETS_DN	20	0.6627339	1.9621431	0	0.00183306	0.211
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_5	27	0.6094216	1.9610964	0	0.00184756	0.214
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_KRAS_DN	133	0.44048533	1.9604095	0	0.00187701	0.219
RODRIGUES_NTN1_TARGETS_DN	133	0.44381094	1.9582734	0	0.00195096	0.229
WORSCHER_TUMOR_REJECTION_UP	51	0.5376549	1.9569465	0	0.00197236	0.232
LEONARD_HYPOXIA	44	0.5458048	1.9551346	0	0.00199196	0.235
ZHOU_INFLAMMATORY_RESPONSE_LPS_UP	357	0.3918461	1.9556006	0	0.00199301	0.234
HORIUCHI_WTAP_TARGETS_UP	254	0.41330746	1.9539512	0	0.00204116	0.241
BURTON_ADIPOGENESIS_PEAK_AT_2HR	50	0.5373255	1.9507618	0	0.00215428	0.255
BANDRES_RESPONSE_TO_CARMUSTIN_MGMT_48HR_DN	153	0.44067907	1.9508591	0	0.00216352	0.255
SABATES_COLORECTAL_ADENOMA_UP	122	0.452054	1.9496477	0	0.00218137	0.257
ZHANG_PROLIFERATING_VS_QUIESCENT	48	0.53636044	1.9490502	0	0.00220046	0.261
KAMIKUBO_MYELOID_CEBPA_NETWORK	28	0.5972733	1.9457998	0	0.00227747	0.27

DELACROIX_RARG_BOUND_MEF	326	0.39684162	1.9452043	0	0.00229611	0.273
GEISS_RESPONSE_TO_DSRNA_UP	33	0.57845074	1.9430585	0	0.00231703	0.275
PATTERSON_DOCETAXEL_RESISTANCE	28	0.6103417	1.9433774	0	0.00231947	0.275
HAN_SATB1_TARGETS_DN	388	0.39028168	1.943468	0	0.00232917	0.275
AMIT_SERUM_RESPONSE_60_MCF10A	56	0.5166964	1.9425364	0	0.00233541	0.279
YAMASHITA_METHYLATED_IN_PROSTATE_CANCER	49	0.5318164	1.9411712	0	0.00236035	0.282
LEE_LIVER_CANCER_MYC_TGFA_UP	57	0.5121595	1.9404808	0	0.00237817	0.285
TRAYNOR_RETT_SYNDROM_UP	40	0.56881064	1.9400675	0	0.00238889	0.288
XU_HGF_TARGETS_INDUCED_BY_AKT1_6HR	19	0.6685791	1.9382788	0	0.00242057	0.293
MCBRYAN_PUBERTAL_TGFB1_TARGETS_UP	158	0.43294418	1.9343004	0	0.0025614	0.309
FERRARI_RESPONSE_TO_FENRETINIDE_UP	18	0.6789848	1.9332161	0	0.00256445	0.313
BASAKI_YBX1_TARGETS_DN	318	0.39925286	1.9336182	0	0.00257142	0.312
HELLER_SILENCED_BY_METHYLATION_UP	241	0.40882346	1.9321061	0	0.00259192	0.317
WEINMANN_ADAPTATION_TO_HYPOXIA_DN	37	0.5560344	1.9313772	0	0.00260199	0.32
BAELDE_DIABETIC_NEPHROPATHY_DN	406	0.38352677	1.9307029	0	0.00260801	0.322
BOQUEST_STEM_CELL_DN	196	0.41363665	1.9303021	0	0.00261133	0.323
TIEN_INTESTINE_PROBIOTICS_24HR_DN	195	0.41946998	1.9279506	0	0.00269587	0.337
KHETCHOUMIAN_TRIM24_TARGETS_UP	44	0.53764004	1.928077	0	0.00270015	0.336
MENSE_HYPOXIA_UP	81	0.4716533	1.9257642	0	0.00279331	0.352
FLECHNER_BIOPSY_KIDNEY_TRANSPLANT_REJECTED_VS_OK_UP	81	0.4712955	1.9221956	0	0.00294741	0.373
WALLACE_PROSTATE_CANCER_RACE_UP	254	0.4035075	1.9208827	0	0.00296382	0.377
DANG_REGULATED_BY_MYC_DN	232	0.40834054	1.9182451	0	0.00299477	0.387
PETROVA_PROX1_TARGETS_DN	62	0.49841514	1.9195247	0	0.00299799	0.384
SMID_BREAST_CANCER_RELAPSE_IN_BONE_DN	276	0.39595148	1.9184316	0	0.0029997	0.386
MEISSNER_NPC_HCP_WITH_H3K27ME3	71	0.4885445	1.9169586	0	0.00302728	0.39
SMIRNOV_CIRCULATING_ENDOTHELIOCYTES_IN_CANCER_UP	150	0.42742363	1.9129423	0	0.00311167	0.4
ODONNELL_TFRC_TARGETS_UP	352	0.38662443	1.9116625	0	0.00316399	0.405
LEE_LIVER_CANCER_E2F1_UP	57	0.5012397	1.9097416	0	0.00326478	0.416
NAKAMURA_METASTASIS_MODEL_DN	39	0.54612887	1.9088305	0	0.0032907	0.42
POTTI_ADRIAMYCIN_SENSITIVITY	73	0.48135382	1.9076846	0	0.0033097	0.424
GROSS_HYPOXIA_VIA_ELK3_AND_HIF1A_UP	131	0.43875644	1.9061816	0	0.00337375	0.431
HARRIS_HYPOXIA	77	0.47737557	1.9048309	0	0.00342361	0.437
BROWNE_HCMV_INFECTION_4HR_UP	50	0.5194882	1.9040031	0	0.00344186	0.44
ONDER_CDH1_SIGNALING_VIA_CTNNB1	78	0.46990636	1.9009652	0	0.00357048	0.452
RIGGINS_TAMOXIFEN_RESISTANCE_DN	203	0.40754256	1.8986264	0	0.00366806	0.461
VANDESLUIS_COMMD1_TARGETS_GROUP_3_UP	81	0.4629367	1.8981285	0	0.00367932	0.463
SWEET_KRAS_TARGETS_UP	73	0.4778792	1.893543	0	0.00384181	0.484
KIM_WT1_TARGETS_UP	196	0.40910417	1.8921056	0	0.00389881	0.495
SWEET_LUNG_CANCER_KRAS_UP	436	0.37611434	1.886469	0	0.00415874	0.511
FALVELLA_SMOKERS_WITH_LUNG_CANCER	68	0.47959784	1.8853436	0	0.00422717	0.52
WOO_LIVER_CANCER_RECURRENCE_UP	95	0.45532373	1.8837088	0	0.00427768	0.525
TURASHVILI_BREAST_DUCTAL_CARCINOMA_VS_DUCTAL_NORMAL_DN	171	0.41613138	1.8825046	0	0.00432747	0.53
BAE_BRCA1_TARGETS_UP	69	0.47948995	1.8819568	0	0.00434786	0.533
SESTO_RESPONSE_TO_UV_C1	63	0.49012515	1.880746	0	0.00438627	0.538
ONDER_CDH1_TARGETS_1_UP	120	0.4359501	1.8790674	0	0.00443853	0.545
LIM_MAMMARY_LUMINAL_PROGENITOR_UP	54	0.49863148	1.8776418	0	0.0044934	0.549
KIM_WT1_TARGETS_12HR_UP	150	0.4253584	1.8769075	0	0.00451835	0.55
LAIHO_COLORECTAL_CANCER_SERRATED_UP	99	0.4488743	1.8759574	0	0.00456703	0.556
CONCANNON_APOPTOSIS_BY_EPOXOMICIN_UP	214	0.40255952	1.8740681	0	0.00465707	0.568
ISSAEVA_MLL2_TARGETS	53	0.5040147	1.8742864	0	0.00467285	0.568
LIAN_LIPA_TARGETS_6M	65	0.48969096	1.8725555	0	0.00474077	0.573
MIKKELSEN_ES_LCP_WITH_H3K4ME3	104	0.45119813	1.8719605	0	0.00474206	0.574
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_10D_DN	128	0.4282269	1.8706425	0	0.00479493	0.582
CHEOK_RESPONSE_TO_HD_MTX_UP	17	0.66367865	1.8688164	0	0.00483892	0.595
MCLACHLAN_DENTAL_CARIES_DN	212	0.40461177	1.8694316	0	0.00484177	0.591
DUNNE_TARGETS_OF_AML1_MTG8_FUSION_UP	44	0.5238567	1.8688883	0	0.00484927	0.594
SENGUPTA_EBNA1_ANTICORRELATED	130	0.4277105	1.8679991	0	0.00485206	0.597
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_6	69	0.485492	1.8696663	0	0.00485785	0.591
ENGELMANN_CANCER_PROGENITORS_UP	43	0.52351934	1.8664061	0	0.00490793	0.6
ONDER_CDH1_TARGETS_3_DN	53	0.5033523	1.865228	0	0.00495217	0.602
WIERENGA_STAT5A_TARGETS_UP	194	0.40574744	1.8650227	0	0.00495253	0.602
DAUER_STAT3_TARGETS_UP	48	0.51795954	1.8644278	0	0.0049645	0.606
LEE_AGING_CEREBELLUM_UP	79	0.4601765	1.860666	0	0.00515562	0.629
SWEET_KRAS_ONCOGENIC_SIGNATURE	84	0.4560225	1.8588103	0	0.00519777	0.634
MOHANKUMAR_TLX1_TARGETS_DN	148	0.4163774	1.8590572	0	0.00519852	0.633
CREIGHTON_ENDOCRINE_THERAPY_RESISTANCE_5	415	0.37207228	1.8591255	0	0.00521508	0.633
CORRE_MULTIPLE_MYELOMA_UP	61	0.4836337	1.855092	0	0.00544888	0.651
WILSON_PROTEASES_AT_TUMOR_BONE_INTERFACE_UP	20	0.6288986	1.8518226	0	0.00558562	0.663
MCBRYAN_PUBERTAL_BREAST_3_4WK_UP	198	0.39569753	1.8507646	0	0.00564785	0.666
KARLSSON_TGFB1_TARGETS_DN	181	0.40061003	1.8478891	0	0.00583827	0.68
MCBRYAN_PUBERTAL_TGFB1_TARGETS_DN	59	0.48706684	1.8422779	0	0.00620233	0.696
DIRMEIER_LMP1_RESPONSE_LATE_UP	53	0.49730232	1.8425359	0	0.00621598	0.696
LU_EZH2_TARGETS_UP	218	0.3945471	1.8397058	0	0.00637101	0.705
CHIBA_RESPONSE_TO_TSA_UP	48	0.50004286	1.8390446	0	0.00637367	0.707
BROWNE_HCMV_INFECTION_24HR_DN	142	0.413954	1.8334737	0	0.00664144	0.729
NELSON_RESPONSE_TO_ANDROGEN_UP	79	0.4501096	1.83209	0	0.00667262	0.732
HOSHIDA_LIVER_CANCER_SUBCLASS_S1	214	0.39476246	1.8279074	0	0.00688823	0.748
WANG_SMARCE1_TARGETS_UP	257	0.3835885	1.828318	0	0.00688834	0.745
VILIMAS_NOTCH1_TARGETS_UP	48	0.49899793	1.8261824	0	0.00698754	0.756

DORN_ADENOVIRUS_INFECTION_32HR_DN	35	0.5377247	1.8262174	0	0.0070081	0.756
WANG_CLIM2_TARGETS_DN	155	0.41110462	1.825248	0	0.00705749	0.761
PASQUALUCCI_LYMPHOMA_BY_GC_STAGE_UP	249	0.3835043	1.8233693	0	0.00714554	0.77
WILCOX_PRESPONSE_TO_ROGESTERONE_DN	52	0.49206	1.8200248	0	0.00731417	0.782
LIAN_LIPA_TARGETS_3M	51	0.489297	1.8201004	0	0.00732995	0.782
LEE_EARLY_T_LYMPHOCYTE_DN	48	0.5023487	1.8175197	0	0.00749278	0.79
MEISSNER_NPC_HCP_WITH_H3K4ME3_AND_H3K27ME3	130	0.4119506	1.8140593	0	0.00775371	0.795
AMIT_EGF_RESPONSE_60_HELA	40	0.52281344	1.8111515	0	0.00789522	0.805
RICKMAN_TUMOR_DIFFERENTIATED_WELL_VS_MODERATELY_DN	102	0.43695045	1.8120636	0	0.00790151	0.804
HUANG_GATA2_TARGETS_UP	132	0.41667715	1.8112808	0	0.00790783	0.805
MARTINEZ_RESPONSE_TO TRABECTEDIN_UP	60	0.4730671	1.8084131	0	0.00812428	0.818
EBAUER_MYOGENIC_TARGETS_OF_PAX3_FOXO1_FUSION	47	0.49972138	1.806866	0	0.00821578	0.822
MARTORIATI_MDM4_TARGETS_NEUROEPITHELIUM_UP	149	0.39937517	1.8054127	0	0.00829686	0.825
WIERENGA_STAT5A_TARGETS_GROUP1	123	0.41710427	1.8047476	0	0.0083297	0.827
BIDUS_METASTASIS_DN	138	0.40918615	1.803015	0	0.00838301	0.834
SCHRAETS_MLL_TARGETS_DN	31	0.54147947	1.8015984	0	0.00839762	0.838
RUTELLA_RESPONSE_TO_CSF2RB_AND_IL4_DN	279	0.37401628	1.8036634	0	0.00840569	0.833
CROONQUIST_STROMAL_STIMULATION_UP	55	0.4751879	1.8016548	0	0.0084205	0.838
ZWANG_CLASS_1_TRANSIENTLY_INDUCED_BY_EGF	448	0.35772514	1.8037784	0	0.00842891	0.833
ABE_INNER_EAR	42	0.50670695	1.8009855	0	0.00843079	0.838
TSUNODA_CISPLATIN_RESISTANCE_DN	43	0.51538944	1.800096	0	0.00847702	0.838
UDAYAKUMAR_MED1_TARGETS_DN	213	0.3852352	1.7958953	0	0.00882928	0.849
LABBE_TARGETS_OF_TGFB1_AND_WNT3A_DN	101	0.42347392	1.7908126	0	0.00924265	0.863
BERENJENO_ROCK_SIGNALING_NOT_VIA_RHOA_DN	46	0.49732763	1.7910091	0	0.00925375	0.863
CLASPER_LYMPHATIC_VESSELS_DURING_METASTASIS_DN	33	0.5426584	1.7901481	0	0.00930439	0.869
CHARAFE_BREAST_CANCER_LUMINAL_VS_MESENCHYMAL_UP	389	0.3542514	1.7847431	0	0.00981496	0.883
RUTELLA_RESPONSE_TO_HGF_VS_CSF2RB_AND_IL4_UP	369	0.36339152	1.7815108	0	0.01012463	0.893
BROCKE_APOPTOSIS_REVERSED_BY_IL6	135	0.40581033	1.7773131	0	0.01050039	0.906
NATSUME_RESPONSE_TO_INTERFERON_BETA_UP	66	0.45853928	1.7757518	0	0.01059939	0.907
CHEN_LVAD_SUPPORT_OF_FAILING_HEART_UP	96	0.41305226	1.7690454	0	0.01124486	0.921
GAUSSMANN_MLL_AF4_FUSION_TARGETS_F_UP	173	0.3885792	1.7669854	0	0.01144622	0.928
BOYLAN_MULTIPLE_MYELOMA_C_D_DN	234	0.36956382	1.7661303	0	0.01150837	0.93
VERHAAC_AML_WITH_NPM1_MUTATED_UP	166	0.39633456	1.7639775	0	0.01169132	0.936
NIKOLSKY_BREAST_CANCER_11Q12_Q14_AMPLICON	129	0.40658054	1.7640764	0	0.01171252	0.936
MIKKELSEN_NPC_HCP_WITH_H3K27ME3	300	0.36178172	1.7611626	0	0.01197706	0.942
STAMBOLSKY_RESPONSE_TO_VITAMIN_D3_UP	71	0.46000186	1.758883	0	0.01216765	0.945
BOQUEST_STEM_CELL_CULTURED_VS_FRESH_UP	392	0.3545896	1.7590287	0	0.01218978	0.945
FOSTER_TOLERANT_MACROPHAGE_UP	141	0.3992228	1.7568448	0	0.01230138	0.946
FUJII_YBX1_TARGETS_UP	41	0.49437985	1.7547246	0	0.01247678	0.948
BLUM_RESPONSE_TO_SALIRASIB_UP	228	0.36681968	1.7456608	0	0.01338591	0.959
CROONQUIST_NRAS_SIGNALING_UP	33	0.511055	1.7448688	0	0.01343195	0.961
COULOUARN_TEMPORAL_TGFB1_SIGNATURE_UP	99	0.42298663	1.7450314	0	0.01343566	0.96
KATSANOUE_ELAVL1_TARGETS_UP	146	0.39678466	1.744048	0	0.01355574	0.963
LABBE_TGFB1_TARGETS_UP	94	0.42070785	1.7429324	0	0.01361878	0.965
DAZARD_RESPONSE_TO_UV_NHEK_UP	206	0.37751952	1.7412353	0	0.01381942	0.966
VERHAAC_AML_WITH_NPM1_MUTATED_DN	227	0.3701422	1.7364086	0	0.01420399	0.968
PEDRIOLI_MIR31_TARGETS_DN	352	0.3526977	1.7364798	0	0.01422988	0.968
HEIDENBLAD_AMPLICON_8Q24_DN	40	0.50047874	1.7349606	0	0.01432732	0.97
DIAZ_CHRONIC_MEYLOGENOUS_LEUKEMIA_DN	107	0.408336	1.7339389	0	0.01443986	0.97
NING_CHRONIC_OBSTRUCTIVE_PULMONARY_DISEASE_DN	112	0.400728	1.7341111	0	0.01446203	0.97
SENESE_HDAC3_TARGETS_UP	439	0.34426832	1.7336063	0	0.01446621	0.971
MEISSNER_NPC_HCP_WITH_H3K4ME2_AND_H3K27ME3	303	0.35739788	1.732079	0	0.01464909	0.973
ZHONG_SECRETOME_OF_LUNG_CANCER_AND_MACROPHAGE	72	0.4355154	1.7298415	0	0.01482015	0.98
RUTELLA_RESPONSE_TO_HGF_DN	204	0.36987013	1.7304387	0	0.01482108	0.978
MEISSNER_NPC_HCP_WITH_H3_UNMETHYLATED	452	0.34448442	1.7262833	0	0.01524366	0.982
ICHIBA_GRAFT_VERSUS_HOST_DISEASE_35D_UP	113	0.40540412	1.7200017	0	0.01596978	0.989
ACOSTA_PROLIFERATION_INDEPENDENT_MYC_TARGETS_DN	100	0.40801206	1.7192624	0	0.01599069	0.989
GU_PDEF_TARGETS_UP	70	0.43358868	1.7183176	0	0.016072	0.99
BURTON_ADIPOGENESIS_2	62	0.44795623	1.7173594	0	0.01612157	0.991
LEE_AGING_NEOCORTEX_UP	84	0.42493168	1.7176206	0	0.01612398	0.99
WAMUNYOKOLI_OVARIAN_CANCER_LMP_UP	229	0.36673793	1.715005	0	0.01652337	0.991
NATSUME_RESPONSE_TO_INTERFERON_BETA_DN	46	0.47251445	1.7099653	0	0.0172904	0.993
SENESE_HDAC1_AND_HDAC2_TARGETS_UP	217	0.36374527	1.7079241	0	0.01744516	0.993
CASORELLI_ACUTE_PROMYELOCYTIC_LEUKEMIA_UP	149	0.3914873	1.7071441	0	0.01752673	0.993
WIELAND_UP_BY_HBV_INFECTION	89	0.41870457	1.7060616	0	0.01762449	0.993
QI_HYPOXIA	123	0.39303768	1.7061123	0	0.0176479	0.993
SWEET_KRAS_TARGETS_DN	58	0.44878495	1.7030373	0	0.01795222	0.993
HESS_TARGETS_OF_HOXA9_AND_MEIS1_DN	70	0.43701994	1.7031087	0	0.01798405	0.993
SUNG_METASTASIS_STROMA_UP	98	0.40948343	1.7026013	0	0.01799048	0.993
KUMAR_TARGETS_OF_MLL_AF9_FUSION	361	0.3411685	1.702023	0	0.0180222	0.993
ZHONG_SECRETOME_OF_LUNG_CANCER_AND_FIBROBLAST	121	0.39000908	1.7008383	0	0.01821489	0.993
ZHU_CMV_ALL_UP	109	0.40461668	1.6991824	0	0.01831944	0.993
GERY_CEBP_TARGETS	113	0.39903197	1.6961608	0	0.01863526	0.994
KONDO_EZH2_TARGETS	207	0.3684483	1.6962242	0	0.01866764	0.994
LENAOUR_DENDRITIC_CELL_MATURATION_DN	124	0.3878657	1.6933943	0	0.01896456	0.994
GHANDHI_DIRECT_IRRADIATION_UP	94	0.41242734	1.6918293	0	0.01912854	0.994
MIKKELSEN_MCV6_ICP_WITH_H3K27ME3	65	0.4374177	1.6910982	0	0.019228	0.994
MIKKELSEN_ES_ICP_WITH_H3K4ME3_AND_H3K27ME3	122	0.38881496	1.6889384	0	0.01949886	0.995
TORCHIA_TARGETS_OF_EWSR1_FLI1_FUSION_UP	241	0.35678765	1.6873436	0	0.01975085	0.996

ENK_UV_RESPONSE_EPIDERMIS_DN	469	0.33589035	1.6840824	0	0.02022261	0.996
MARKEY_RB1_CHRONIC_LOF_DN	108	0.40186167	1.6812087	0	0.02054934	0.996
MIYAGAWA_TARGETS_OF_EWSR1_ETS_FUSIONS_UP	226	0.3556381	1.6741192	0	0.02164413	0.998
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_8D_DN	187	0.3616213	1.67432	0	0.02169793	0.997
DURCHDEWALD_SKIN_CARCIANOGENESIS_DN	245	0.35379696	1.6720101	0	0.02197555	0.998
VART_KSHV_INFECTION_ANGIOGENIC_MARKERS_UP	151	0.3710514	1.6712725	0	0.02202626	0.998
PICCALUGA_ANGIOIMMUNOBLASTIC_LYMPHOMA_DN	120	0.39231434	1.671282	0	0.02206731	0.998
HOELZEL_NF1_TARGETS_UP	126	0.383458	1.6693604	0	0.02236973	0.998
SCHUETZ_BREAST_CANCER_DUCTAL_INVASIVE_UP	320	0.3400888	1.6672173	0	0.02272532	0.998
PECE_MAMMARY_STEM_CELL_DN	120	0.38736615	1.6623807	0	0.02347607	0.999
KIM_WT1_TARGETS_8HR_UP	152	0.37567356	1.6621234	0	0.02347609	0.999
LENAOUR_DENDRITIC_CELL_MATURATION_UP	105	0.390471	1.6610556	0	0.02353573	0.999
ACEVEDO_FGFR1_TARGETS_IN_PROSTATE_CANCER_MODEL_UP	263	0.3457843	1.6587327	0	0.02382754	0.999
HAN_SATB1_TARGETS_UP	340	0.33585453	1.6581388	0	0.02391064	0.999
DEBIASI_APOPTOSIS_BY_REOVIRUS_INFECTION_UP	277	0.3422986	1.6553946	0	0.02422382	0.999
RUTELLA_RESPONSE_TO_HGF_UP	382	0.33192307	1.6554034	0	0.02426701	0.999
RICKMAN_HEAD_AND_NECK_CANCER_E	79	0.40668184	1.6445243	0	0.02590236	1
GAUSSMANN_MLL_AF4_FUSION_TARGETS_E_UP	87	0.39751437	1.6439378	0	0.02597861	1
RUAN_RESPONSE_TO_TNF_DN	80	0.4042631	1.6402824	0	0.02650894	1
CHIANG_LIVER_CANCER_SUBCLASS_CTNNB1_DN	158	0.36362544	1.639457	0	0.02659475	1
RHEIN_ALL_GLUCCORTICOID_THERAPY_UP	72	0.41563064	1.6394606	0	0.0266441	1
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_4	97	0.38772923	1.6382998	0	0.02677	1
ZHONG_RESPONSE_TO_AZACITIDINE_AND_TSA_UP	162	0.3619389	1.6371353	0	0.02703486	1
MOREAUX_B_LYMPHOCYTE_MATURATION_BY_TACI_UP	74	0.40950876	1.6349344	0	0.02726741	1
JIANG_HYPOXIA_NORMAL	270	0.3389636	1.6306338	0	0.02805112	1
BROWNE_HCMV_INFECTION_6HR_UP	64	0.4221425	1.6299689	0	0.02812063	1
CERVERA_SDHB_TARGETS_2	101	0.39036307	1.627389	0	0.02851321	1
ZHU_CMV_ALL_DN	123	0.3782635	1.6259552	0	0.02877075	1
GRAESSMANN_APOPTOSIS_BY_SERUM_DEPRIVATION_UP	475	0.3203645	1.6244421	0	0.02910822	1
ZWANG_EGF_INTERVAL_DN	177	0.35575894	1.6204423	0	0.02986994	1
SHAFFER_IRF4_TARGETS_IN_PLASMA_CELL_VS_MATURE_B_LYMPHOCYTE	63	0.42187196	1.6206051	0	0.02990989	1
YAO_HOXA10_TARGETS_VIA_PROGESTERONE_UP	67	0.4087277	1.6199063	0	0.02994358	1
SCHAEFFER_PROSTATE_DEVELOPMENT_48HR_UP	433	0.32402295	1.616494	0	0.03052244	1
ZHOU_TNF_SIGNALING_4HR	51	0.4421735	1.6124684	0	0.03146386	1
RAY_TUMORIGENESIS_BY_ERBB2_CDC25A_DN	142	0.36350578	1.6070702	0	0.03247906	1
FULCHER_INFLAMMATORY_RESPONSE_LECTIN_VS_LPS_UP	496	0.31215858	1.6072798	0	0.03248172	1
GERHOLD_ADIPOGENESIS_DN	59	0.4159782	1.6074452	0	0.03250581	1
GRUETZMANN_PANCREATIC_CANCER_UP	332	0.32664305	1.6061885	0	0.0325524	1
HUTTMANN_B_CLL_POOR_SURVIVAL_UP	239	0.33638784	1.6062702	0	0.03257632	1
LINDVALL_IMMORTALIZED_BY_TERT_DN	66	0.40155032	1.6005034	0	0.03359279	1
SENESE_HDAC1_AND_HDAC2_TARGETS_DN	199	0.3492454	1.6009575	0	0.03366973	1
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_MONOCYTE_UP	180	0.34800458	1.597334	0	0.03392399	1
CAIRO_HEPATOBLASTOMA_CLASSES_DN	196	0.34864664	1.5915315	0	0.03504435	1
KAYO_CALORIE_RESTRICTION_MUSCLE_UP	88	0.3903771	1.5893768	0	0.03545127	1
ENK_UV_RESPONSE_EPIDERMIS_UP	262	0.33350816	1.5888791	0	0.03552435	1
MEISSNER_NPC_HCP_WITH_H3K4ME2	429	0.31829154	1.5839423	0	0.03646073	1
LIU_PROSTATE_CANCER_DN	424	0.3148048	1.5827706	0	0.03677563	1
LIM_MAMMARY_STEM_CELL_UP	435	0.31501776	1.5800158	0	0.037309	1
MIKKELSEN_MEF_LCP_WITH_H3K4ME3	105	0.37916324	1.5789398	0	0.03748539	1
SENGUPTA_NASOPHARYNGEAL_CARCINOMA_DN	270	0.3327119	1.5783398	0	0.03761594	1
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_16D_DN	122	0.36636618	1.5748862	0	0.03831507	1
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_HSC_DN	170	0.34748602	1.5710132	0	0.03925678	1
SANSOM_APC_TARGETS_DN	329	0.3173438	1.5666888	0	0.04027872	1
BERENJENO_TRANSFORMED_BY_RHOA_DN	354	0.3176327	1.5643985	0	0.04089133	1
QI_PLASMACYTOMA_UP	242	0.3284234	1.5633827	0	0.04117962	1
PEREZ_TP63_TARGETS	303	0.32296106	1.5618926	0	0.04164497	1
ZHOU_INFLAMMATORY_RESPONSE_LIVE_UP	403	0.31484926	1.5603534	0	0.04214526	1
FOSTER_KDM1A_TARGETS_UP	236	0.32885975	1.5574085	0	0.04274475	1
NING_CHRONIC_OBSTRUCTIVE_PULMONARY_DISEASE_UP	139	0.3574384	1.5571095	0	0.04278547	1
RUTELLA_RESPONSE_TO_CSF2RB_AND_IL4_UP	307	0.3195202	1.5559142	0	0.0430443	1
LINDGREN_BLADDER_CANCER_CLUSTER_2B	345	0.31662372	1.5549818	0	0.04322128	1
LEE_NEURAL_CRESCENT_STEM_CELL_UP	135	0.3539775	1.5532125	0	0.04364141	1
LI_WILMS_TUMOR_VS_FETAL_KIDNEY_1_UP	168	0.34608632	1.5514624	0	0.04413613	1
BROWNE_HCMV_INFECTION_18HR_DN	161	0.34564328	1.5472512	0	0.04514827	1
GARY_CD5_TARGETS_UP	424	0.30382353	1.5394648	0	0.04721205	1
KOYAMA_SEMA3B_TARGETS_UP	238	0.32435322	1.5369538	0	0.04770203	1
ZHOU_INFLAMMATORY_RESPONSE_FIMA_UP	439	0.30264053	1.5327146	0	0.04889934	1
MITSIANES_RESPONSE_TO_APLIDIN_UP	380	0.30802134	1.5319983	0	0.04906492	1
UEDA_PERIPHERAL_CLOCK	156	0.34465712	1.522136	0	0.05214192	1
ZHU_CMV_24_HR_DN	87	0.36707145	1.5194191	0	0.05255199	1
FOSTER_TOLERANT_MACROPHAGE_DN	375	0.30604082	1.5030909	0	0.05753301	1
SHEDDEN_LUNG_CANCER_GOOD_SURVIVAL_A12	258	0.31710315	1.4974717	0	0.05959015	1
SENESE_HDAC1_TARGETS_DN	208	0.32563844	1.4972663	0	0.05959025	1
RUTELLA_RESPONSE_TO_HGF_VS_CSF2RB_AND_IL4_DN	217	0.31705254	1.4966736	0	0.05977111	1
DURAND_STROMA_MAX_UP	269	0.3133287	1.495736	0	0.06002541	1
MIYAGAWA_TARGETS_OF_EWSR1_ETS_FUSIONS_DN	200	0.32162693	1.4946029	0	0.06038577	1
JAATINEN_HEMATOPOIETIC_STEM_CELL_DN	202	0.32081395	1.4915559	0	0.06113517	1
LIM_MAMMARY_STEM_CELL_DN	377	0.29909787	1.489268	0	0.06193389	1
MILI_PSEUDOPODIA_CHEMOTAXIS_DN	421	0.29971227	1.4852859	0	0.06353755	1

KRIEG_KDM3A_TARGETS_NOT_HYPOXIA	155	0.3326714	1.4840941	0	0.06403522	1
MOREAUX_MULTIPLE_MYELOMA_BY_TACI_UP	358	0.30109495	1.4804544	0	0.06529552	1
OSWALD_HEMATOPOIETIC_STEM_CELL_IN_COLLAGEN_GEL_UP	216	0.31453362	1.4732555	0	0.06803384	1
CAIRO_LIVER_DEVELOPMENT_DN	211	0.31968856	1.4692752	0	0.06959318	1
DOUGLAS_BMI1_TARGETS_DN	282	0.30509117	1.4583634	0	0.07349034	1
HELLER_HDAC_TARGETS_SILENCED_BY_METHYLATION_UP	398	0.2913915	1.4468652	0	0.07834723	1
HELLER_HDAC_TARGETS_UP	269	0.2934797	1.4105806	0	0.09463813	1
BRUINS_UVC_RESPONSE_VIA_TP53_GROUP_B	477	0.27393216	1.397331	0	0.10035459	1
CHYLA_CBFA2T3_TARGETS_UP	335	0.27930957	1.3823569	0	0.10936227	1
SMID_BREAST_CANCER_NORMAL_LIKE_UP	416	0.26890048	1.3534995	0	0.12531014	1
MARTINEZ_RB1_TARGETS_DN	486	0.26011539	1.3044708	0	0.15826248	1
BROWNE_HCMV_INFECTION_48HR_DN	457	0.25483757	1.2833189	0	0.17489946	1
RASHI_NFKB1_TARGETS	17	0.6961831	1.9806641	0.00210526	0.00154965	0.172
LEE_LIVER_CANCER_HEPATOBlast	16	0.68868965	1.9332163	0.00210526	0.00257475	0.313
XU_RESPONSE_TO_TRETINOIN_AND_NSC682994_UP	16	0.6808944	1.920886	0.0021645	0.00297513	0.377
GILDEA_METASTASIS	26	0.58170795	1.8382398	0.00218818	0.00636725	0.71
VARELA_ZMPSTE24_TARGETS_UP	33	0.57636666	1.912627	0.00220264	0.00311904	0.402
ZIRN_TRETINOIN_RESPONSE_WT1_UP	21	0.57083845	1.7054311	0.00220264	0.01768261	0.993
HERNANDEZ_ABERRANT_MITOSIS_BY_DOCETACEL_4NM_UP	21	0.654663	1.9311928	0.00224215	0.00259175	0.32
DORN_ADENOVIRUS_INFECTION_12HR_UP	27	0.6045822	1.9329932	0.00224719	0.00256782	0.314
SEITZ_NEOPLASTIC_TRANSFORMATION_BY_8P_DELETION_DN	30	0.548792	1.7926699	0.00225734	0.00908712	0.857
ROZANOV_MMP14_TARGETS_SUBSET	32	0.5461749	1.847512	0.00226244	0.00586204	0.681
KANG_CISPLATIN_RESISTANCE_UP	16	0.64877445	1.8354868	0.0022779	0.00651233	0.72
DAZARD_UV_RESPONSE_CLUSTER_G24	23	0.6048751	1.9272552	0.00229358	0.00270485	0.34
VALK_AML_CLUSTER_11	35	0.53942955	1.8502122	0.00229885	0.00566767	0.667
NOJIMA_SFRP2_TARGETS_UP	28	0.5842745	1.8630873	0.00230947	0.00500377	0.612
LUI_THYROID_CANCER_PAX8_PPARG_DN	40	0.4946696	1.7219132	0.00231482	0.01577026	0.986
GENTILE_UV_HIGH_DOSE_UP	21	0.6251432	1.8792564	0.00233645	0.00444204	0.544
LUI_TARGETS_OF_PAX8_PPARG_FUSION	28	0.55019534	1.7469866	0.00233645	0.01328535	0.959
HAHTOLA_MYCOSIS_FUNGOIDES_UP	17	0.6551306	1.8309897	0.00234192	0.00672315	0.734
NAKAMURA_ADIPOGENESIS_LATE_DN	35	0.51603884	1.7623324	0.00234742	0.01183007	0.941
DELACROIX_RAR_TARGETS_UP	42	0.53896856	1.9721514	0.00235849	0.00165712	0.191
UZONYI_RESPONSE_TO_LEUKOTRIENE_AND_THROMBIN	33	0.54128873	1.8194107	0.00235849	0.00733131	0.784
CHO_NR4A1_TARGETS	31	0.5352316	1.7412325	0.0023753	0.0137862	0.966
HUI_MAPK14_TARGETS_UP	19	0.58450085	1.6828735	0.0023753	0.02038493	0.996
WANG_TNF_TARGETS	23	0.5938958	1.8388987	0.00239234	0.00636471	0.707
KASLER_HDAC7_TARGETS_2_DN	30	0.5793943	1.8885745	0.00239808	0.00402243	0.502
FARDIN_HYPOXIA_11	26	0.5894049	1.8681917	0.00241546	0.00486792	0.597
DOANE_BREAST_CANCER_ESR1_DN	46	0.45957994	1.6751448	0.00243309	0.02168146	0.997
MCDOWELL_ACUTE_LUNG_INJURY_UP	43	0.48378113	1.7281326	0.00245098	0.01500677	0.981
BOYALT_LIVER_CANCER_SUBCLASS_G56_DN	16	0.6044683	1.7033436	0.00245098	0.01799316	0.993
VALK_AML_CLUSTER_9	34	0.56344706	1.8926257	0.002457	0.00387067	0.488
COLIN_PILOCYTIC_ASTROCYTOMA_VS_GLIOMASTOMA_DN	27	0.5570669	1.7812874	0.002457	0.01012049	0.895
ZHU_CMV_8_HR_DN	51	0.46101633	1.6860988	0.00248139	0.01989729	0.996
KANG_GIST_WITH_PDGFRB_UP	48	0.4710455	1.6659584	0.00248139	0.02289893	0.998
DIRMEIER_LMP1_RESPONSE_LATE_DN	30	0.51557565	1.7206028	0.00248756	0.01592456	0.987
MEISSNER_BRAIN_HCP_WITH_H3K4ME2_AND_H3K27ME3	54	0.44986206	1.6617942	0.00248756	0.02343747	0.999
SESTO_RESPONSE_TO_UV_C2	49	0.4734863	1.7482984	0.00250627	0.01318875	0.956
HERNANDEZ_MITOTIC_ARREST_BY_DOCETAXEL_2_UP	56	0.44519353	1.6965688	0.00250627	0.01867082	0.994
GEORGANTAS_HSC_MARKERS	61	0.43038425	1.645132	0.00253165	0.02582572	0.999
AMIT_EGF_RESPONSE_120_MCF10A	35	0.48625267	1.6283728	0.00253807	0.02833679	1
WANG_METHYLATED_IN_BREAST_CANCER	35	0.5042112	1.7270414	0.00254453	0.01514537	0.981
RAGHAVACHARI_PLATELET_SPECIFIC_GENES	67	0.4155925	1.6355697	0.00254453	0.02728648	1
CROMER_METASTASIS_DN	72	0.43939114	1.7438474	0.00255755	0.01353934	0.963
LEE_LIVER_CANCER_CIPROFIBRATE_UP	54	0.46185583	1.7379586	0.00255755	0.01406472	0.968
HALMOS_CEBPA_TARGETS_DN	43	0.49917626	1.8029557	0.00260417	0.00836465	0.834
ZHAN_MULTIPLE_MYELOMA_CD1_VS_CD2_DN	49	0.4718516	1.7382352	0.00260417	0.01403335	0.968
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_0	64	0.46325883	1.7933251	0.00261097	0.00904727	0.854
KRIEG_HYPOXIA_VIA_KDM3A	47	0.4920876	1.7950591	0.00262467	0.00889275	0.851
ZHENG_IL22_SIGNALING_UP	49	0.4601948	1.6620378	0.00262467	0.02344669	0.999
ZHENG_GLIOMASTOMA_PLASTICITY_DN	54	0.43588656	1.6407257	0.00262467	0.02642133	1
JI_RESPONSE_TO_FSH_UP	66	0.40303507	1.5695239	0.00262467	0.03958058	1
SMIRNOV_RESPONSE_TO_IR_2HR_UP	46	0.49313045	1.7858372	0.00263158	0.00971951	0.88
STEARMAN_TUMOR_FIELD_EFFECT_UP	32	0.5057143	1.693882	0.00263852	0.01892922	0.994
QUELLET_CULTURED_OVARIAN_CANCER_INVASIVE_VS_LMP_DN	30	0.5510112	1.8392304	0.00265252	0.0063829	0.707
RICKMAN_TUMOR_DIFFERENTIATED_MODERATELY_VS_POORLY_UP	102	0.37383044	1.5548549	0.00266667	0.04321241	1
NAKAYAMA_FRA2_TARGETS	41	0.51432425	1.8203808	0.00268097	0.00732126	0.781
KUNINGER_IGF1_VS_PDGFRB_TARGETS_UP	76	0.4195396	1.6518294	0.00268097	0.02466014	0.999
ZHU_CMV_24_HR_UP	84	0.4201531	1.6949698	0.0027027	0.0187822	0.994
BURTON_ADIPOGENESIS_9	85	0.40129122	1.6307496	0.00271739	0.02810938	1
MORI_LARGE_PRE_BII_LYMPHOCYTE_DN	53	0.4813785	1.8033739	0.00273224	0.00839675	0.834
DELASERNA_MYOD_TARGETS_UP	85	0.39395538	1.5940068	0.00273224	0.03453025	1
SCHUETZ_BREAST_CANCER_DUCTAL_INVASIVE_DN	80	0.4054865	1.6607764	0.00273973	0.02355956	0.999
LINDSTEDT_DENDRITIC_CELL_MATURATION_B	48	0.49048817	1.7718937	0.00274725	0.01096764	0.915
KIM_GLI2_TARGETS_UP	80	0.40157315	1.6306696	0.00276243	0.02809254	1
MIKKELSEN_MEF_LCP_WITH_H3K27ME3	56	0.43635285	1.6646	0.0027933	0.02311044	0.999
NGUYEN_NOTCH1_TARGETS_DN	82	0.37502337	1.5285156	0.00280112	0.05011533	1
LIEN_BREAST_CARCINOMA_METAPLASTIC_VS_DUCTAL_UP	79	0.40459284	1.5985719	0.0028169	0.03367865	1
BHAT_ESR1_TARGETS_NOT_VIA_AKT1_DN	80	0.4485892	1.7896016	0.00287356	0.00935553	0.872

MIKKELSEN_IPS_ICP_WITH_H3K4ME3_AND_H327ME3	111	0.4009055	1.7299445	0.00288184	0.01485058	0.98
WANG_HCP_PROSTATE_CANCER	102	0.4002188	1.675088	0.00290698	0.0216441	0.997
HINATA_NFKB_TARGETS_FIBROBLAST_UP	77	0.38010246	1.5213302	0.00291545	0.05223592	1
MAHAJAN_RESPONSE_TO_IL1A_UP	72	0.40294257	1.5895857	0.00292398	0.03546469	1
SERVITJA_ISLET_HNF1A_TARGETS_UP	153	0.3553789	1.598584	0.00293255	0.03373264	1
LIM_MAMMARY_LUMINAL_MATURE_DN	89	0.37810376	1.545219	0.00294985	0.04564249	1
SAFFORD_T_LYMPHOCYTE_AENERGY	84	0.38938767	1.5990137	0.00298508	0.03366126	1
LABBE_TARGETS_OF_TGFB1_AND_WNT3A_UP	105	0.35910422	1.4933847	0.00299401	0.0606748	1
RODRIGUES_DCC_TARGETS_DN	114	0.3777801	1.6034492	0.00301205	0.03311787	1
POTTI_TOPOTECAN_SENSITIVITY	119	0.35737535	1.5433459	0.00301205	0.04620435	1
NIKOLSKY_BREAST_CANCER_20Q12_Q13_AMPLICON	118	0.33949992	1.4571301	0.00301205	0.07384767	1
LIM_MAMMARY_LUMINAL_MATURE_UP	98	0.3931625	1.6354399	0.00304878	0.0272083	1
KAN_RESPONSE_TO_ARSENIC_TRIOXIDE	116	0.34963968	1.5152699	0.00311527	0.05376092	1
IGLESIAS_E2F_TARGETS_UP	138	0.31911263	1.4123497	0.00320513	0.09379222	1
SMIRNOV_RESPONSE_TO_IR_6HR_UP	140	0.33591095	1.5049561	0.00321543	0.05703208	1
PICCALUGA_ANGIOIMMUNOBLASTIC_LYMPHOMA_UP	189	0.31618768	1.4515693	0.00324675	0.07642504	1
LANDIS_ERBB2_BREAST_TUMORS_324_DN	138	0.32164887	1.4030002	0.00327869	0.09805448	1
DAVICIONI_MOLECULAR_ARMS_VS_ERMS_DN	165	0.32951403	1.4736099	0.00333333	0.06797765	1
PEREZ_TP53_AND_TP63_TARGETS	174	0.32028815	1.4474791	0.003367	0.07813169	1
MIKKELSEN_MEF_ICP_WITH_H3K27ME3	174	0.37828368	1.7071102	0.00350877	0.01748821	0.993
WANG_CISPLATIN_RESPONSE_AND_XPC_DN	202	0.31263927	1.4414183	0.00350877	0.08022767	1
SHEDDEN_LUNG_CANCER_GOOD_SURVIVAL_A4	179	0.31002155	1.4173276	0.00362319	0.09134724	1
BARRIER_COLON_CANCER_RECURRENCE_DN	17	0.66327506	1.8729761	0.00440529	0.00472761	0.571
CREIGHTON_AKT1_SIGNALING_VIA_MTOR_DN	19	0.6362766	1.8692154	0.00444445	0.0048369	0.592
SENESE_HDAC1_TARGETS_UP	404	0.2489118	1.2609209	0.00444445	0.1918957	1
OZEN_MIR125B1_TARGETS	23	0.5918144	1.8248209	0.00446429	0.00706674	0.764
BRACHAT_RESPONSE_TO_CAMPTOTHECIN_UP	25	0.5847952	1.8383234	0.00448431	0.00638133	0.71
AKL_HTLV1_INFECTON_UP	19	0.6264054	1.8199601	0.00451467	0.00729827	0.782
SHI_SPARC_TARGETS_UP	19	0.5981049	1.7196089	0.00454545	0.01596489	0.989
MISHRA_CARCINOMA_ASSOCIATED_FIBROBLAST_DN	22	0.5899895	1.8377106	0.00456621	0.00636868	0.711
VILIMAS_NOTCH1_TARGETS_DN	18	0.6407629	1.8139174	0.00456621	0.00774607	0.795
GOLUB_ALL_VS_AML_DN	22	0.60122377	1.817071	0.0045977	0.00750976	0.79
ZHU_SKIL_TARGETS_UP	19	0.59543973	1.7744222	0.0046083	0.01071619	0.909
JOSEPH_RESPONSE_TO_SODIUM_BUTYRATE_UP	25	0.5495296	1.6981953	0.00465116	0.01844422	0.993
JEON_SMAD6_TARGETS_UP	21	0.6175724	1.8224543	0.00466201	0.00714942	0.77
FARMER_BREAST_CANCER_CLUSTER_4	16	0.67266744	1.8573154	0.00470588	0.00529961	0.643
MARTENS_BOUND_BY_PML_RARA_FUSION	399	0.2642935	1.3163683	0.00471698	0.14921445	1
MURAKAMI_UV_RESPONSE_6HR_UP	33	0.52645147	1.7847131	0.00473934	0.00979814	0.883
CHIBA_RESPONSE_TO_TSA	41	0.5202109	1.8489072	0.00485437	0.00574599	0.674
ABBUD_LIF_SIGNALING_1_UP	40	0.48747486	1.7189301	0.00487805	0.01602046	0.99
KANNAN_TP53_TARGETS_UP	51	0.46311074	1.6962471	0.00487805	0.01870374	0.994
CHEN_LVAD_SUPPORT_OF_FAILING_HEART_DN	40	0.4608049	1.6355573	0.00487805	0.02723641	1
DORN_ADENOVIRUS_INFECTON_48HR_DN	35	0.52016604	1.7766019	0.00488998	0.01055607	0.906
CROMER_TUMORIGENESIS_DN	49	0.45317146	1.6553882	0.0049505	0.02417732	0.999
RUAN_RESPONSE_TO_TROGLITAZONE_UP	23	0.5495427	1.6921587	0.00502513	0.01911118	0.994
BEIER_GLIOMA_STEM_CELL_DN	58	0.4228476	1.5977662	0.00508906	0.03385808	1
TAVOR_CEBPA_TARGETS_UP	44	0.4501134	1.6141248	0.00514139	0.0311094	1
CHIANG_LIVER_CANCER_SUBCLASS_POLYSOMY7_UP	65	0.43757883	1.7005763	0.00522193	0.01819424	0.993
LEIN_MEDULLA_MARKERS	76	0.39241263	1.5503447	0.00526316	0.04432962	1
GHANDHI_BYSTANDER_IRRADIATION_UP	76	0.3965598	1.6006126	0.00530504	0.03362679	1
AMIT_SERUM_RESPONSE_120_MCF10A	56	0.45609117	1.7287209	0.00533333	0.01494685	0.981
VANHARANTA_UTERINE_FIBROID_DN	60	0.43297055	1.6633884	0.00534759	0.02332289	0.999
JACKSON_DNMT1_TARGETS_UP	74	0.40017152	1.5846316	0.00550964	0.03636537	1
ZAMORA_NOS2_TARGETS_DN	88	0.35081664	1.4299302	0.00554017	0.08525831	1
HELLER_SILENCED_BY_METHYLATION_DN	94	0.3952982	1.631672	0.00576369	0.0279343	1
BERTUCCI_MEDULLARY_VS_DUCTAL_BREAST_CANCER_DN	145	0.34252474	1.498992	0.0060423	0.05893093	1
SCHAEFFER_PROSTATE_DEVELOPMENT_12HR_UP	107	0.3732321	1.5688373	0.00630915	0.0397166	1
KIM_WT1_TARGETS_12HR_DN	181	0.29786736	1.3621173	0.00634921	0.11978679	1
VART_KSHV_INFECTON_ANGIOGENIC_MARKERS_DN	127	0.3460804	1.5017219	0.00655738	0.05794688	1
MARTORIATI_MDM4_TARGETS_FETAL_LIVER_UP	192	0.31701368	1.4560552	0.00657895	0.07428537	1
LINDGREN_BLADDER_CANCER_CLUSTER_3_DN	195	0.30991673	1.4436786	0.00680272	0.07945768	1
NIELSEN_SYNOVIAL_SARCOMA_DN	19	0.5753909	1.6542944	0.00686499	0.02434727	0.999
KANG_FLUOROURACIL_RESISTANCE_DN	16	0.65560466	1.7580123	0.00704225	0.01223874	0.945
MARCHINI TRABECTEDIN_RESISTANCE_UP	20	0.56548685	1.6892393	0.00705882	0.01947915	0.995
ZHAN_MULTIPLE_MYELOMA_CD1_DN	39	0.4497797	1.5823715	0.00719425	0.03683824	1
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_6HR_DN	36	0.49319357	1.6559314	0.00728155	0.02424615	0.999
BURTON_ADIPOGENESIS_PEAK_AT_8HR	32	0.51234746	1.7249085	0.00742574	0.01541311	0.983
BANDRES_RESPONSE_TO_CARMUSTIN_WITHOUT_MGMT_48HR_DN	28	0.5544736	1.75063	0.00744417	0.01296043	0.955
OSADA_ASCL1_TARGETS_DN	23	0.5406218	1.6668478	0.00744417	0.02274098	0.998
NAKAJIMA_MAST_CELL	44	0.45692316	1.6709949	0.00746269	0.02204922	0.998
SHEN_SMARCA2_TARGETS_DN	296	0.27721718	1.3509965	0.00746269	0.12684633	1
DAVICIONI_TARGETS_OF_PAX_FOXO1_FUSIONS_UP	235	0.305524	1.4466394	0.00754717	0.07827367	1
BAELDE_DIABETIC_NEPHROPATHY_UP	79	0.38804767	1.5756922	0.00759494	0.03824272	1
PAPASPYRIDONOS_UNSTABLE_ATEROSCLEROTIC_PLAQUE_UP	42	0.44658652	1.6158482	0.00763359	0.03066309	1
HELLER_HDAC_TARGETS_SILENCED_BY_METHYLATION_DN	242	0.2782618	1.3168337	0.00766284	0.14901069	1
CADWELL_ATG16L1_TARGETS_UP	85	0.38709393	1.5687301	0.0078125	0.0396674	1
LEE_METASTASIS_AND_ALTERNATIVE_SPLICING_UP	70	0.38146737	1.5157561	0.00802139	0.0535834	1
THUM_SYSTOLIC_HEART_FAILURE_UP	371	0.25869137	1.2846425	0.00803213	0.17396557	1
ZHONG_SECRETOME_OF_LUNG_CANCER_AND_ENDOTHELIUM	58	0.4043805	1.545393	0.00813008	0.04566747	1

GAVIN_FOXP3_TARGETS_CLUSTER_T4	81	0.39112014	1.560019	0.00815217	0.04213343	1
LINDSTEDT_DENDRITIC_CELL_MATURATION_C	64	0.41427594	1.6267667	0.00852273	0.02862096	1
WAMUNYOKOLI_OVARIAN_CANCER_GRADES_1_2_UP	122	0.3333969	1.4264419	0.00862069	0.08694469	1
SASSON_RESPONSE_TO_FORSKOLIN_DN	83	0.3724605	1.5115844	0.00864553	0.05496653	1
CHANDRAN_METASTASIS_DN	262	0.28764755	1.3898293	0.00865801	0.10466283	1
LE_SKI_TARGETS_UP	17	0.58800405	1.6760818	0.00886918	0.02156583	0.997
MAINA_VHL_TARGETS_DN	17	0.6302562	1.7886904	0.00888889	0.00945231	0.875
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_CDC25_UP	114	0.35382015	1.5095111	0.00898204	0.05551484	1
ROY_WOUND_BLOOD_VESSEL_DN	20	0.5958339	1.7558147	0.00902935	0.01240205	0.946
VERRECCHIA_RESPONSE_TO_TGFB1_C2	24	0.5703322	1.777644	0.00909091	0.01050156	0.905
ZIRN_TRETINOIN_RESPONSE_UP	18	0.6079697	1.7114098	0.00913242	0.01712048	0.992
FIGUEROA_AML_METHYLATION_CLUSTER_6_DN	31	0.47025448	1.5750352	0.00925926	0.03832719	1
SEMENZA_HIF1_TARGETS	34	0.5140627	1.7094182	0.00947867	0.01726248	0.993
POMEROY_MEDULLOBLASTOMA_PROGNOSIS_UP	40	0.44957918	1.5946813	0.00947867	0.03446952	1
OLSSON_E2F3_TARGETS_UP	25	0.54124326	1.6741439	0.00952381	0.02168143	0.998
HSIAO_HOUSEKEEPING_GENES	351	0.2525113	1.2456019	0.00952381	0.20488614	1
WANG_METASTASIS_OF_BREAST_CANCER_ESR1_DN	24	0.53973985	1.6604158	0.00954654	0.02361643	0.999
GAUSSMANN_MLL_AF4_FUSION_TARGETS_F_DN	29	0.52613914	1.6909351	0.00961539	0.01922708	0.994
WINNEPENNINCKX_MELANOMA_METASTASIS_DN	38	0.47012556	1.6234671	0.00973236	0.0292833	1
ZHAN_V1_LATE_DIFFERENTIATION_GENES_UP	32	0.4826035	1.6177012	0.00980392	0.03032666	1

Table S3. GSEA report for cancer stem cells (CSC) vs non-stimulation (NS)

NAME	SIZE	ES	NES	NOM p-val	FDR q-val	FWER p-val
MISSIAGLIA_REGULATED_BY_METHYLATION_UP	106	0.7293896	3.057931	0	0	0
PODAR_RESPONSE_TO_ADAPHOSTIN_UP	132	0.6993402	3.0442166	0	0	0
ZHANG_RESPONSE_TO_IKK_INHIBITOR_AND_TNF_UP	200	0.6587559	3.0314295	0	0	0
ELVIDGE_HYPOXIA_BY_DMOG_UP	116	0.71219075	3.0027227	0	0	0
MOSERLE_IFNA_RESPONSE	30	0.918825	2.967307	0	0	0
HECKER_IFNB1_TARGETS	87	0.70694256	2.9013548	0	0	0
DUTERTRE ESTRADIOL_RESPONSE_24HR_DN	470	0.5787904	2.8720818	0	0	0
NAGASHIMA_NRG1_SIGNALING_UP	164	0.6353387	2.853858	0	0	0
LIANG_SILENCED_BY_METHYLATION_2	50	0.7857653	2.8437648	0	0	0
PEDERSEN_TARGETS_OF_611CTF_ISOFORM_OF_ERBB2	71	0.7244628	2.8422348	0	0	0
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_1	42	0.81176305	2.8410213	0	0	0
DAUER_STAT3_TARGETS_DN	46	0.7819136	2.793226	0	0	0
ZWANG_CLASS_3_TRANSIENTLY_INDUCED_BY_EGF	196	0.6046638	2.7596319	0	0	0
ELVIDGE_HYPOXIA_UP	151	0.6251611	2.7380078	0	0	0
HIRSCH_CELLULAR_TRANSFORMATION_SIGNATURE_UP	220	0.5830129	2.7237706	0	0	0
STAMBOLSKY_TARGETS_OF_MUTATED_TP53_DN	43	0.786343	2.720371	0	0	0
BOWIE_RESPONSE_TO_TAMOXIFEN	18	0.9423749	2.6918771	0	0	0
GALINDO_IMMUNE_RESPONSE_TO_ENTEROTOXIN	78	0.6771553	2.6802526	0	0	0
DER_IFN_BETA_RESPONSE_UP	96	0.64499927	2.6347268	0	0	0
WINZEN_DEGRADED_VIA_KHSRP	92	0.6506383	2.633151	0	0	0
SANA_TNF_SIGNALING_UP	78	0.663363	2.6136773	0	0	0
PRAMOONJAGO_SOX4_TARGETS_UP	49	0.7346835	2.6108518	0	0	0
DER_IFN_ALPHA_RESPONSE_UP	69	0.6764367	2.6045108	0	0	0
ZHANG_INTERFERON_RESPONSE	23	0.8421849	2.6031234	0	0	0
SEITZ_NEOPLASTIC_TRANSFORMATION_BY_8P_DELETION_UP	68	0.6834277	2.5948036	0	0	0
ALTEMEIER_RESPONSE_TO_LPS_WITH_MECHANICAL_VENTILATION	114	0.6079756	2.585817	0	0	0
PHONG_TNF_TARGETS_UP	60	0.6830423	2.5829682	0	0	0
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_3D_UP	157	0.5725755	2.5801861	0	0	0
TIEN_INTESTINE_PROBIOTICS_24HR_DN	195	0.5776692	2.5660875	0	0	0
SARRIO_EPITHELIAL_MESENCHYMAL_TRANSITION_DN	137	0.59149975	2.5648036	0	0	0
CHARAFE_BREAST_CANCER_LUMINAL_VS_BASAL_DN	412	0.5271776	2.5631874	0	0	0
MENSE_HYPOXIA_UP	81	0.62613344	2.5487711	0	0	0
BROWNE_INTERFERON_RESPONSIVE_GENES	63	0.66698015	2.5270178	0	0	0
BOSCO_INTERFERON_INDUCED_ANTIVIRAL_MODULE	68	0.6507187	2.5191126	0	0	0
BENNETT_SYSTEMIC_LUPUS_ERYTHEMATOSUS	28	0.79069394	2.5171309	0	0	0
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_8D_UP	137	0.5785836	2.513306	0	0	0
NAGASHIMA_EGF_SIGNALING_UP	54	0.684926	2.5074222	0	0	0
AMIT_EGF_RESPONSE_120_HELA	60	0.67117006	2.5044954	0	0	0
PACHER_TARGETS_OF_IGF1_AND_IGF2_UP	35	0.7331994	2.499071	0	0	0
GROSS_HYPOXIA_VIA_ELK3_DN	144	0.5610772	2.496308	0	0	0
BOWIE_RESPONSE_TO_EXTRACELLULAR_MATRIX	16	0.90632313	2.4877367	0	0	0
ONDER_CDH1_TARGETS_2_DN	433	0.49483523	2.4826772	0	0	0
GAJATE_RESPONSE_TO TRABECTEDIN_UP	61	0.64250255	2.4807878	0	0	0
KIM_LRRC3B_TARGETS	28	0.7811797	2.4647965	0	0	0
BLUM_RESPONSE_TO_SALIRASIB_UP	228	0.5277439	2.4576268	0	0	0
LINDSTEDT_DENDRITIC_CELL_MATURATION_A	61	0.6521481	2.454089	0	0	0
ELVIDGE_HIF1A_AND_HIF2A_TARGETS_DN	92	0.6006417	2.450192	0	0	0
EINAV_INTERFERON_SIGNATURE_IN_CANCER	26	0.7734808	2.4440365	0	0	0
KRIGE_AMINO_ACID_DEPRIVATION	29	0.75170827	2.443355	0	0	0
BURTON_ADIPOGENESIS_1	32	0.73402303	2.4403167	0	0	0
PHONG_TNF_RESPONSE_VIA_P38_PARTIAL	148	0.55113953	2.426761	0	0	0
GHANDHI_DIRECT_IRRADIATION_UP	94	0.58822703	2.426441	0	0	0
CROMER_TUMORIGENESIS_UP	58	0.63576174	2.4214728	0	0	0
SANA_RESPONSE_TO_IFNG_UP	63	0.6404561	2.4152598	0	0	0
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_10D_UP	172	0.5391363	2.4149804	0	0	0
AMIT_SERUM_RESPONSE_240_MCF10A	53	0.6563013	2.4095612	0	0	0
CHANG_CORE_SERUM_RESPONSE_DN	175	0.53348994	2.4070175	0	0	0
MAHADEVAN_RESPONSE_TO_MP470_DN	18	0.85108364	2.40036	0	0	0
DER_IFN_GAMMA_RESPONSE_UP	66	0.6272581	2.4003272	0	0	0
RASHI_RESPONSE_TO_IONIZING_RADIATION_2	111	0.56350505	2.3856387	0	0	0
HENDRICKS_SMARCA4_TARGETS_UP	54	0.64409167	2.380033	0	0	0
HUPER_BREAST_BASAL_VS_LUMINAL_UP	51	0.65075123	2.3791826	0	0	0
PICCALUGA_ANGIOIMMUNOBLASTIC_LYMPHOMA_DN	120	0.5600636	2.370341	0	0	0
GROSS_HYPOXIA_VIA_ELK3_ONLY_UP	32	0.71694654	2.3678668	0	0	0
YAMASHITA_METHYLATED_IN_PROSTATE_CANCER	49	0.64300907	2.3650973	0	0	0
NEMETH_INFLAMMATORY_RESPONSE_LPS_UP	83	0.5958849	2.3611436	0	0	0
FARMER_BREAST_CANCER_CLUSTER_1	38	0.69028413	2.3570125	0	0	0
MARKEY_RB1_ACUTE_LOF_UP	191	0.5187861	2.3486888	0	0	0
GROSS_HYPOXIA_VIA_ELK3_AND_HIF1A_UP	131	0.5415093	2.3292553	0	0	0
AMIT_SERUM_RESPONSE_60_MCF10A	56	0.6294554	2.327757	0	0	0
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_TURQUOISE_UP	72	0.5964552	2.323348	0	0	0
HUANG_DASATINIB_RESISTANCE_UP	72	0.6043739	2.3182454	0	0	0
AMIT_EGF_RESPONSE_480_HELA	147	0.5250099	2.3088734	0	0	0
HAN_JNK_SIGNALING_UP	34	0.67839295	2.3040671	0	0	0
YAN_ESCAPE_FROM_ANOIKIS	20	0.79459786	2.2970972	0	0	0
CHANG_IMMORTALIZED_BY_HP31_DN	61	0.6128991	2.2969403	0	0	0
BILD_HRAS_ONCOGENIC_SIGNATURE	229	0.4911492	2.2965846	0	0	0

HAHTOLA_MYCOSIS_FUNGOIDES_CD4_UP	60	0.6093679	2.2943704	0	0	0
XU_HGF_SIGNALING_NOT_VIA_AKT1_48HR_UP	31	0.70182794	2.2860923	0	0	0
RICKMAN_TUMOR_DIFFERENTIATED_WELL_VS_POORLY_DN	335	0.46873343	2.2849898	0	0	0
WINTER_HYPOXIA_METAGENE	218	0.4967555	2.283081	0	0	0
SEKI_INFLAMMATORY_RESPONSE_LPS_UP	70	0.58901054	2.2825549	0	0	0
TRAYNOR_RETT_SYNDROM_UP	40	0.66923624	2.276549	0	0	0
JECHLINGER_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_UP	66	0.5907212	2.2747343	0	0	0
KERLEY_RESPONSE_TO_CISPLATIN_UP	40	0.6479545	2.2746668	0	0	0
RODRIGUES_THYROID_CARCINOMA_DN	66	0.59765226	2.269986	0	0	0
AMIT_EGF_RESPONSE_60_MCF10A	36	0.65129495	2.2697742	0	0	0
JI_METASTASIS_REPRESSED_BY_STK11	26	0.7284544	2.268739	0	0	0
JOHNSTONE_PARVB_TARGETS_3_UP	386	0.46408284	2.265432	0	0	0
ZWANG_CLASS_1_TRANSIENTLY_INDUCED_BY_EGF	448	0.45606282	2.2642658	0	0	0
FURUKAWA_DUSP6_TARGETS_PCI35_UP	62	0.5915279	2.262403	0	0	0
MUELLER_METHYLATED_IN_GLIOMASTOMA	36	0.685832	2.2606936	0	0	0
TSAI_RESPONSE_TO_RADIATION_THERAPY	31	0.71015644	2.2566469	0	1.93E-05	0.001
WUNDER_INFLAMMATORY_RESPONSE_AND_CHOLESTEROL_UP	47	0.6281637	2.2566226	0	1.91E-05	0.001
BURTON_ADIPOGENESIS_PEAK_AT_2HR	50	0.60837215	2.2485104	0	1.89E-05	0.001
SENESE_HDAC3_TARGETS_UP	439	0.45497918	2.2480788	0	1.87E-05	0.001
AZARE_NEOPLASTIC_TRANSFORMATION_BY_STAT3_DN	110	0.5320731	2.243859	0	1.85E-05	0.001
NAKAMURA_ADIPOGENESIS_EARLY_DN	37	0.6602386	2.2430341	0	1.83E-05	0.001
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_ERYTHROCYTE_UP	145	0.5102405	2.2396066	0	1.82E-05	0.001
ELVIDGE_HIF1A_TARGETS_DN	79	0.5665348	2.2370842	0	1.80E-05	0.001
MURATA_VIRULENCE_OF_H_PILORI	24	0.7455786	2.2367089	0	1.78E-05	0.001
HINATA_NFKB_TARGETS_KERATINOCYTE_UP	85	0.5627292	2.2329383	0	5.27E-05	0.003
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_16D_UP	154	0.501276	2.2306368	0	5.22E-05	0.003
INGA_TP53_TARGETS	16	0.78778696	2.2286289	0	5.17E-05	0.003
KRASNOSELSKAYA_ILF3_TARGETS_UP	35	0.6619861	2.2283957	0	5.12E-05	0.003
DELPUECH_FOXO3_TARGETS_UP	64	0.5737239	2.2262752	0	5.07E-05	0.003
ICHIBA_GRAFT_VERSUS_HOST_DISEASE_D7_UP	89	0.5517318	2.226007	0	5.02E-05	0.003
PLASARI_TGFB1_TARGETS_10HR_UP	184	0.49677658	2.22296	0	6.68E-05	0.004
KINSEY_TARGETS_OF_EWSR1_FLII_FUSION_DN	289	0.46179307	2.2195325	0	6.62E-05	0.004
GESERICK_TERT_TARGETS_DN	20	0.7646296	2.2187989	0	6.56E-05	0.004
ZHU_CMV_8_HR_UP	43	0.6380379	2.2163517	0	6.50E-05	0.004
BECKER_TAMOXIFEN_RESISTANCE_UP	47	0.6279284	2.2142496	0	6.44E-05	0.004
DIRMEIER_LMP1_RESPONSE_EARLY	65	0.5671411	2.2099729	0	6.38E-05	0.004
CHARAFE_BREAST_CANCER_BASAL_VS_MESENCHYMAL_UP	110	0.5229648	2.2064033	0	6.33E-05	0.004
FOSTER_TOLERANT_MACROPHAGE_UP	141	0.49034768	2.2030292	0	7.83E-05	0.005
HORIUCHI_WTAP_TARGETS_UP	254	0.46691296	2.198037	0	9.29E-05	0.006
BROWNE_HCMV_INFECTION_4HR_UP	50	0.6042146	2.1868804	0	1.08E-04	0.007
WU_CELL_MIGRATION	172	0.48307118	2.1863225	0	1.07E-04	0.007
GHANDHI_BYSTANDER_IRRADIATION_UP	76	0.55451447	2.1762922	0	1.21E-04	0.008
SESTO_RESPONSE_TO_UV_C1	63	0.56623954	2.1740084	0	1.20E-04	0.008
BASAKI_YBX1_TARGETS_DN	318	0.45408028	2.170573	0	1.19E-04	0.008
COATES_MACROPHAGE_M1_VS_M2_DN	60	0.5829428	2.1694171	0	1.18E-04	0.008
SMIRNOV_RESPONSE_TO_IR_2HR_UP	46	0.6009151	2.1659176	0	1.17E-04	0.008
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED_IN_MONOCYTE_UP	19	0.7448264	2.1655116	0	1.16E-04	0.008
KOBAYASHI_EGFR_SIGNALING_24HR_UP	87	0.53121793	2.1631098	0	1.15E-04	0.008
PETROVA_ENDOTHELIUM_LYMPHATIC_VS_BLOOD_DN	156	0.49082464	2.1613803	0	1.14E-04	0.008
CASTELLANO_NRAS_TARGETS_UP	60	0.5865231	2.159215	0	1.27E-04	0.009
FULCHER_INFLAMMATORY_RESPONSE_LLECTIN_VS_LPS_DN	391	0.43811232	2.1575701	0	1.26E-04	0.009
FARDIN_HYPOXIA_11	26	0.67808795	2.1461627	0	1.69E-04	0.012
XU_AKT1_TARGETS_6HR	26	0.66891676	2.1384857	0	2.10E-04	0.015
APPEL_IMATINIB_RESPONSE	31	0.666035	2.1343644	0	2.08E-04	0.015
MCLACHLAN_DENTAL_CARIES_UP	214	0.45838204	2.1331055	0	2.20E-04	0.016
LEONARD_HYPOXIA	44	0.5898035	2.132728	0	2.18E-04	0.016
NOJIMA_SFRP2_TARGETS_UP	28	0.6639126	2.1308067	0	2.16E-04	0.016
SAGIV_CD24_TARGETS_DN	43	0.6174969	2.1288404	0	2.15E-04	0.016
STAMBOLSKY_RESPONSE_TO_VITAMIN_D3_UP	71	0.54418635	2.1270847	0	2.13E-04	0.016
HOFFMANN_PRE_BI_TO_LARGE_PRE_BII_LYMPHOCYTE_DN	64	0.55329156	2.1201866	0	2.52E-04	0.019
KIM_WT1_TARGETS_UP	196	0.46382558	2.11623	0	2.64E-04	0.02
DORN_ADENOVIRUS_INFECTION_12HR_UP	27	0.6681869	2.1104257	0	2.87E-04	0.022
MANALO_HYPOXIA_UP	187	0.462293	2.1096206	0	2.98E-04	0.023
CASORELLI_ACUTE_PROMYELOCYTIC_LEUKEMIA_UP	149	0.47301468	2.1094024	0	3.22E-04	0.025
BOYLAN_MULTIPLE_MYELOMA_PCA1_UP	95	0.5238396	2.1093607	0	3.20E-04	0.025
PASINI_SUZ12_TARGETS_DN	297	0.44051334	2.1074662	0	3.30E-04	0.026
JISON_SICKLE_CELL_DISEASE_UP	170	0.48126784	2.1072898	0	3.28E-04	0.026
VILIMAS_NOTCH1_TARGETS_UP	48	0.5729236	2.1051588	0	3.26E-04	0.026
CONCANNON_APOPTOSIS_BY_EPOXOMICIN_UP	214	0.44754565	2.1048648	0	3.23E-04	0.026
LEE_LIVER_CANCER_HEPATOBLAST	16	0.7651594	2.1047044	0	3.21E-04	0.026
COLIN_PILOCYTIC_ASTROCYTOMA_VS_GLIOMASTOMA_DN	27	0.6790476	2.1024415	0	3.44E-04	0.028
DELYS_THYROID_CANCER_UP	410	0.426143	2.099099	0	3.54E-04	0.029
WANG_CLIM2_TARGETS_DN	155	0.4759369	2.099059	0	3.51E-04	0.029
FERRARI_RESPONSE_TO_FENRETINIDE_UP	18	0.7540442	2.0951984	0	3.61E-04	0.03
THEILGAARD_NEUTROPHIL_AT_SKIN_WOUND_UP	73	0.54033035	2.0949774	0	3.70E-04	0.031
JAEGER_METASTASIS_DN	238	0.44471094	2.0930145	0	3.92E-04	0.033
DEBIASI_APOPTOSIS_BY_REOVIRUS_INFECTION_UP	277	0.44408023	2.089115	0	4.13E-04	0.035
JEON_SMAD6_TARGETS_UP	21	0.70743066	2.0867648	0	4.23E-04	0.036
TAVOR_CEBPA_TARGETS_DN	28	0.65814334	2.0861285	0	4.20E-04	0.036

GRAESSMANN_RESPONSE_TO_MC_AND_SERUM_DEPRIVATION_UP	181	0.45994198	2.0857918	0	4.17E-04	0.036
NAKAYAMA_FRA2_TARGETS	41	0.59916866	2.085664	0	4.15E-04	0.036
BROCKE_APOPTOSIS_REVERSED_BY_IL6	135	0.47969928	2.078726	0	4.68E-04	0.041
NOJIMA_SFRP2_TARGETS_DN	23	0.69026136	2.0746746	0	5.11E-04	0.043
NAKAYAMA_SOFT_TISSUE_TUMORS_PCA1_UP	66	0.5335496	2.0727894	0	5.20E-04	0.044
GRAHAM_NORMAL QUIESCENT_VS_NORMAL_DIVIDING_UP	61	0.5448384	2.0726209	0	5.27E-04	0.045
DASU_IL6_SIGNALING_UP	55	0.5578205	2.0685859	0	5.45E-04	0.047
DORN_ADENOVIRUS_INFECTION_48HR_DN	35	0.62630546	2.0669491	0	5.64E-04	0.049
GEISS_RESPONSE_TO_DSRNA_UP	33	0.64099336	2.0665536	0	5.71E-04	0.05
KIM_PTEN_TARGETS_UP	15	0.752369	2.0664833	0	5.68E-04	0.05
DORSAM_HOXA9_TARGETS_DN	29	0.6450368	2.065869	0	5.75E-04	0.051
RICKMAN_TUMOR_DIFFERENTIATED_WELL_VS_MODERATELY_DN	102	0.49626684	2.0644433	0	5.82E-04	0.052
FRASOR_RESPONSE_TO ESTRADIOL_DN	76	0.5250712	2.0593154	0	6.64E-04	0.06
WANG_TNF_TARGETS	23	0.6967606	2.058146	0	7.04E-04	0.064
CORRE_MULTIPLE_MYELOMA_UP	61	0.54422957	2.0560842	0	7.21E-04	0.066
WIERENGA_STAT5A_TARGETS_UP	194	0.44802564	2.054654	0	7.17E-04	0.066
LINDSTEDT_DENDRITIC_CELL_MATURATION_B	48	0.58739865	2.0509799	0	7.86E-04	0.073
LIAN_LIPA_TARGETS_6M	65	0.5406639	2.0483298	0	8.22E-04	0.076
BAELDE_DIABETIC_NEPHROPATHY_DN	406	0.4051208	2.0474222	0	8.28E-04	0.077
BROWN_MYELOID_CELL_DEVELOPMENT_UP	145	0.4713967	2.047323	0	8.24E-04	0.077
GRAHAM_CML_DIVIDING_VS_NORMAL QUIESCENT_DN	87	0.5158514	2.0444894	0	8.81E-04	0.083
BAE_BRCA1_TARGETS_UP	69	0.53226745	2.044264	0	8.86E-04	0.084
WORSCHER_TUMOR_REJECTION_UP	51	0.56233156	2.0436552	0	9.01E-04	0.086
GROSS_ELK3_TARGETS_DN	32	0.6228013	2.0432935	0	9.06E-04	0.087
FALVELLA_SMOKERS_WITH_LUNG_CANCER	68	0.5284936	2.041535	0	9.11E-04	0.088
FARMER_BREAST_CANCER_CLUSTER_4	16	0.73552364	2.040223	0	9.15E-04	0.089
REN_ALVEOLAR_RHABDOMYOSARCOMA_DN	379	0.41493782	2.0382462	0	9.30E-04	0.091
UROSEVIC_RESPONSE_TO_IMIQUIMOD	21	0.6872002	2.0382152	0	9.25E-04	0.091
AMIT_EGF_RESPONSE_60_HELA	40	0.5898137	2.037977	0	9.20E-04	0.091
HARRIS_HYPOXIA	77	0.51442	2.0341728	0	9.53E-04	0.094
PARK_APL_PATHOGENESIS_DN	45	0.58220303	2.0327828	0	9.48E-04	0.094
XU_HGF_SIGNALING_NOT_VIA_AKT1_6HR	23	0.65863645	2.031974	0	9.73E-04	0.097
ONDER_CDH1_TARGETS_1_UP	120	0.46716276	2.0317163	0	9.68E-04	0.097
LAIHO_COLORECTAL_CANCER_SERRATED_UP	99	0.4915328	2.028615	0	9.82E-04	0.099
GRAHAM_CML QUIESCENT_VS_NORMAL_DIVIDING_UP	48	0.5552447	2.0278318	0	9.77E-04	0.099
NEWMAN_ERCC6_TARGETS_UP	22	0.6815408	2.0253766	0	0.00101022	0.102
CERVERA_SDHB_TARGETS_1_UP	98	0.48750496	2.0249846	0	0.00101422	0.103
PHONG_TNF_RESPONSE_NOT_VIA_P38	317	0.42495838	2.0247796	0	0.00100899	0.103
AMIT_SERUM_RESPONSE_120_MCF10A	56	0.54347044	2.0239499	0	0.00102263	0.104
RADAEVA_RESPONSE_TO_IFNA1_UP	49	0.55551845	2.0236247	0	0.00101742	0.104
RUIZ_TNC_TARGETS_UP	137	0.46315044	2.0235345	0	0.00101225	0.104
HESS_TARGETS_OF_HOXA9_AND_MEIS1_DN	70	0.51925695	2.0234818	0	0.00100714	0.104
MITSIADES_RESPONSE_TO_APLIDIN_UP	380	0.4039283	2.0218437	0	0.00102869	0.107
SMIRNOV_RESPONSE_TO_IR_6HR_UP	140	0.46230045	2.021692	0	0.00102355	0.107
LIN_SILENCED_BY_TUMOR_MICROENVIRONMENT	101	0.47805452	2.015696	0	0.00111039	0.114
SHAFFER_IRF4_TARGETS_IN_PLASMA_CELL_VS_MATURE_B_LYMPHOCYTE	63	0.5350347	2.015462	0	0.00112261	0.116
LEE_LIVER_CANCER_ACOX1_UP	61	0.525969	2.0103412	0	0.00120632	0.126
ZHANG_RESPONSE_TO_CANTHARIDIN_UP	18	0.710821	2.0079389	0	0.00123676	0.13
VERHAAS_GLIOMASTOMA_NEURAL	187	0.44514042	2.0045583	0	0.00126021	0.134
SMID_BREAST_CANCER_RELAPSE_IN_BONE_DN	276	0.42216086	2.0031393	0	0.00127162	0.136
SMIRNOV_CIRCULATING_ENDOTHELIOCYTES_IN_CANCER_UP	150	0.45690006	2.0011184	0	0.00131802	0.142
HELLER_SILENCED_BY METHYLATION_DN	94	0.48959514	2.0007057	0	0.00131172	0.142
RASHI_NFKB1_TARGETS	17	0.7106629	1.9990544	0	0.00132271	0.144
KIM_RESPONSE_TO_TSA_AND_DECITABINE_UP	113	0.48424923	1.9975315	0	0.00135077	0.147
ODONNELL_TARGETS_OF_MYC_AND_TFRC_UP	73	0.5177413	1.9971998	0	0.0013444	0.147
WEINMANN_ADAPTATION_TO_HYPOXIA_DN	37	0.57822496	1.9961988	0	0.00133809	0.147
ONDER_CDH1_SIGNALING_VIA_CTNNB1	78	0.49662074	1.9951446	0	0.00134838	0.149
GENTILE_UV_LOW_DOSE_UP	23	0.6502147	1.9947363	0	0.00134211	0.149
COULOUARN_TEMPORAL_TGFB1_SIGNATURE_UP	99	0.48266858	1.9945031	0	0.0013359	0.149
KHETCHOUMIAN_TRIM24_TARGETS_UP	44	0.5689374	1.9931362	0	0.00137207	0.154
HELLEBREKERS_SILENCED_DURING_TUMOR_ANGIOGENESIS	75	0.5017247	1.992545	0	0.00137437	0.155
TOMIDA_METASTASIS_DN	15	0.74485433	1.9914266	0	0.00138426	0.156
GUENTHER_GROWTH_SPHERICAL_VS_ADHERENT_DN	25	0.6500604	1.9900036	0	0.00141126	0.16
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_HSC_UP	169	0.444417	1.9882531	0	0.00146275	0.166
WILSON_PROTEASES_AT_TUMOR_BONE_INTERFACE_UP	20	0.6730795	1.9882505	0	0.00145616	0.166
SENESE_HDAC1_AND_HDAC2_TARGETS_UP	217	0.42446652	1.987181	0	0.00149069	0.17
OSADA_ASCL1_TARGETS_DN	23	0.64029276	1.9857514	0	0.00150026	0.171
CHEN_LVAD_SUPPORT_OF_FAILING_HEART_UP	96	0.47994056	1.985057	0	0.00150169	0.172
SEITZ NEOPLASTIC_TRANSFORMATION_BY_8P_DELETION_DN	30	0.6051102	1.9828556	0	0.00154334	0.176
SWEET_KRAS_ONCOGENIC_SIGNATURE	84	0.4929668	1.9812382	0	0.00160834	0.182
TIAN_TNF_SIGNALING_NOT_VIA_NFKB	20	0.67179525	1.9809651	0	0.00160129	0.182
KAAB_FAILED_HEART_VENTRICLE_DN	35	0.58716583	1.9807953	0	0.00159429	0.182
FLECHNER_BIOPSY_KIDNEY_TRANSPLANT_REJECTED_VS_OK_UP	81	0.49758896	1.9774494	0	0.00170551	0.195
SATO_SILENCED_BY METHYLATION_IN_PANCREATIC_CANCER_1	375	0.40392965	1.9770994	0	0.00170579	0.196
DUTERTRE ESTRADIOL_RESPONSE_6HR_DN	84	0.49703676	1.9758418	0	0.00171434	0.198
ZHOU_INFLAMMATORY_RESPONSE_LPS_UP	357	0.4048464	1.9757117	0	0.00170698	0.198
AMIT_EGF_RESPONSE_240_HELA	55	0.5272374	1.9757098	0	0.00169968	0.198
NAKAMURA_METASTASIS_MODEL_DN	39	0.56793696	1.9750239	0	0.00171617	0.201
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_10D_DN	128	0.45995614	1.9734157	0	0.00172404	0.203

BRUECKNER_TARGETS_OF_MIRLET7A3_UP	96	0.4781302	1.9706062	0	0.00178655	0.211
NADLER_OBESITY_UP	58	0.53178877	1.9696958	0	0.00177904	0.211
RIGGINS_TAMOXIFEN_RESISTANCE_DN	203	0.42567715	1.9633048	0	0.0019685	0.23
VERHAAK_AML_WITH_NPM1_MUTATED_UP	166	0.4362228	1.9608785	0	0.00200557	0.236
MCDOWELL_ACUTE_LUNG_INJURY_UP	43	0.56090933	1.9601684	0	0.00200471	0.237
CHO_NR4A1_TARGETS	31	0.5952138	1.9578763	0	0.00210245	0.248
DORN_ADENOVIRUS_INFECTION_32HR_DN	35	0.58046204	1.9548118	0	0.00217587	0.257
DANG_REGULATED_BY_MYC_DN	232	0.42131683	1.9546835	0	0.00217423	0.257
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLACK_UP	32	0.5905885	1.9515932	0	0.002229	0.264
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_GREY_DN	55	0.5203459	1.95086	0	0.00227092	0.268
BRACHAT_RESPONSE_TO_CAMPTOTHECIN_UP	25	0.6269081	1.9501637	0	0.00229119	0.271
HUMMERICH_SKIN_CANCER_PROGRESSION_UP	84	0.48851445	1.9497198	0	0.0022965	0.273
WIEDERSCHAIN_TARGETS_OF_BMI1_AND_PCGF2	53	0.5286003	1.9477355	0	0.00233026	0.279
DELACROIX_RAR_TARGETS_UP	42	0.5611221	1.9474585	0	0.00234302	0.282
GRAHAM_CML QUIESCENT VS NORMAL QUIESCENT_DN	42	0.5620494	1.9473022	0	0.00233373	0.282
ZHAN_MULTIPLE_MYELOMA_LB_DN	36	0.569666	1.9472523	0	0.0023245	0.282
CHIARADONNA NEOPLASTIC TRANSFORMATION KRAS CDC25_UP	51	0.52288383	1.9459264	0	0.00240224	0.29
KIM_HYPOXIA	25	0.6280077	1.9447902	0	0.00242863	0.294
BASSO_CD40_SIGNALING_UP	95	0.47140038	1.9437336	0	0.00244727	0.297
HAN_SATB1_TARGETS_DN	388	0.39309123	1.9433032	0	0.00245914	0.3
VARELA_ZMPSTE24_TARGETS_UP	33	0.57706416	1.9411925	0	0.00259793	0.315
TARTE_PLASMA_CELL_VS_B_LYMPHOCYTE_UP	70	0.5132482	1.9407067	0	0.00260204	0.316
KOBAYASHI_EGFR_SIGNALING_6HR_DN	17	0.6817885	1.9390491	0	0.00263424	0.321
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLUE_UP	113	0.46257815	1.9381585	0	0.00267955	0.329
MASRI_RESISTANCE_TO_TAMOXIFEN_AND_AROMATASE_INHIBITORS_DN	18	0.6732063	1.9381132	0	0.00266932	0.329
HUANG_FOXA2_TARGETS_DN	35	0.56860894	1.9375216	0	0.00267274	0.331
GAUSSMANN_MLL_AF4_FUSION_TARGETS_E_UP	87	0.47839585	1.9354075	0	0.00275874	0.342
CROONQUIST_IL6_DEPRIVATION_UP	18	0.68676776	1.931595	0	0.00287916	0.357
UDAYAKUMAR_MED1_TARGETS_DN	213	0.4227212	1.9299738	0	0.00296342	0.365
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_0	64	0.50713515	1.9287342	0	0.0029685	0.368
WANG_SMARCE1_TARGETS_UP	257	0.41177547	1.9278426	0	0.00299883	0.371
ZHU_SKIL_TARGETS_UP	19	0.6618885	1.9264426	0	0.00304822	0.378
KRIEG_HYPOXIA_VIA_KDM3A	47	0.5356403	1.9259052	0	0.00303697	0.378
COLIN_PILOCYTIC_ASTROCYTOMA_VS_GLIOMASTOMA_UP	35	0.5826306	1.9231495	0	0.00312612	0.384
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_8D_DN	187	0.42388752	1.9225972	0	0.00312812	0.386
JOHNSTONE_PARVB_TARGETS_2_UP	128	0.44282743	1.9219594	0	0.00313677	0.388
KAMIKUBO_MYELOID_CEBPA_NETWORK	28	0.5847725	1.9178246	0	0.00329203	0.404
ZHANG_ANTIVIRAL_RESPONSE_TO_RIBAVIRIN_DN	49	0.52651215	1.9160413	0	0.00334799	0.409
VALK_AML_CLUSTER_1	27	0.6123189	1.9097192	0	0.00356084	0.431
SATO_SILENCED_BY_DEACETYLATION_IN_PANCREATIC_CANCER	39	0.56129223	1.9094958	0	0.00356116	0.432
KEEN_RESPONSE_TO_ROSIGLITAZONE_DN	96	0.45990992	1.9072365	0	0.00363823	0.439
RUTELLA_RESPONSE_TO_CSF2RB_AND_IL4_DN	279	0.3982899	1.9066362	0	0.00364462	0.44
MCLACHLAN_DENTAL_CARIES_DN	212	0.4109084	1.9061468	0	0.00365102	0.442
ZHANG_TLX_TARGETS_DN	101	0.46249628	1.9058076	0	0.00364439	0.442
SHIPP_DLCL_CURED_VS_FATAL_UP	36	0.56545323	1.9036877	0	0.003714	0.45
TURASHVILI_BREAST_DUCTAL_CARCINOMA_VS_DUCTAL_NORMAL_DN	171	0.42525798	1.9033211	0	0.00372005	0.452
SHAFFER_IRF4_MULTIPLE_MYELOMA_PROGRAM	34	0.575149	1.9023038	0	0.00373885	0.453
SHI_SPARC_TARGETS_UP	19	0.6646466	1.9023037	0	0.00372587	0.453
RUTELLA_RESPONSE_TO_HGF_VS_CSF2RB_AND_IL4_UP	369	0.38540825	1.9022584	0	0.00371298	0.453
SESTO_RESPONSE_TO_UV_C2	49	0.52365005	1.9012889	0	0.00374419	0.456
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_9	69	0.49193606	1.9009347	0	0.00373132	0.456
WIERENGA_STAT5A_TARGETS_GROUP2	52	0.5148417	1.900458	0	0.00375697	0.461
KANNAN_TP53_TARGETS_UP	51	0.5145272	1.8999307	0	0.00376877	0.462
HUPER_BREAST_BASAL_VS_LUMINAL_DN	56	0.51786244	1.8994962	0	0.0037867	0.464
KUROZUMI_RESPONSE_TO_ONCOCYTIC_VIRUS	42	0.5588002	1.8992407	0	0.00378651	0.466
DAZARD_UV_RESPONSE_CLUSTER_G24	23	0.6236934	1.8987294	0	0.00377949	0.468
LIANG_SILENCED_BY_METHYLATION_UP	28	0.60919267	1.8987018	0	0.00376681	0.468
BURTON_ADIPOGENESIS_7	47	0.53179264	1.8959558	0	0.0038894	0.481
LIAN_LIPA_TARGETS_3M	51	0.5290932	1.8945222	0	0.00393127	0.487
ZHU_CMV_ALL_UP	109	0.45408612	1.8933651	0	0.00396062	0.493
GAURNIER_PSMD4_TARGETS	65	0.49136373	1.8916713	0	0.00402011	0.501
DIRMEIER_LMP1_RESPONSE_LATE_UP	53	0.5231013	1.8903768	0	0.00403069	0.503
NAKAMURA_ADIPOGENESIS_LATE_DN	35	0.5693909	1.8903453	0	0.00402346	0.504
KONDO_EZH2_TARGETS	207	0.4107946	1.8882061	0	0.00411204	0.514
RHEIN_ALL_GLUCOCORTICOID_THERAPY_UP	72	0.48080143	1.88813	0	0.00410458	0.514
SIMBULAN_PARP1_TARGETS_UP	31	0.5859395	1.8852761	0	0.00420194	0.526
HOELZEL_NF1_TARGETS_UP	126	0.43284187	1.8847744	0	0.00419986	0.528
UZONYI_RESPONSE_TO_LEUKOTRIENE_AND_THROMBIN	33	0.5772855	1.8818935	0	0.0043154	0.541
KANG_FLUOROURACIL_RESISTANCE_DN	16	0.6843564	1.8771547	0	0.00447558	0.554
DURCHDEWALD_SKIN_CARCINOGENESIS_DN	245	0.404865	1.8768895	0	0.00447298	0.555
FLOTHO_PEDIATRIC_ALL_THERAPY_RESPONSE_UP	49	0.51034844	1.8728436	0	0.00462601	0.568
RODRIGUES_NTN1_AND_DCC_TARGETS	33	0.553128	1.8720227	0	0.00468093	0.573
HERNANDEZ_ABERRANT_MITOSIS_BY_DOCETACEL_4NM_UP	21	0.6294028	1.8693895	0	0.00475262	0.576
JIANG_HYPOXIA_NORMAL	270	0.39001337	1.867414	0	0.00483227	0.584
SABATES_COLORECTAL_ADENOMA_UP	122	0.4376493	1.8669246	0	0.004874	0.589
SENESE_HDAC1_TARGETS_UP	404	0.3818454	1.8657364	0	0.00492612	0.594
ENK_UV_RESPONSE_EPIDERMIS_DN	469	0.36848062	1.8511347	0	0.00578922	0.663
SHAFFER_IRF4_TARGETS_IN_MYELOMA_VS_MATURE_B_LYMPHOCYTE	94	0.45090365	1.84945	0	0.00586087	0.668
ZHAN_MULTIPLE_MYELOMA_SPIKED	20	0.63044727	1.8480431	0	0.00592056	0.671

HALMOS_CEBPA_TARGETS_UP	48	0.52241695	1.8464257	0	0.00597432	0.674
ZUCCHI_METASTASIS_DN	41	0.52521807	1.842619	0	0.00612501	0.687
BOYLAN_MULTIPLE_MYELOMA_C_D_DN	234	0.39351627	1.8422823	0	0.0061065	0.687
LI_INDUCED_T_TO_NATURAL_KILLER_UP	271	0.3805934	1.8412971	0	0.00612436	0.688
KIM_WT1_TARGETS_12HR_UP	150	0.41807562	1.8334445	0	0.00648202	0.711
RODWELL_AGING_KIDNEY_UP	389	0.37661025	1.8334434	0	0.00646273	0.711
NELSON_RESPONSE_TO_ANDROGEN_UP	79	0.462562	1.8320613	0	0.00656677	0.718
ODONNELL_TFRC_TARGETS_UP	352	0.3747915	1.8314958	0	0.00661083	0.723
BOQUEST_STEM_CELL_DN	196	0.41099593	1.8312603	0	0.00659686	0.723
ZHANG_PROLIFERATING_VS_QUIESCENT	48	0.51036894	1.8279369	0	0.00680812	0.736
MARSON_FOXP3_TARGETS_UP	61	0.49053493	1.8229271	0	0.00722576	0.759
MIKKELSEN_IPS_LCP_WITH_H3K4ME3	138	0.42365956	1.8200542	0	0.00745852	0.774
DAUER_STAT3_TARGETS_UP	48	0.5049943	1.8193879	0	0.00747881	0.777
LUI_THYROID_CANCER_PAX8_PPARG_DN	40	0.5250976	1.8192827	0	0.00747311	0.778
GERHOLD_ADIPOGENESIS_UP	47	0.5116582	1.8181173	0	0.00755058	0.785
CHIANG_LIVER_CANCER_SUBCLASS_CTNNB1_DN	158	0.40281656	1.8180399	0	0.00753406	0.785
HELLER_SILENCED_BY_METHYLATION_UP	241	0.380628	1.8172942	0	0.00755889	0.786
ROZANOV_MMP14_TARGETS_UP	235	0.39518848	1.81338	0	0.00785708	0.797
HAMAI_APOPTOSIS_VIA_TRAIL_DN	157	0.40910867	1.8121814	0	0.0079527	0.802
RICKMAN_METASTASIS_DN	220	0.39010432	1.8114494	0	0.00798201	0.803
CREIGHTON_ENDOCRINE_THERAPY_RESISTANCE_5	415	0.36370927	1.8111323	0	0.00796769	0.804
BOSCO_EPITHELIAL_DIFFERENTIATION_MODULE	57	0.48840672	1.8095852	0	0.00801947	0.808
RODWELL_AGING_KIDNEY_NO_BLOOD_UP	189	0.39983752	1.8094743	0	0.00799706	0.808
MOHANKUMAR_TLX1_TARGETS_DN	148	0.41625112	1.8093094	0	0.00798494	0.808
WIERENGA_STAT5A_TARGETS_GROUP1	123	0.42571118	1.8079717	0	0.00809968	0.813
KIM_WT1_TARGETS_8HR_UP	152	0.41703564	1.8048623	0	0.00841332	0.829
PASQUALUCCI_LYMPHOMA_BY_GC_STAGE_UP	249	0.38748294	1.8046322	0	0.00840512	0.829
GENTILE_UV_RESPONSE_CLUSTER_D1	15	0.6672005	1.804353	0	0.008417	0.829
WALLACE_PROSTATE_CANCER_RACE_UP	254	0.37997952	1.8042047	0	0.00842397	0.83
FRIDMAN_SENESCENCE_UP	72	0.46384263	1.8001966	0	0.00886337	0.848
MIYAGAWA_TARGETS_OF_EWSR1_ETS_FUSIONS_DN	200	0.3906223	1.7980844	0	0.00900279	0.857
DAZARD_RESPONSE_TO_UV_NHEK_UP	206	0.39718166	1.7972139	0	0.00906325	0.863
MEISSNER_BRAIN_HCP_WITH_H3K27ME3	230	0.3862834	1.7925822	0	0.00944918	0.871
SARTIPY_NORMAL_AT_INSULIN_RESISTANCE_UP	29	0.55813557	1.7903569	0	0.00962101	0.88
VART_KSHV_INFECTION_ANGIOGENIC_MARKERS_UP	151	0.40152422	1.7892222	0	0.00970127	0.882
DOANE_BREAST_CANCER_ESR1_DN	46	0.49843454	1.7816455	0	0.01033755	0.895
JACKSON_DNMT1_TARGETS_UP	74	0.45492205	1.7809939	0	0.01036295	0.895
PEDRIOLI_MIR31_TARGETS_DN	352	0.36424163	1.7804803	0	0.01038337	0.895
MIKKELSEN_ES_ICP_WITH_H3K4ME3_AND_H3K27ME3	122	0.4121545	1.7797878	0	0.01041761	0.898
RUTELLA_RESPONSE_TO_HGF_DN	204	0.38831687	1.777896	0	0.01059737	0.903
NIKOLSKY_BREAST_CANCER_16P13_AMPLICON	88	0.4296887	1.7702454	0	0.01137857	0.919
SCHUETZ_BREAST_CANCER_DUCTAL_INVASIVE_UP	320	0.3657695	1.7687185	0	0.01148529	0.92
PROVENZANI_METASTASIS_DN	128	0.41060555	1.7682604	0	0.0115161	0.92
DELACROIX_RARG_BOUND_MEF	326	0.36432493	1.7660683	0	0.01168961	0.926
RODRIGUES_DCC_TARGETS_DN	114	0.4080086	1.7618289	0	0.01214431	0.934
NGUYEN_NOTCH1_TARGETS_DN	82	0.44284293	1.7612338	0	0.01215985	0.935
PETROVA_PROX1_TARGETS_DN	62	0.46359366	1.7573742	0	0.01263892	0.939
GERY_CEBP_TARGETS	113	0.41698998	1.7568789	0	0.01267095	0.94
OZEN_MIR125B1_TARGETS	23	0.57663846	1.7567352	0	0.01265272	0.94
MARKEY_RB1_CHRONIC_LOF_DN	108	0.41638002	1.7545104	0	0.01290796	0.942
BROWNE_HCMV_INFECTION_24HR_DN	142	0.39798132	1.7484194	0	0.01358277	0.947
GU_PDEF_TARGETS_UP	70	0.45404163	1.7456301	0	0.01394987	0.951
SUNG_METASTASIS_STROMA_UP	98	0.42152965	1.7454644	0	0.01392433	0.951
SWEET_LUNG_CANCER_KRAS_UP	436	0.34850794	1.7448065	0	0.01392818	0.954
RUTELLA_RESPONSE_TO_CSF2RB_AND_IL4_UP	307	0.35809335	1.7447242	0	0.01390317	0.955
RUTELLA_RESPONSE_TO_HGF_UP	382	0.35773692	1.7446781	0	0.01387373	0.955
AIYAR_COBRA1_TARGETS_UP	34	0.51786506	1.743565	0	0.0140039	0.955
LU_IL4_SIGNALING	83	0.4446212	1.7420801	0	0.01414346	0.956
MIKKELSEN_MCV6_LCP_WITH_H3K4ME3	135	0.39396024	1.7363586	0	0.01483495	0.964
MIKKELSEN_MCV6_HCP_WITH_H3K27ME3	379	0.35481042	1.734133	0	0.0151978	0.964
LIU_SMARCA4_TARGETS	56	0.4700165	1.7318242	0	0.01555814	0.969
FOSTER_TOLERANT_MACROPHAGE_DN	375	0.36067533	1.7311611	0	0.0155945	0.969
LINDSTEDT_DENDRITIC_CELL_MATURATION_D	64	0.44555482	1.7246345	0	0.01631092	0.977
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_16D_DN	122	0.3986664	1.7235703	0	0.016448	0.977
MIKKELSEN_MEF_ICP_WITH_H3K27ME3	174	0.38392603	1.7215083	0	0.0166382	0.979
SEIDEN_ONCOGENESIS_BY_MET	73	0.43595198	1.7209694	0	0.0166677	0.979
MAHAJAN_RESPONSE_TO_IL1A_UP	72	0.43913034	1.7169604	0	0.01711555	0.984
CROONQUIST_STROMAL_STIMULATION_UP	55	0.46441978	1.7100855	0	0.01799421	0.99
LEE_AGING_CEREBELLUM_UP	79	0.43446174	1.7100035	0	0.01796162	0.99
LABBE_TARGETS_OF_TGFB1_AND_WNT3A_DN	101	0.4103484	1.7081703	0	0.018172	0.991
ZHOU_INFLAMMATORY_RESPONSE_LIVE_UP	403	0.34533456	1.7053957	0	0.01855946	0.991
YAMAZAKI_TCEB3_TARGETS_UP	162	0.382906	1.7032243	0	0.01883296	0.993
ZHU_CMV_24_HR_UP	84	0.42390466	1.702512	0	0.01880998	0.994
SMID_BREAST_CANCER_ERBB2_UP	126	0.40805548	1.6981335	0	0.019285	0.995
MIKKELSEN_ES_LCP_WITH_H3K4ME3	104	0.4099487	1.6961373	0	0.01963018	0.996
MCBRYAN_PUBERTAL_TGFB1_TARGETS_UP	158	0.38415012	1.6942147	0	0.01990967	0.996
GAUSSMANN_MLL_AF4_FUSION_TARGETS_F_UP	173	0.3738722	1.6938238	0	0.01994576	0.996
KATSANOUE_ELAVL1_TARGETS_UP	146	0.38730845	1.6936909	0	0.01992191	0.996
AMIT_EGF_RESPONSE_40_HELA	40	0.49558422	1.692931	0	0.02000906	0.996

EBAUER_MYOGENIC_TARGETS_OF_PAX3_FOXO1_FUSION	47	0.47067192	1.6898121	0	0.02049507	0.997
MIKKELSEN_IPS_ICP_WITH_H3K4ME3_AND_H327ME3	111	0.3936109	1.6801516	0	0.02194334	0.999
PHONG_TNF_RESPONSE_VIA_P38_COMPLETE	207	0.36144	1.679394	0	0.02201264	0.999
BOQUEST_STEM_CELL_CULTURED_VS_FRESH_UP	392	0.3469815	1.6780163	0	0.02224747	1
MIKKELSEN_NPC_HCP_WITH_H3K4ME3_AND_H3K27ME3	193	0.36477983	1.677398	0	0.02227323	1
ZHOU_INFLAMMATORY_RESPONSE_FIMA_UP	439	0.33612224	1.676561	0	0.02237647	1
ZHONG_RESPONSE_TO_AZACITIDINE_AND_TSA_UP	162	0.37703043	1.6704885	0	0.02333745	1
IZADPANAH_STEM_CELL_ADIPOSE_VS_BONE_UP	111	0.39430612	1.6641691	0	0.02422028	1
COLDREN_GEFITINIB_RESISTANCE_DN	203	0.3608997	1.6612732	0	0.02469966	1
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_4	97	0.3979033	1.6612592	0	0.02465284	1
LIEN_BREAST_CARCINOMA_METAPLASTIC_VS_DUCTAL_UP	79	0.4169679	1.6530565	0	0.02630167	1
OSWALD_HEMATOPOIETIC_STEM_CELL_IN_COLLAGEN_GEL_UP	216	0.35148346	1.6524945	0	0.02637436	1
PUIFFE_INVASION_INHIBITED_BY_ASCITES_DN	129	0.38297975	1.6510109	0	0.02641052	1
KUMAR_TARGETS_OF_MLL_AF9_FUSION	361	0.33702624	1.6479326	0	0.02694202	1
RUTELLA_RESPONSE_TO_HGF_VS_CSF2RB_AND_IL4_DN	217	0.35251418	1.6454536	0	0.02735085	1
MCBRYAN_PUBERTAL_TGFB1_TARGETS_DN	59	0.43839237	1.6406476	0	0.02805567	1
CHEN_HOXA5_TARGETS_9HR_UP	190	0.35780206	1.636711	0	0.02878724	1
ICHIBA_GRAFT_VERSUS_HOST_DISEASE_35D_UP	113	0.37432212	1.633559	0	0.029479	1
VERHAAC_AML_WITH_NPM1_MUTATED_DN	227	0.35016093	1.6312859	0	0.0298158	1
ENK_UV_RESPONSE_EPIDERMIS_UP	262	0.34131807	1.6297351	0	0.03009978	1
HELLER_HDAC_TARGETS_SILENCED_BY_METHYLATION_DN	242	0.34995103	1.6269009	0	0.03074262	1
WOO_LIVER_CANCER_RECURRENCE_UP	95	0.39067492	1.6259261	0	0.03085467	1
LEI_MYB_TARGETS	298	0.34088463	1.6240857	0	0.03112832	1
QI_PLASMACYTOMA_UP	242	0.34661818	1.6208524	0	0.0318632	1
CAIRO_HEPATOBLASTOMA_CLASSES_DN	196	0.35224393	1.6182678	0	0.0324176	1
ZHENG_FOXP3_TARGETS_IN_THYMUS_UP	169	0.3560929	1.615141	0	0.03308638	1
KRIEG_KDM3A_TARGETS_NOT_HYPOXIA	155	0.36432934	1.614318	0	0.03324526	1
MCBRYAN_PUBERTAL_BREAST_3_4WK_UP	198	0.3540096	1.6140305	0	0.03318576	1
ENK_UV_RESPONSE_KERATINOCYTE_UP	486	0.32137257	1.6132483	0	0.0332857	1
WANG_CISPLATIN_RESPONSE_AND_XPC_DN	202	0.350754	1.6125183	0	0.03336789	1
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_MONOCYTE_UP	180	0.35751548	1.6100593	0	0.03379717	1
TARTE_PLASMA_CELL_VS_PLASMABLAST_UP	346	0.33152664	1.6097654	0	0.03381904	1
AMUNDSON_RESPONSE_TO_ARSENITE	201	0.3534896	1.60512	0	0.03474396	1
LI_AMPLIFIED_IN_LUNG_CANCER	160	0.36024824	1.6018705	0	0.03550741	1
MCBRYAN_PUBERTAL_BREAST_4_5WK_UP	250	0.34352234	1.5995709	0	0.03587901	1
ZWANG_EGF_INTERVAL_DN	177	0.35355955	1.5994161	0	0.03578333	1
NAKAMURA_ADIPOGENESIS_EARLY_UP	56	0.42554766	1.5948893	0	0.03689506	1
ZHANG_TLX_TARGETS_60HR_UP	269	0.33458057	1.5948154	0	0.03684596	1
MARTORIATI_MDM4_TARGETS_NEUROEPITHELIUM_UP	149	0.36611125	1.5919391	0	0.03742456	1
MARTORIATI_MDM4_TARGETS_FETAL_LIVER_UP	192	0.34710225	1.5910119	0	0.03767025	1
DEURIG_T_CELL_PROLYMPHOCYTIC_LEUKEMIA_DN	278	0.331391	1.5879012	0	0.0381689	1
DOUGLAS_BMI1_TARGETS_DN	282	0.3361515	1.5823976	0	0.03960861	1
BOSCO_ALLERGEN_INDUCED_TH2_ASSOCIATED_MODULE	131	0.36354494	1.5710701	0	0.04257761	1
KIM_WT1_TARGETS_12HR_DN	181	0.34429288	1.564863	0	0.04417183	1
HAN_SATB1_TARGETS_UP	340	0.31759694	1.5598435	0	0.04557367	1
OKUMURA_INFLAMMATORY_RESPONSE_LPS	164	0.34593594	1.5508168	0	0.04832399	1
LU_EZH2_TARGETS_UP	218	0.33790436	1.54916	0	0.04871538	1
WANG_LMO4_TARGETS_DN	303	0.31903937	1.5475632	0	0.04903748	1
GRAESSMANN_APOPTOSIS_BY_SERUM_DEPRIVATION_UP	475	0.3107231	1.5351479	0	0.05292661	1
GARY_CD5_TARGETS_UP	424	0.31072634	1.526542	0	0.05533378	1
POTTI_TOPOTECAN_SENSITIVITY	119	0.35638547	1.5246258	0	0.05561632	1
SENGUPTA_NASOPHARYNGEAL_CARCINOMA_WITH_LMP1_UP	356	0.31423908	1.5219445	0	0.05640493	1
ZHANG_TLX_TARGETS_36HR_UP	207	0.33179355	1.5190939	0	0.05727606	1
SERVITJA_ISLET_HNF1A_TARGETS_UP	153	0.34325638	1.5190698	0	0.05719195	1
FULCHER_INFLAMMATORY_RESPONSE_LLECTIN_VS_LPS_UP	496	0.3034031	1.5159516	0	0.05822728	1
HOSHIDA_LIVER_CANCER_SUBCLASS_S1	214	0.32679465	1.5145528	0	0.05855142	1
KIM_GLIS2_TARGETS_UP	80	0.38137192	1.4949799	0	0.06579723	1
RAY_TUMORIGENESIS_BY_ERBB2_CDC25A_DN	142	0.3418597	1.4917732	0	0.06731953	1
MIYAGAWA_TARGETS_OF_EWSR1_ETS_FUSIONS_UP	226	0.31529263	1.4741755	0	0.07365949	1
WANG_RESPONSE_TO_GSK3_INHIBITOR_SB216763_UP	304	0.30912468	1.4655021	0	0.07717134	1
FOSTER_KDM1A_TARGETS_UP	236	0.31094024	1.465135	0	0.07727158	1
THUM_SYSTOLIC_HEART_FAILURE_UP	371	0.29941317	1.4572192	0	0.08055622	1
LU_AGING_BRAIN_UP	247	0.30424228	1.424873	0	0.09606776	1
LI_WILMS_TUMOR_VS_FETAL_KIDNEY_1_UP	168	0.31358457	1.423426	0	0.09679796	1
GRUETZMANN_PANCREATIC_CANCER_UP	332	0.29504415	1.4211311	0	0.09796382	1
BRUINS_UVC_RESPONSE_VIA_TP53_GROUP_B	477	0.28138337	1.417232	0	0.09990516	1
SMID_BREAST_CANCER_NORMAL_LIKE_UP	416	0.28390896	1.4149281	0	0.10119931	1
YAGI_AML_FAB_MARKERS	175	0.31392834	1.4138684	0	0.10170098	1
ACEVEDO_FGFR1_TARGETS_IN_PROSTATE_CANCER_MODEL_UP	263	0.29669416	1.4086735	0	0.10435177	1
FLECHNER_BIOPSY_KIDNEY_TRANSPLANT_OK_VS_DONOR_UP	497	0.27928284	1.4084964	0	0.10432083	1
JAATINEN_HEMATOPOIETIC_STEM_CELL_DN	202	0.30008328	1.3885592	0	0.1150326	1
LIU_PROSTATE_CANCER_DN	424	0.27535006	1.379217	0	0.12003058	1
LIM_MAMMARY_STEM_CELL_UP	435	0.27335915	1.3760084	0	0.1217685	1
LINDGREN_BLADDER_CANCER_CLUSTER_2B	345	0.28103662	1.3543286	0	0.13531648	1
ROME_INSULIN_TARGETS_IN_MUSCLE_UP	386	0.2647506	1.3239609	0	0.15418062	1
CHARAFE_BREAST_CANCER_LUMINAL_VS_MESENCHYMAL_DN	423	0.26380327	1.3112075	0	0.1632071	1
MEISSNER_NPC_HCP_WITH_H3_UNMETHYLATED	452	0.26132706	1.2944905	0	0.17473085	1
MILI_PSEUDOPODIA_CHEMOTAXIS_DN	421	0.25186345	1.2479762	0	0.21201335	1
HAHTOLA_MYCOSIS_FUNGOIDES_UP	17	0.6726459	1.8867761	0.00215983	0.00415029	0.52

MARCHINI TRABECTEDIN RESISTANCE_UP	20	0.61269593	1.8363258	0.002331	0.00632523	0.702
GENTILE UV HIGH DOSE_UP	21	0.65542984	1.9294741	0.00239234	0.00295232	0.365
BERENJENO TRANSFORMED_BY_RHOA_FOREVER_UP	18	0.6132746	1.7394631	0.00239808	0.01443352	0.959
CROONQUIST NRAS SIGNALING_UP	33	0.5385956	1.8260608	0.00246305	0.00698002	0.746
HAHTOLA CTCL PATHOGENESIS	15	0.70054823	1.875279	0.00249377	0.00454247	0.561
YAO TEMPORAL RESPONSE_TO_PROGESTERONE_CLUSTER_5	27	0.60831636	1.9166278	0.0025	0.00334027	0.408
AMIT_EGF_RESPONSE_240_MCF10A	19	0.63576466	1.8693746	0.00250627	0.00474355	0.577
SABATES COLORECTAL ADENOMA_SIZE_UP	16	0.65902615	1.8114065	0.0025641	0.00796449	0.803
BRACHAT_RESPONSE_TO_METHOTREXATE_UP	21	0.58778685	1.7308152	0.0025974	0.01561361	0.969
DORN ADENOVIRUS INFECTION_24HR_DN	39	0.533637	1.8511981	0.0027027	0.0058014	0.663
QI_HYPOXIA_TARGETS_OF_HIF1A_AND_FOXA2	36	0.5008148	1.6693854	0.0027248	0.02339365	1
AMIT_EGF_RESPONSE_120_MCF10A	35	0.59376425	2.0052977	0.00273224	0.00126635	0.134
LEIN_ASTROCYTE_MARKERS	39	0.47342682	1.6009483	0.00274725	0.03561037	1
DORN ADENOVIRUS INFECTION_12HR_DN	30	0.5225016	1.7231358	0.00275482	0.01645162	0.977
FUJII_YBX1_TARGETS_UP	41	0.5091749	1.7508453	0.00277778	0.01328458	0.945
SEMENZA_HIF1_TARGETS	34	0.5321995	1.7921485	0.00280899	0.00945163	0.874
VALK_AML_CLUSTER_11	35	0.5473861	1.8436872	0.002849	0.00606641	0.683
TSUNODA CISPLATIN RESISTANCE_DN	43	0.5028428	1.7831688	0.00287356	0.01022268	0.892
WESTON_VEGFA_TARGETS_12HR	33	0.52321786	1.7252218	0.00290698	0.01624975	0.976
VANHARANTA UTERINE FIBROID_DN	60	0.45652875	1.7062095	0.00294118	0.01847	0.991
BURTON_ADIPOGENESIS_11	54	0.4574923	1.644624	0.00294985	0.02745585	1
ZHU_CMV_8_HR_DN	51	0.48245642	1.7669022	0.003003	0.01162125	0.923
LINDVALL_IMMORTALIZED_BY_TERT_DN	66	0.4430834	1.7119436	0.00306749	0.01781322	0.99
RAGHAVACHARI_PLATELET_SPECIFIC_GENES	67	0.41286546	1.595901	0.00311527	0.03676029	1
FERRANDO_T_ALL_WITH_MLL_ENL_FUSION_UP	81	0.4127388	1.6649524	0.003125	0.02413693	1
HERNANDEZ_ABERRANT_MITOSIS_BY_DOCETACEL_2NM_UP	75	0.41532382	1.6516917	0.003125	0.02633067	1
MARCHINI TRABECTEDIN RESISTANCE_DN	45	0.44180754	1.5951059	0.003125	0.03689576	1
NATSUME_RESPONSE_TO_INTERFERON_BETA_UP	66	0.42913786	1.6524001	0.0031746	0.02633202	1
LIU_VAV3_PROSTATE_CARCINOGENESIS_UP	79	0.4168809	1.6413951	0.0031746	0.02792501	1
GEORGANTAS_HSC_MARKERS	61	0.41559303	1.593062	0.00321543	0.03723924	1
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_6	69	0.47334075	1.798379	0.00322581	0.00900272	0.854
SWEET_KRAS_TARGETS_UP	73	0.46098393	1.7922558	0.00322581	0.00945793	0.873
VANDESLUIS_COMMD1_TARGETS_GROUP_3_UP	81	0.40704954	1.6500939	0.00324675	0.0266124	1
CHIANG_LIVER_CANCER_SUBCLASS_UNANNOTATED_UP	69	0.45476398	1.7657294	0.00335571	0.01171612	0.926
HINATA_NFKB_TARGETS_FIBROBLAST_UP	77	0.41464898	1.6424421	0.00342466	0.02777297	1
BROWNE_HCMV_INFECTION_6HR_UP	64	0.39607388	1.533918	0.0034965	0.05327864	1
FERREIRA_EWINGS_SARCOMA_UNSTABLE_VS_STABLE_DN	80	0.4114141	1.6385984	0.0035461	0.02847425	1
WANG_HCP_PROSTATE_CANCER	102	0.41591394	1.7217637	0.00357143	0.01662163	0.978
DIAZ_CHRONIC_MEYLOGENOUS_LEUKEMIA_DN	107	0.36871907	1.5328591	0.00363636	0.05362454	1
BHAT_ESR1_TARGETS_NOT_VIA_AKT1_DN	80	0.41613108	1.6750314	0.00367647	0.02260645	1
RICKMAN_HEAD_AND_NECK_CANCER_C	93	0.36558768	1.4992516	0.00371747	0.06425785	1
BIDUS_METASTASIS_DN	138	0.37899452	1.6520709	0.00373134	0.02627716	1
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_CDC25_UP	114	0.3647159	1.5371522	0.00378788	0.05246627	1
WESTON_VEGFA_TARGETS	102	0.3555222	1.5040717	0.00378788	0.06278529	1
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_CDC25_DN	137	0.34814617	1.4879256	0.00395257	0.06884542	1
LENAOUR_DENDRITIC_CELL_MATURATION_DN	124	0.3945892	1.6800978	0.00406504	0.02190404	0.999
NING_CHRONIC_OBSTRUCTIVE_PULMONARY_DISEASE_DN	112	0.3506723	1.4771096	0.00406504	0.07257526	1
ZHU_CMV_ALL_DN	123	0.36961192	1.5708838	0.00413223	0.04254561	1
QI_HYPOXIA	123	0.38388836	1.6312304	0.00414938	0.0297619	1
HUANG_GATA2_TARGETS_UP	132	0.37487555	1.6419796	0.00416667	0.02785023	1
BERTUCCI_MEDULLARY_VS_DUCTAL_BREAST_CANCER_DN	145	0.3420962	1.5010399	0.00420168	0.06369738	1
UEDA_PERIFERAL_CLOCK	156	0.3324667	1.4709073	0.00429185	0.07504998	1
TSAI_RESPONSE_TO_IONIZING_RADIATION	137	0.33990332	1.4822073	0.00448431	0.07106648	1
SUH_COEXPRESSED_WITH_ID1_AND_ID2_UP	17	0.6277041	1.7736723	0.00453515	0.01103277	0.908
MCCABE_HOXC6_TARGETS_CANCER_DN	19	0.61334556	1.7529969	0.00478469	0.01309723	0.943
SARTIPY_BLUNTED_BY_INSULIN_RESISTANCE_UP	17	0.64662397	1.8105365	0.00479616	0.0079964	0.807
BOYAULT_LIVER_CANCER_SUBCLASS_G56_DN	16	0.6749321	1.842161	0.00483092	0.00609906	0.687
AMIT_DELAYED_EARLY_GENES	18	0.67319995	1.9108648	0.00488998	0.00349395	0.423
XU_RESPONSE_TO_TRETINOIN_AND_NSC682994_UP	16	0.6447384	1.8135104	0.00490196	0.00787953	0.797
DUTTA_APOPTOSIS_VIA_NFKB	31	0.5510462	1.7970382	0.00492611	0.00904864	0.864
MAHADEVAN_IMATINIB_RESISTANCE_UP	18	0.61488396	1.7089239	0.00493827	0.01807791	0.99
BANDRES_RESPONSE_TO_CARMUSTIN_MGMT_48HR_DN	153	0.332408	1.4612693	0.00497512	0.07894015	1
SESTO_RESPONSE_TO_UV_C3	20	0.64466506	1.8559175	0.005	0.00545844	0.634
CHEOK_RESPONSE_TO_HD_MTX_UP	17	0.6210071	1.719318	0.005	0.0168391	0.982
MAHADEVAN_RESPONSE_TO_MP470_UP	19	0.6588646	1.8760142	0.00501253	0.00453376	0.56
XU_HGF_TARGETS_INDUCED_BY_AKT1_6HR	19	0.6250035	1.8582408	0.00501253	0.00536839	0.626
DAZARD_UV_RESPONSE_CLUSTER_G28	20	0.60569835	1.8266321	0.00512821	0.00693074	0.74
BURTON_ADIPOGENESIS_PEAK_AT_8HR	32	0.49159408	1.6427959	0.00519481	0.02774859	1
ZHANG_ANTIVIRAL_RESPONSE_TO_RIBAVIRIN_UP	26	0.5674382	1.7900693	0.00527705	0.00960973	0.881
HOFMANN_MYELODYSPLASTIC_SYNDROM_LOW_RISK_DN	27	0.60372406	1.951732	0.00530504	0.00222335	0.263
WANG_BARRETTES_ESOPHAGUS_UP	40	0.52079517	1.7589728	0.00537634	0.0124469	0.937
SIMBULAN_UV_RESPONSE_NORMAL_DN	31	0.5009406	1.6669055	0.00547945	0.02380073	1
VALK_AML_CLUSTER_9	34	0.51117	1.711974	0.00552486	0.0178457	0.99
MULLIGHAN_MLL_SIGNATURE_2_DN	260	0.30030397	1.4178154	0.00558659	0.09965973	1
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED_IN_ERYTHROCYTE_UP	43	0.5103172	1.7432295	0.00564972	0.01402348	0.955
MIKKELSEN_MCV6_LCP_WITH_H3K27ME3	24	0.5688732	1.7203941	0.00564972	0.01673836	0.981
WANG METHYLATED_IN_BREAST_CANCER	35	0.5100748	1.7023821	0.00564972	0.01875515	0.994
HALMOS_CEBPA_TARGETS_DN	43	0.50430936	1.7680418	0.00566572	0.01150561	0.921
ONDER_CDH1_TARGETS_3_DN	53	0.46669105	1.7265489	0.00568182	0.0161632	0.975

KANG_GIST_WITH_PDGFR_A_UP	48	0.46149018	1.6521113	0.00574713	0.0263192	1
ENGELMANN_CANCER_PROGENITORS_UP	43	0.46709308	1.6434339	0.00574713	0.02767098	1
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_6HR_DN	36	0.52432317	1.7828989	0.00578035	0.01021981	0.892
BERENJENO_ROCK_SIGNALING_NOT_VIA_RHOA_DN	46	0.47528094	1.7008584	0.00598802	0.01892132	0.995
LIM_MAMMARY_LUMINAL_PROGENITOR_UP	54	0.4542483	1.6888542	0.00600601	0.0206124	0.997
TORCHIA_TARGETS_OF_EWSR1_FLI1_FUSION_UP	241	0.28885886	1.3418065	0.0060241	0.14229342	1
ZHENG_IL22_SIGNALING_UP	49	0.4642206	1.669315	0.00606061	0.02336426	1
OSWALD_HEMATOPOIETIC_STEM_CELL_IN_COLLAGEN_GEL_DN	239	0.27770677	1.3031499	0.00609756	0.16914372	1
HERNANDEZ_MITOTIC_ARREST_BY_DOCETAXEL_2_UP	56	0.45650482	1.6776886	0.00621118	0.0222816	1
LEE_LIVER_CANCER_E2F1_UP	57	0.42891213	1.5780864	0.00632911	0.04066098	1
BOYLAN_MULTIPLE_MYELOMA_PCA3_UP	71	0.42837945	1.6500129	0.00636943	0.02657372	1
MUNSHI_MULTIPLE_MYELOMA_UP	76	0.3993554	1.6015846	0.00638978	0.03551449	1
GROSS_HYPOXIA_VIA_HIF1A_DN	99	0.3729222	1.5385792	0.00662252	0.05204425	1
GAVIN_FOXP3_TARGETS_CLUSTER_P7	78	0.40996164	1.6067716	0.00696864	0.03441806	1
WANG_BARRETTS_ESOPHAGUS_DN	25	0.5419389	1.702552	0.00721154	0.01885187	0.994
WANG_ESOPHAGUS_CANCER_VS_NORMAL_UP	105	0.38686058	1.5690305	0.00724638	0.04287696	1
OUELLET_CULTURED_OVARIAN_CANCER_INVASIVE_VS_LMP_DN	30	0.5147213	1.6742815	0.00733496	0.0227051	1
LIAN_NEUTROPHIL_GRANULE_CONSTITUENTS	24	0.6190366	1.8991609	0.00737101	0.00377371	0.466
PEREZ_TP63_TARGETS	303	0.2672885	1.2863721	0.00746269	0.1806171	1
KASLER_HDAC7_TARGETS_2_DN	30	0.5350505	1.7512293	0.00759494	0.01328159	0.944
ZIRN_TRETINOIN_RESPONSE_UP	18	0.6153175	1.7448869	0.00771208	0.01395776	0.954
CAFFAREL_RESPONSE_TO_THC_UP	31	0.50108683	1.6091572	0.00787402	0.03394017	1
AIGNER_ZEB1_TARGETS	32	0.5371249	1.7415437	0.00793651	0.01413244	0.956
YOSHIMURA_MAPK8_TARGETS_DN	334	0.2869028	1.4221977	0.00793651	0.09748088	1
MEISSNER_NPC_HCP_WITH_H3K4ME3_AND_H3K27ME3	130	0.3375901	1.4462373	0.00858369	0.08540312	1
CHIBA_RESPONSE_TO_TSA_UP	48	0.4382253	1.5803576	0.00859599	0.04014097	1
TIEN_INTESTINE_PROBIOTICS_6HR_UP	47	0.41283974	1.4822489	0.00869565	0.07115378	1
RODRIGUES_NTN1_TARGETS_DN	133	0.36598742	1.561912	0.00873363	0.04496157	1
HAN_JNK_SIGNALING_DN	37	0.4876849	1.6557974	0.00877193	0.02578902	1
MOLENAAR_TARGETS_OF_CCND1_AND_CDK4_UP	54	0.43846428	1.6204404	0.00903614	0.03189207	1
KORKOLA_EMBRYONIC_CARCINOMA_VS_SEMINOMA_UP	21	0.58761626	1.727226	0.0090703	0.01606868	0.974
ADDYA_ERYTHROID_DIFFERENTIATION_BY_HEMIN	67	0.43663532	1.6646916	0.00923077	0.02415497	1
GOTZMANN_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_DN	192	0.28592116	1.3078643	0.00925926	0.16567521	1
SCHAEFFER_PROSTATE_DEVELOPMENT_48HR_UP	433	0.27308512	1.3587124	0.00943396	0.13266738	1
ZHAN_MULTIPLE_MYELOMA_CD1_VS_CD2_UP	60	0.44406858	1.6700448	0.00952381	0.02330202	1
MIKKELSEN_MCV6_ICP_WITH_H3K27ME3	65	0.3973975	1.562322	0.00952381	0.04487525	1
VILIMAS_NOTCH1_TARGETS_DN	18	0.6143922	1.7611396	0.00961539	0.01214288	0.935
BURTON_ADIPOGENESIS_8	76	0.39831674	1.5778772	0.00967742	0.04065691	1
SCHUETZ_BREAST_CANCER_DUCTAL_INVASIVE_DN	80	0.37420243	1.4880444	0.00977199	0.06888032	1
GAVIN_PDE3B_TARGETS	21	0.57746416	1.7367777	0.00990099	0.0148051	0.963
SENESE_HDAC1_AND_HDAC2_TARGETS_DN	199	0.30715534	1.4094434	0.01	0.10401254	1

Table S4. Gene listing of PKC-driven inducible genes that are sensitive to the PKC-θ pathway.

Probeset	Symbol	ENSEMBL	Description	Induced by TGF	More in CSC than NCSC
16704182	CSGALNACT2	ENSG00000169826	chondroitin sulfate N-acetylgalactosaminyltransferase 2	yes	yes
16705011	DKK1	ENSG00000107984	dickkopf 1 homolog	yes	yes
16707327	PCGF5	ENSG00000180628	polycomb group ring finger 5	yes	yes
16716478	ANKRD1	ENSG00000148677	ankyrin repeat domain 1	yes	yes
16756202	EID3	ENSG00000255150	EP300 interacting inhibitor of differentiation 3	yes	yes
16765558	ITGA5	ENSG00000161638	integrin, alpha 5 (fibronectin receptor, alpha polypeptide)	yes	yes
16773759	FRY	ENSG00000073910	furry homolog	yes	yes
16774727	FNDC3A	ENSG00000102531	fibronectin type III domain containing 3A	yes	yes
16825371	NUPR1	ENSG00000176046	nuclear protein, transcriptional regulator, 1	yes	yes
16867074	MFSD12	ENSG00000161091	major facilitator superfamily domain containing 12	yes	yes
16909021	SERPINE2	ENSG00000135919	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 2	yes	yes
16933470	TTC28	ENSG00000100154	tetratricopeptide repeat domain 28	yes	yes
16979917	SLC7A11	ENSG00000151012	solute carrier family 7 (anionic amino acid transporter light chain, xc- system), member 11	yes	yes
16985950	MAP1B	ENSG00000131711	microtubule-associated protein 1B	yes	yes
16989736	EGR1	ENSG00000120738	early growth response 1	yes	yes
17000463	EGR1	ENSG00000120738	early growth response 1	yes	yes
17015862	ATXN1	ENSG00000124788	ataxin 1	yes	yes
17050381	IFRD1	ENSG00000006652	interferon-related developmental regulator 1	yes	yes
17060061	ASNS	ENSG00000070669	asparagine synthetase	yes	yes
17077594	ASPH	ENSG00000198363	aspartate beta-hydroxylase	yes	yes
17079210	GEM	ENSG00000164949	GTP binding protein overexpressed in skeletal muscle	yes	yes
16665182	PRKAA2	ENSG00000162409	protein kinase, AMP-activated, alpha 2 catalytic subunit	no	yes
16670479	C1orf51	ENSG00000159208	chromosome 1 open reading frame 51	no	yes
16674845	LAMC2	ENSG00000058085	laminin, gamma 2	no	yes
16675924	ELF3	ENSG00000163435	E74-like factor 3 (ets domain transcription factor, epithelial-specific)	no	yes
16681304	ERF1	ENSG00000116285	ERBB receptor feedback inhibitor 1	no	yes
16681827	DHRS3	ENSG00000162496	dehydrogenase/reductase	no	yes
16684812	RNF19B	ENSG00000116514	ring finger protein 19B	no	yes
16691403	CD58	ENSG00000116815	CD58 molecule	no	yes
16697981	LOC100289488	NA	uncharacterized LOC100289488	no	yes
16705961	DDIT4	ENSG00000168209	DNA-damage-inducible transcript 4	no	yes
16706499	PPIF	ENSG00000108179	peptidylprolyl isomerase F	no	yes
16707120	STAMBPL1	ENSG00000138134	STAM binding protein-like 1	no	yes
16707180	IFIT2	ENSG00000119922	interferon-induced protein with tetratricopeptide repeats 2	no	yes
16707184	IFIT3	ENSG00000119917	interferon-induced protein with tetratricopeptide repeats 3	no	yes
16709128	DUSP5	ENSG00000138166	dual specificity phosphatase 5	no	yes
16711343	AKR1C2	ENSG00000151632	aldo-keto reductase family 1, member C2	no	yes
16713144	ITGB1	ENSG00000150093	integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)	no	yes
16723614	CD44	ENSG00000026508	CD44 molecule	no	yes
16723653	CD44	ENSG00000026508	CD44 molecule	no	yes
16728227	MYEOV	ENSG00000172927	myeloma overexpressed	no	yes
16730522	BIRC3	ENSG00000023445	baculoviral IAP repeat containing 3	no	yes
16743707	MMP10	ENSG00000166670	matrix metalloproteinase 10	no	yes
16743721	MMP1	ENSG00000196611	matrix metalloproteinase 1	no	yes
16743764	MMP13	ENSG00000137745	matrix metalloproteinase 13	no	yes
16744415	IL18	ENSG00000150782	interleukin 18	no	yes
16754397	PHLDA1	NA	pleckstrin homology-like domain, family A, member 1	no	yes
16756310	TCP11L2	ENSG00000166046	t-complex 11	no	yes
16764053	RND1	ENSG00000172602	Rho family GTPase 1	no	yes
16766578	DDIT3	ENSG00000175197	DNA-damage-inducible transcript 3	no	yes
16768297	DUSP6	ENSG00000139318	dual specificity phosphatase 6	no	yes
16771417	OASL	ENSG00000135114	2'-5'-oligoadenylate synthetase-like	no	yes
16784226	ERO1L	ENSG00000197930	ERO1-like	no	yes
16793024	ERO1L	ENSG00000197930	ERO1-like	no	yes
16796694	WARS	ENSG00000140105	tryptophanyl-tRNA synthetase	no	yes
16802251	SMAD3	ENSG00000166949	SMAD family member 3	no	yes
16803018	ARID3B	ENSG00000179361	AT rich interactive domain 3B	no	yes
16803754	KIAA1199	ENSG00000103888	KIAA1199	no	yes
16819478	CCL22	ENSG00000102962	chemokine	no	yes
16821330	PLCG2	ENSG00000197943	phospholipase C, gamma 2 (phosphatidylinositol-specific)	no	yes
16830577	CD68	ENSG00000129226	CD68 molecule	no	yes
16833060	LRR37B	ENSG00000185158	leucine rich repeat containing 37B	no	yes
16843511	CCL5	ENSG00000161570	chemokine	no	yes
16844294	NR1D1	ENSG00000126368	nuclear receptor subfamily 1, group D, member 1	no	yes
16846864	MMD	ENSG00000108960	monocyte to macrophage differentiation-associated	no	yes
16847771	ERN1	ENSG00000178607	endoplasmic reticulum to nucleus signaling 1	no	yes
16852666	SEC11C	ENSG00000166562	SEC11 homolog C	no	yes
16852683	PMAIP1	ENSG00000141682	phorbol-12-myristate-13-acetate-induced protein 1	no	yes
16854268	NPC1	ENSG00000141458	Niemann-Pick disease, type C1	no	yes
16854301	ANKRD29	ENSG00000154065	ankyrin repeat domain 29	no	yes
16859090	CASP14	ENSG00000105141	caspase 14, apoptosis-related cysteine peptidase	no	yes
16859795	GDF15	ENSG00000130513	growth differentiation factor 15	no	yes
16861961	IL29	ENSG00000182393	---	no	yes
16862548	CEACAM5	ENSG00000105388	carcinoembryonic antigen-related cell adhesion molecule 5	no	yes
16863877	PPP1R15A	ENSG00000087074	protein phosphatase 1, regulatory subunit 15A	no	yes
16873060	PLAUR	ENSG000000011422	plasminogen activator, urokinase receptor	no	yes
16876764	RSAD2	ENSG00000134321	radical S-adenosyl methionine domain containing 2	no	yes
16878994	RASGRP3	ENSG00000152689	RAS guanyl releasing protein 3	no	yes
16879500	PLEKHH2	ENSG00000152527	pleckstrin homology domain containing, family H (with MyTH4 domain) member 2	no	yes
16879721	EPAS1	ENSG00000116016	endothelial PAS domain protein 1	no	yes
16881138	MXD1	ENSG00000059728	MAX dimerization protein 1	no	yes
16883690	IL1RL1	ENSG00000115602	interleukin 1 receptor-like 1	no	yes
16884523	SLC20A1	ENSG00000144136	solute carrier family 20 (phosphate transporter), member 1	no	yes

16888803	INPP1	ENSG00000151689	inositol polyphosphate-1-phosphatase	no	yes
16890099	CCNYL1	ENSG00000163249	cyclin Y-like 1	no	yes
16896764	MAP4K3	ENSG00000011566	mitogen-activated protein kinase kinase kinase kinase 3	no	yes
16903491	RND3	ENSG00000115963	Rho family GTPase 3	no	yes
16911261	BMP2	ENSG00000125845	bone morphogenetic protein 2	no	yes
16914812	CEBPB	ENSG00000172216	CCAAT/enhancer binding protein (C/EBP), beta	no	yes
16917373	FLRT3	ENSG00000125848	fibronectin leucine rich transmembrane protein 3	no	yes
16920169	B4GALT5	ENSG00000158470	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 5	no	yes
16922779	ETS2	ENSG00000157557	v-ets erythroblastosis virus E26 oncogene homolog 2	no	yes
16941024	SEMA3B	ENSG00000012171	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3B	no	yes
16947113	RAP2B	ENSG00000181467	RAP2B, member of RAS oncogene family	no	yes
16948540	B3GNT5	ENSG00000176597	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 5	no	yes
16949499	FLJ42393	ENSG00000213132	uncharacterized LOC401105	no	yes
16951696	NEK10	ENSG00000163491	NIMA	no	yes
16951756	SLC4A7	ENSG00000033867	solute carrier family 4, sodium bicarbonate cotransporter, member 7	no	yes
16960304	CP	ENSG00000047457	ceruloplasmin	no	yes
16960355	TM4SF1	ENSG00000169908	transmembrane 4 L six family member 1	no	yes
16960911	LXN	ENSG00000079257	latexin	no	yes
16961551	PLD1	ENSG00000075651	phospholipase D1, phosphatidylcholine-specific	no	yes
16962022	LAMP3	ENSG00000078081	lysosomal-associated membrane protein 3	no	yes
16964735	S100P	ENSG00000163993	S100 calcium binding protein P	no	yes
16967853	AREG	ENSG00000109321	amphiregulin	no	yes
16967863	AREG	ENSG00000109321	amphiregulin	no	yes
16968765	HERC5	ENSG00000138646	HECT and RLD domain containing E3 ubiquitin protein ligase 5	no	yes
16975234	TMEM156	ENSG00000121895	transmembrane protein 156	no	yes
16977052	CXCL10	ENSG00000169245	chemokine	no	yes
16983848	RAI14	ENSG00000039560	retinoic acid induced 14	no	yes
16998293	GLRX	ENSG00000173221	glutaredoxin	no	yes
16998309	ELL2	ENSG00000118985	elongation factor, RNA polymerase II, 2	no	yes
17000724	HBEGF	ENSG00000113070	heparin-binding EGF-like growth factor	no	yes
17001100	NR3C1	ENSG00000113580	nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor)	no	yes
17007543	ITPR3	ENSG00000096433	inositol 1,4,5-trisphosphate receptor, type 3	no	yes
17009093	VEGFA	ENSG00000112715	vascular endothelial growth factor A	no	yes
17012946	TNFAIP3	ENSG00000118503	tumor necrosis factor, alpha-induced protein 3	no	yes
17019484	GTPBP2	ENSG00000172432	GTP binding protein 2	no	yes
17024144	IFNGR1	ENSG00000027697	interferon gamma receptor 1	no	yes
17025267	SOD2	ENSG00000112096	superoxide dismutase 2, mitochondrial	no	yes
17045917	UPP1	ENSG00000183696	uridine phosphorylase 1	no	yes
17046135	EGFR	ENSG00000146648	epidermal growth factor receptor	no	yes
17050591	MET	ENSG00000105976	met proto-oncogene	no	yes
17059828	TFPI2	ENSG00000105825	tissue factor pathway inhibitor 2	no	yes
17060143	BAIAP2L1	ENSG00000006453	BAI1-associated protein 2-like 1	no	yes
17061545	NAMPT	ENSG00000105835	nicotinamide phosphoribosyltransferase	no	yes
17069212	SDCBP	ENSG00000137575	syndecan binding protein	no	yes
17070013	RDH10	ENSG00000121039	retinol dehydrogenase 10	no	yes
17070492	ATP6VOD2	ENSG00000147614	ATPase, H+ transporting, lysosomal 38kDa, V0 subunit d2	no	yes
17072351	FAM83A	ENSG00000147689	family with sequence similarity 83, member A	no	yes
17075168	CSGALNACT1	ENSG00000147408	chondroitin sulfate N-acetylgalactosaminyltransferase 1	no	yes
17075426	TNFRSF10B	ENSG00000120889	tumor necrosis factor receptor superfamily, member 10b	no	yes
17081829	SLC45A4	ENSG00000022567	solute carrier family 45, member 4	no	yes
17083614	LURAP1L	ENSG00000153714	leucine rich adaptor protein 1-like	no	yes
17052823	ZYX	ENSG00000159840	zyxin	yes	no
16920121	ZNFX1	ENSG00000124201	zinc finger, NFX1-type containing 1	yes	no
16697686	ZNF281	ENSG00000162702	zinc finger protein 281	yes	no
16703715	ZEB1	ENSG00000148516	zinc finger E-box binding homeobox 1	yes	no
17013657	ULBP1	ENSG00000111981	UL16 binding protein 1	yes	no
16756163	TXNRD1	ENSG00000198431	thioredoxin reductase 1	yes	no
16764305	TUBA1A	ENSG00000167552	tubulin, alpha 1a	yes	no
16831908	TRIM16L	ENSG00000108448	tripartite motif containing 16-like	yes	no
16841662	TRIM16	ENSG00000221926	tripartite motif containing 16	yes	no
17057525	TNS3	ENSG00000136205	tensin 3	yes	no
16849556	TIMP2	ENSG00000035862	TIMP metalloproteinase inhibitor 2	yes	no
16677556	TGFB2	ENSG00000092969	transforming growth factor, beta 2	yes	no
16872551	TGFB1	ENSG00000105329	transforming growth factor, beta 1	yes	no
16930132	SUN2	NA	Sad1 and UNC84 domain containing 2	yes	no
16884956	STEAP3	ENSG00000115107	STEAP family member 3, metalloproteinase	yes	no
16993458	SQSTM1	ENSG00000161011	sequestosome 1	yes	no
16838059	SPHK1	ENSG00000176170	sphingosine kinase 1	yes	no
16909413	SP110	ENSG00000135899	SP110 nuclear body protein	yes	no
16842217	SNORD3D	NA	small nucleolar RNA, C/D box 3D	yes	no
16721375	SMPD1	ENSG00000166311	sphingomyelin phosphodiesterase 1, acid lysosomal	yes	no
16959386	SLCO2A1	ENSG00000174640	solute carrier organic anion transporter family, member 2A1	yes	no
16937943	SLC6A6	ENSG00000131389	solute carrier family 6 (neurotransmitter transporter, taurine), member 6	yes	no
16826970	SLC38A7	ENSG00000103042	solute carrier family 38, member 7	yes	no
17002820	SH3PXD2B	ENSG00000174705	SH3 and PX domains 2B	yes	no
17049676	SERPINE1	ENSG00000106366	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1	yes	no
16811638	SEMA7A	ENSG00000138623	semaphorin 7A, GPI membrane anchor (John Milton Hagen blood group)	yes	no
16885189	RNU4ATAC	ENSG00000208506	RNA, U4atac small nuclear (U12-dependent splicing)	yes	no
16795582	PTPN21	ENSG00000070778	protein tyrosine phosphatase, non-receptor type 21	yes	no
16837128	PRKCA	ENSG00000154229	protein kinase C, alpha	yes	no
16920671	PMEPA1	ENSG00000124225	prostate transmembrane protein, androgen induced 1	yes	no
16670432	PLEKHO1	ENSG00000023902	pleckstrin homology domain containing, family O member 1	yes	no
16702175	PFKFB3	ENSG00000170525	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3	yes	no
17003291	PDLIM7	ENSG00000196923	PDZ and LIM domain 7	yes	no
16707009	PAPSS2	ENSG00000198682	3'-phosphoadenosine 5'-phosphosulfate synthase 2	yes	no

16668997	OLFML3	ENSG00000116774	olfactomedin-like 3	yes	no
16768738	NTN4	ENSG00000074527	netrin 4	yes	no
16713187	NRP1	ENSG00000099250	neuropilin 1	yes	no
17029348	NEU1	ENSG00000204386	sialidase 1	yes	no
17015652	NEDD9	ENSG00000111859	neural precursor cell expressed, developmentally down-regulated 9	yes	no
16722720	NAV2	ENSG00000166833	neuron navigator 2	yes	no
16705329	MYPN	ENSG00000138347	myopalladin	yes	no
16758264	MLXIP	ENSG00000175727	MLX interacting protein	yes	no
16935290	MKL1	ENSG00000196588	megakaryoblastic leukemia	yes	no
16816018	MIR365A	ENSG00000199130	microRNA 365a	yes	no
16839524	MIR22HG	ENSG00000186594	MIR22 host gene	yes	no
16722081	MICAL2	ENSG00000133816	microtubule associated monooxygenase, calponin and LIM domain containing 2	yes	no
16981426	MFAP3L	ENSG00000198948	microfibrillar-associated protein 3-like	yes	no
16845876	MAP3K14	NA	mitogen-activated protein kinase kinase kinase 14	yes	no
16703603	LYZL1	ENSG00000120563	lysozyme-like 1	yes	no
16962911	LRRCL15	ENSG00000172061	leucine rich repeat containing 15	yes	no
17075478	LOXL2	ENSG00000134013	lysyl oxidase-like 2	yes	no
17042997	LFNG	ENSG00000106003	LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase	yes	no
16811286	LARP6	ENSG00000166173	La ribonucleoprotein domain family, member 6	yes	no
16674805	LAMC1	ENSG00000135862	laminin, gamma 1 (formerly LAMB2)	yes	no
17079910	KLF10	ENSG00000155090	Kruppel-like factor 10	yes	no
16858710	JUNB	ENSG00000171223	jun B proto-oncogene	yes	no
16891990	ITM2C	ENSG00000135916	integral membrane protein 2C	yes	no
16958356	ITGB5	ENSG00000082781	integrin, beta 5	yes	no
16888512	ITGAV	ENSG00000138448	integrin, alpha V	yes	no
16683377	ID3	ENSG00000117318	inhibitor of DNA binding 3, dominant negative helix-loop-helix protein	yes	no
16683264	HTR1D	ENSG00000179546	5-hydroxytryptamine (serotonin) receptor 1D, G protein-coupled	yes	no
16929562	HMOX1	ENSG00000100292	heme oxygenase	yes	no
16991018	HMGXB3	ENSG00000113716	HMG box domain containing 3	yes	no
16754373	GLIPR1	ENSG00000139278	GLI pathogenesis-related 1	yes	no
16856232	FSTL3	ENSG00000070404	follistatin-like 3	yes	no
16808401	FRMD5	ENSG00000171877	FERM domain containing 5	yes	no
16947974	FNDC3B	ENSG00000075420	fibronectin type III domain containing 3B	yes	no
16908037	FN1	ENSG00000115414	fibronectin 1	yes	no
16786625	FLVCR2	ENSG00000119686	feline leukemia virus subgroup C cellular receptor family, member 2	yes	no
16685571	FHL3	ENSG00000183386	four and a half LIM domains 3	yes	no
16901393	FHL2	ENSG00000115641	four and a half LIM domains 2	yes	no
17080788	FBXO32	ENSG00000156804	F-box protein 32	yes	no
16962380	ETV5	ENSG00000244405	ets variant 5	yes	no
16877795	EFR3B	ENSG00000084710	EFR3 homolog B	yes	no
16845445	DUSP3	ENSG00000108861	dual specificity phosphatase 3	yes	no
16672457	DUSP23	ENSG00000158716	dual specificity phosphatase 23	yes	no
17002846	DUSP1	ENSG00000120129	dual specificity phosphatase 1	yes	no
16775856	DNAJC3	ENSG00000102580	Dnaj (Hsp40) homolog, subfamily C, member 3	yes	no
16666738	CYR61	ENSG00000142871	cysteine-rich, angiogenic inducer, 61	yes	no
16824046	CPPED1	ENSG00000103381	calcineurin-like phosphoesterase domain containing 1	yes	no
16756212	CHST11	ENSG00000171310	carbohydrate	yes	no
16970853	CCRN4L	ENSG00000151014	CCR4 carbon catabolite repression 4-like	yes	no
17005138	CAP2	ENSG00000112186	CAP, adenylate cyclase-associated protein, 2 (yeast)	yes	no
16816186	C16orf45	ENSG00000166780	chromosome 16 open reading frame 45	yes	no
16788014	C14orf132	ENSG00000227051	chromosome 14 open reading frame 132	yes	no
17066523	BMP1	ENSG00000168487	bone morphogenetic protein 1	yes	no
16937024	BHLHE40	ENSG00000134107	basic helix-loop-helix family, member e40	yes	no
16983451	BASP1	ENSG00000176788	brain abundant, membrane attached signal protein 1	yes	no
16803710	ARNT2	ENSG00000172379	aryl-hydrocarbon receptor nuclear translocator 2	yes	no
16769514	APPL2	ENSG00000136044	adaptor protein, phosphotyrosine interaction, PH domain and leucine zipper containing 2	yes	no
16934476	APOL2	ENSG00000128335	apolipoprotein L, 2	yes	no
16763600	AMIGO2	ENSG00000139211	adhesion molecule with Ig-like domain 2	yes	no
16696824	ABL2	ENSG00000143322	v-abl Abelson murine leukemia viral oncogene homolog 2	yes	no
16815735	ABAT	ENSG00000183044	4-aminobutyrate aminotransferase	yes	no
16985094	ZSWIM6	ENSG00000130449	zinc finger, SWIM-type containing 6	no	no
16858865	ZSWIM4	ENSG00000132003	zinc finger, SWIM-type containing 4	no	no
16866115	ZSCAN4	ENSG00000180532	zinc finger and SCAN domain containing 4	no	no
16870956	ZNF91	ENSG00000167232	zinc finger protein 91	no	no
16875026	ZNF616	ENSG00000204611	zinc finger protein 616	no	no
16862895	ZNF222	ENSG00000159885	zinc finger protein 222	no	no
16870838	ZNF208	ENSG00000160321	zinc finger protein 208	no	no
17005888	ZNF165	ENSG00000197279	zinc finger protein 165	no	no
16794084	ZFYVE26	ENSG00000072121	zinc finger, FYVE domain containing 26	no	no
16897026	ZFP36L2	ENSG00000152518	ZFP36 ring finger protein-like 2	no	no
16794158	ZFP36L1	ENSG00000185650	ZFP36 ring finger protein-like 1	no	no
16872223	ZFP36	NA	ZFP36 ring finger protein	no	no
16861997	ZFP36	ENSG00000128016	ZFP36 ring finger protein	no	no
16662623	ZC3H12A	ENSG00000163874	zinc finger CCCH-type containing 12A	no	no
16830202	XAF1	ENSG00000132530	XIAP associated factor 1	no	no
17060824	VGF	ENSG00000128564	VGF nerve growth factor inducible	no	no
16845336	VAT1	ENSG00000108828	vesicle amine transport protein 1 homolog	no	no
16927283	USP41	NA	ubiquitin specific peptidase 41	no	no
16932732	USP41	NA	ubiquitin specific peptidase 41	no	no
16729485	USP35	ENSG00000118369	ubiquitin specific peptidase 35	no	no
16926942	USP18	ENSG00000184979	ubiquitin specific peptidase 18	no	no
16892601	UGT1A9	ENSG00000241119	UDP glucuronosyltransferase 1 family, polypeptide A9	no	no
16859205	UCA1	NA	urothelial cancer associated 1	no	no
16812790	UBE2Q2P1	ENSG00000189136	ubiquitin-conjugating enzyme E2Q family member 2 pseudogene 1	no	no
16738544	UBE2L6	ENSG00000156587	ubiquitin-conjugating enzyme E2L 6	no	no

16954217	UBA7	ENSG00000182179	ubiquitin-like modifier activating enzyme 7	no	no
17015143	TUBB2A	ENSG00000137267	tubulin, beta 2A class IIa	no	no
16785938	TTC9	ENSG00000133985	tetratricopeptide repeat domain 9	no	no
16811975	TSPAN3	ENSG00000140391	tetraspanin 3	no	no
16664218	TSPAN1	ENSG00000117472	tetraspanin 1	no	no
16721249	TRIM6-TRIM34	ENSG00000258588	TRIM6-TRIM34 readthrough	no	no
16734929	TRIM5	ENSG00000132256	tripartite motif containing 5	no	no
16724715	TRIM48	ENSG00000150244	tripartite motif containing 48	no	no
16846915	TRIM25	ENSG00000121060	tripartite motif containing 25	no	no
16734762	TRIM21	ENSG00000132109	tripartite motif containing 21	no	no
17072601	TRIB1	ENSG00000173334	tribbles homolog 1	no	no
16952118	TRANK1	ENSG00000168016	tetratricopeptide repeat and ankyrin repeat containing 1	no	no
16949537	TP63	ENSG00000073282	tumor protein p63	no	no
16844356	TNS4	ENSG00000131746	tensin 4	no	no
17001763	TNIP1	ENSG00000145901	TNFAIP3 interacting protein 1	no	no
16961616	TNFSF10	ENSG00000121858	tumor necrosis factor (ligand) superfamily, member 10	no	no
17019805	TNFRSF21	ENSG00000146072	tumor necrosis factor receptor superfamily, member 21	no	no
16815310	TNFRSF12A	ENSG00000006327	tumor necrosis factor receptor superfamily, member 12A	no	no
17075460	TNFRSF10A	ENSG00000104689	tumor necrosis factor receptor superfamily, member 10a	no	no
17027794	TNF	NA	tumor necrosis factor	no	no
17030620	TNF	NA	tumor necrosis factor	no	no
17033337	TNF	NA	tumor necrosis factor	no	no
17035418	TNF	NA	tumor necrosis factor	no	no
17038117	TNF	NA	tumor necrosis factor	no	no
17040712	TNF	NA	tumor necrosis factor	no	no
17026267	TNF	ENSG00000232810	tumor necrosis factor	no	no
17006659	TNF	ENSG00000232810	tumor necrosis factor	no	no
16822438	TMEM8A	ENSG00000129925	transmembrane protein 8A	no	no
16830778	TMEM88	ENSG00000167874	transmembrane protein 88	no	no
16800156	TMEM62	ENSG00000137842	transmembrane protein 62	no	no
16659537	TMEM51	ENSG00000171729	transmembrane protein 51	no	no
16733421	TMEM45B	ENSG00000151715	transmembrane protein 45B	no	no
16950877	TMEM40	ENSG00000088726	transmembrane protein 40	no	no
16868920	TMEM205	ENSG00000105518	transmembrane protein 205	no	no
16952782	TMEM158	ENSG00000249992	transmembrane protein 158	no	no
16861047	TMEM147	ENSG00000105677	transmembrane protein 147	no	no
17051943	TMEM140	ENSG00000146859	transmembrane protein 140	no	no
16725405	TMEM132A	ENSG00000006118	transmembrane protein 132A	no	no
16816386	TMC7	ENSG00000170537	transmembrane channel-like 7	no	no
16849355	TMC6	ENSG00000141524	transmembrane channel-like 6	no	no
16975226	TLR6	ENSG00000174130	toll-like receptor 6	no	no
16972993	TLR3	ENSG00000164342	toll-like receptor 3	no	no
16971631	TLR2	ENSG00000137462	toll-like receptor 2	no	no
16929442	TIMP3	ENSG00000100234	TIMP metalloproteinase inhibitor 3	no	no
16867409	TICAM1	ENSG00000127666	toll-like receptor adaptor molecule 1	no	no
16802653	THSD4	ENSG00000187720	thrombospondin, type I, domain containing 4	no	no
16919158	TGM2	ENSG00000198959	transglutaminase 2	no	no
17050522	TES	ENSG00000135269	testis derived transcript	no	no
16789960	TEP1	ENSG00000129566	telomerase-associated protein 1	no	no
16874273	TEAD2	ENSG00000074219	TEA domain family member 2	no	no
16738803	TCN1	ENSG00000134827	transcobalamin I (vitamin B12 binding protein, R binder family)	no	no
16847520	TBC1D3P2	ENSG00000188755	TBC1 domain family, member 3 pseudogene 2	no	no
17030026	TAPBP	ENSG00000231925	TAP binding protein	no	no
17032710	TAPBP	ENSG00000231925	TAP binding protein	no	no
17037511	TAPBP	ENSG00000231925	TAP binding protein	no	no
17018215	TAPBP	ENSG00000231925	TAP binding protein	no	no
17040221	TAPBP	ENSG00000231925	TAP binding protein	no	no
17034759	TAP2	ENSG00000204267	transporter 2, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17039945	TAP2	ENSG00000204267	transporter 2, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17017947	TAP2	ENSG00000204267	transporter 2, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17037228	TAP2	ENSG00000204267	transporter 2, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17029788	TAP1	NA	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17032476	TAP1	NA	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17034791	TAP1	NA	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17037271	TAP1	NA	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17039977	TAP1	NA	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17042487	TAP1	NA	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17017979	TAP1	ENSG00000168394	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
17027144	TAP1	ENSG00000168394	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	no	no
16818147	STX4	ENSG00000103496	syntaxin 4	no	no
17013279	STX11	ENSG00000135604	syntaxin 11	no	no
17075553	STC1	ENSG00000159167	stanniocalcin 1	no	no
16766093	STAT2	ENSG00000170581	signal transducer and activator of transcription 2, 113kDa	no	no
16906534	STAT1	ENSG00000115415	signal transducer and activator of transcription 1, 91kDa	no	no
16867278	STAP2	ENSG00000178078	signal transducing adaptor family member 2	no	no
16733473	ST14	ENSG00000149418	suppression of tumorigenicity 14	no	no
16916352	SRXN1	ENSG00000172070	sulfiredoxin 1	no	no
16800680	SQRDL	ENSG00000137767	sulfide quinone reductase-like	no	no
16961056	SPTSSB	ENSG00000196542	serine palmitoyltransferase, small subunit B	no	no
17001063	SPRY4	ENSG00000187678	sprouty homolog 4	no	no
16970435	SPRY1	ENSG00000164056	sprouty homolog 1, antagonist of FGF signaling (Drosophila)	no	no
16693365	SPRR2C	NA	small proline-rich protein 2C	no	no
16829801	SPNS2	ENSG00000183018	spinster homolog 2	no	no
16817521	SPNS1	ENSG00000169682	spinster homolog 1	no	no
16799690	SPINT1	ENSG00000166145	serine peptidase inhibitor, Kunitz type 1	no	no

16889218	SPATS2L	ENSG00000196141	spermatogenesis associated, serine-rich 2-like	no	no
16891922	SP100	ENSG00000067066	SP100 nuclear antigen	no	no
17005276	SOX4	ENSG00000124766	SRY	no	no
16850806	SOGA2	ENSG00000168502	SOGA family member 2	no	no
16823866	SOCS1	ENSG00000185338	suppressor of cytokine signaling 1	no	no
16820556	SNTB2	ENSG00000168807	syntrophin, beta 2 (dystrophin-associated protein A1, 59kDa, basic component 2)	no	no
16823046	SNORD60	ENSG00000206630	small nucleolar RNA, C/D box 60	no	no
16832566	SNORD42A	ENSG00000198242	small nucleolar RNA, C/D box 42A	no	no
17026087	SNORD32B	ENSG00000201330	small nucleolar RNA, C/D box 32B	no	no
17027281	SNORD32B	ENSG00000201330	small nucleolar RNA, C/D box 32B	no	no
17030127	SNORD32B	ENSG00000201330	small nucleolar RNA, C/D box 32B	no	no
17032817	SNORD32B	ENSG00000201330	small nucleolar RNA, C/D box 32B	no	no
17035002	SNORD32B	ENSG00000201330	small nucleolar RNA, C/D box 32B	no	no
17037609	SNORD32B	ENSG00000201330	small nucleolar RNA, C/D box 32B	no	no
17006066	SNORD32B	ENSG00000201330	small nucleolar RNA, C/D box 32B	no	no
16798230	SNORD116-2	ENSG00000251896	small nucleolar RNA, C/D box 116-27	no	no
16798158	SNORD116-1	ENSG00000206609	small nucleolar RNA, C/D box 116-11	no	no
16798331	SNORD115-1	ENSG00000201679	small nucleolar RNA, C/D box 115-15	no	no
16788628	SNORD114-6	ENSG00000201263	small nucleolar RNA, C/D box 114-6	no	no
17046586	SNORA22	ENSG00000206634	small nucleolar RNA, H/ACA box 22	no	no
17060186	SMURF1	ENSG00000198742	SMAD specific E3 ubiquitin protein ligase 1	no	no
16919547	SLPI	ENSG00000124107	secretory leukocyte peptidase inhibitor	no	no
17063536	SLC37A3	ENSG00000157800	solute carrier family 37, member 3	no	no
17059974	SLC25A13	ENSG00000004864	solute carrier family 25 (aspartate/glutamate carrier), member 13	no	no
16989001	SLC22A4	ENSG00000197208	solute carrier family 22 (organic cation/ergothioneine transporter), member 4	no	no
16984056	SLC1A3	ENSG00000079215	solute carrier family 1 (glial high affinity glutamate transporter), member 3	no	no
17083261	SLC1A1	ENSG00000106688	solute carrier family 1 (neuronal/epithelial high affinity glutamate transporter, system Xag), member 1	no	no
17020823	SLC17A5	ENSG00000119899	solute carrier family 17 (anion/sugar transporter), member 5	no	no
16993878	SLC12A7	ENSG00000113504	solute carrier family 12 (potassium/chloride transporters), member 7	no	no
16744731	SIK3	ENSG00000160584	SIK family kinase 3	no	no
16926200	SIK1	ENSG00000142178	salt-inducible kinase 1	no	no
16953396	SHISA5	ENSG00000164054	shisa homolog 5	no	no
16808918	SHC4	ENSG00000185634	SHC (Src homology 2 domain containing) family, member 4	no	no
16980601	SH3D19	ENSG00000109686	SH3 domain containing 19	no	no
16661141	SH3BGR13	ENSG00000142669	SH3 domain binding glutamic acid-rich protein like 3	no	no
16711562	SFMBT2	ENSG00000198879	Scm-like with four mbt domains 2	no	no
16661544	SESN2	ENSG00000130766	sestrin 2	no	no
16852812	SERPINB5	ENSG00000206075	serpin peptidase inhibitor, clade B (ovalbumin), member 5	no	no
17059119	SEMA3C	ENSG00000075223	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3C	no	no
16974968	SEL1L3	ENSG00000091490	sel-1 suppressor of lin-12-like 3	no	no
16919567	SDC4	ENSG00000124145	syndecan 4	no	no
16817320	SBK1	ENSG00000188322	SH3-binding domain kinase 1	no	no
16919022	SAMHD1	ENSG00000101347	SAM domain and HD domain 1	no	no
17059776	SAMD9L	ENSG00000177409	sterile alpha motif domain containing 9-like	no	no
17059771	SAMD9	ENSG00000205413	sterile alpha motif domain containing 9	no	no
16784333	SAMD4A	ENSG00000020577	sterile alpha motif domain containing 4A	no	no
16868619	S1PR2	ENSG00000267534	sphingosine-1-phosphate receptor 2	no	no
16693414	S100A8	ENSG00000143546	S100 calcium binding protein A8	no	no
16693427	S100A7	ENSG00000143556	S100 calcium binding protein A7	no	no
16693409	S100A12	ENSG00000163221	S100 calcium binding protein A12	no	no
16949442	RTP4	ENSG00000136514	receptor	no	no
16677361	RPS6KC1	ENSG00000136643	ribosomal protein S6 kinase, 52kDa, polypeptide 1	no	no
16913198	ROMO1	ENSG00000125995	reactive oxygen species modulator 1	no	no
16838581	RNF213	ENSG00000173821	ring finger protein 213	no	no
17076170	RNF122	ENSG00000133874	ring finger protein 122	no	no
16663446	RN5S46	NA	---	no	no
16879764	RHOQ	ENSG00000119729	ras homolog family member Q	no	no
17066791	RHOBTB2	ENSG00000008853	Rho-related BTB domain containing 2	no	no
16764220	RHEBL1	ENSG00000167550	Ras homolog enriched in brain like 1	no	no
16774303	RGCC	ENSG00000102760	regulator of cell cycle	no	no
16698286	REN	ENSG00000143839	renin	no	no
16744174	RDX	ENSG00000137710	radixin	no	no
16921527	RBM11	ENSG00000185272	RNA binding motif protein 11	no	no
16807195	RASGRP1	ENSG00000172575	RAS guanyl releasing protein 1	no	no
16841907	RASD1	ENSG00000108551	RAS, dexamethasone-induced 1	no	no
16683022	RAP1GAP	ENSG00000076864	RAP1 GTPase activating protein	no	no
17076285	RAB11FIP1	ENSG00000156675	RAB11 family interacting protein 1	no	no
16674521	QSOX1	ENSG00000116260	quiescin Q6 sulfhydryl oxidase 1	no	no
16879174	QPCT	ENSG00000115828	glutaminy-peptide cyclotransferase	no	no
16695558	PVRL4	ENSG00000143217	poliovirus receptor-related 4	no	no
16875656	PTPRH	ENSG00000080031	protein tyrosine phosphatase, receptor type, H	no	no
16710548	PTPRE	ENSG00000132334	protein tyrosine phosphatase, receptor type, E	no	no
16684144	PTAFR	ENSG00000169403	platelet-activating factor receptor	no	no
16854904	PSTPIP2	ENSG00000152229	proline-serine-threonine phosphatase interacting protein 2	no	no
17038034	PSORS1C1	ENSG00000204540	psoriasis susceptibility 1 candidate 1	no	no
17030550	PSORS1C1	ENSG00000204540	psoriasis susceptibility 1 candidate 1	no	no
17054460	PSMG3	ENSG00000157778	proteasome (prosome, macropain) assembly chaperone 3	no	no
17007307	PSMB9	ENSG00000240118	proteasome (prosome, macropain) subunit, beta type, 9	no	no
16872966	PSG9	ENSG00000183668	pregnancy specific beta-1-glycoprotein 9	no	no
16872944	PSG4	ENSG00000243137	pregnancy specific beta-1-glycoprotein 4	no	no
16872871	PSG1	ENSG00000231924	pregnancy specific beta-1-glycoprotein 1	no	no
16825970	PRSS8	ENSG00000052344	protease, serine, 8	no	no
16823215	PRSS22	ENSG00000005001	protease, serine, 22	no	no
16873581	PRKD2	ENSG00000105287	protein kinase D2	no	no
17054273	PRKAR1B	ENSG00000188191	protein kinase, cAMP-dependent, regulatory, type I, beta	no	no

16921289	PRIC285	ENSG00000130589	peroxisomal proliferator-activated receptor A interacting complex 285	no	no
16660212	PQLC2	ENSG00000040487	PQ loop repeat containing 2	no	no
16920699	PPP4R1L	ENSG00000124224	protein phosphatase 4, regulatory subunit 1-like	no	no
16888349	PPP1R1C	ENSG00000150722	protein phosphatase 1, regulatory (inhibitor) subunit 1C	no	no
17031616	PPP1R18	NA	protein phosphatase 1, regulatory subunit 18	no	no
17041697	PPP1R18	ENSG00000146112	protein phosphatase 1, regulatory subunit 18	no	no
17026687	PPP1R18	ENSG00000146112	protein phosphatase 1, regulatory subunit 18	no	no
17016946	PPP1R18	ENSG00000146112	protein phosphatase 1, regulatory subunit 18	no	no
17034070	PPP1R18	ENSG00000146112	protein phosphatase 1, regulatory subunit 18	no	no
17036337	PPP1R18	ENSG00000146112	protein phosphatase 1, regulatory subunit 18	no	no
17039113	PPP1R18	ENSG00000146112	protein phosphatase 1, regulatory subunit 18	no	no
16997344	POLK	NA	polymerase	no	no
16897797	PNPT1	ENSG00000138035	polyribonucleotide nucleotidyltransferase 1	no	no
16802918	PML	ENSG00000140464	promyelocytic leukemia	no	no
16960165	PLSCR2	ENSG00000163746	phospholipid scramblase 2	no	no
16960186	PLSCR1	ENSG00000188313	phospholipid scramblase 1	no	no
16664005	PLK3	ENSG00000173846	polo-like kinase 3	no	no
16907696	PLEKHM3	ENSG00000178385	pleckstrin homology domain containing, family M, member 3	no	no
16850344	PLEKHM1	ENSG00000225190	pleckstrin homology domain containing, family M (with RUN domain) member 1	no	no
16793999	PLEK2	ENSG00000100558	pleckstrin 2	no	no
16911283	PLCB1	ENSG00000182621	phospholipase C, beta 1 (phosphoinositide-specific)	no	no
17076726	PLAT	ENSG00000104368	plasminogen activator, tissue	no	no
16873826	PLA2G4C	ENSG00000105499	phospholipase A2, group IVC (cytosolic, calcium-independent)	no	no
16914070	PKIG	ENSG00000168734	protein kinase (cAMP-dependent, catalytic) inhibitor gamma	no	no
16829170	PIEZO1	ENSG00000103335	piezo-type mechanosensitive ion channel component 1	no	no
16708038	PI4K2A	ENSG00000155252	phosphatidylinositol 4-kinase type 2 alpha	no	no
16943819	PHLDB2	ENSG00000144824	pleckstrin homology-like domain, family B, member 2	no	no
16734491	PHLDA2	ENSG00000181649	pleckstrin homology-like domain, family A, member 2	no	no
16774808	PHF11	ENSG00000136147	PHD finger protein 11	no	no
16840846	PER1	ENSG00000179094	period homolog 1	no	no
16990298	PCDHB11	ENSG00000197479	protocadherin beta 11	no	no
16958124	PARP9	ENSG00000138496	poly (ADP-ribose) polymerase family, member 9	no	no
16944695	PARP14	ENSG00000173193	poly (ADP-ribose) polymerase family, member 14	no	no
17063480	PARP12	ENSG00000059378	poly (ADP-ribose) polymerase family, member 12	no	no
16856159	PARD6G	ENSG00000178184	par-6 partitioning defective 6 homolog gamma	no	no
16773328	PABPC3	ENSG00000151846	poly(A) binding protein, cytoplasmic 3	no	no
16703242	OTUD1	ENSG00000165312	OTU domain containing 1	no	no
16869710	OR7C1	ENSG00000127530	olfactory receptor, family 7, subfamily C, member 1	no	no
16738389	OR5M10	ENSG00000254834	olfactory receptor, family 5, subfamily M, member 10	no	no
16943169	OR5K3	ENSG00000206536	olfactory receptor, family 5, subfamily K, member 3	no	no
16679777	OR2L2	ENSG00000203663	olfactory receptor, family 2, subfamily L, member 2	no	no
16702547	OPTN	ENSG00000123240	optineurin	no	no
16757347	OAS3	ENSG00000111331	2'-5'-oligoadenylate synthetase 3, 100kDa	no	no
16757373	OAS2	ENSG00000111335	2'-5'-oligoadenylate synthetase 2, 69/71kDa	no	no
16757324	OAS1	ENSG00000089127	2'-5'-oligoadenylate synthetase 1, 40/46kDa	no	no
16698466	NUAK2	ENSG00000163545	NUAK family, SNF1-like kinase, 2	no	no
17010760	NT5E	ENSG00000135318	5'-nucleotidase, ecto (CD73)	no	no
16903897	NR4A2	ENSG00000153234	nuclear receptor subfamily 4, group A, member 2	no	no
16751438	NR4A1	ENSG00000123358	nuclear receptor subfamily 4, group A, member 1	no	no
16903537	NMI	ENSG00000123609	N-myc	no	no
16861895	NFKBIB	ENSG00000104825	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, beta	no	no
16791991	NFKBIA	ENSG00000100906	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	no	no
16708623	NFKB2	ENSG00000077150	nuclear factor of kappa light polypeptide gene enhancer in B-cells 2	no	no
16665346	NFIA	ENSG00000162599	nuclear factor I/A	no	no
17044414	NFE2L3	ENSG00000050344	nuclear factor	no	no
16659881	NECAP2	ENSG00000157191	NECAP endocytosis associated 2	no	no
16819689	NDRG4	ENSG00000103034	NDRG family member 4	no	no
16697095	NCF2	ENSG00000116701	neutrophil cytosolic factor 2	no	no
16690403	NBPF4	ENSG00000196427	neuroblastoma breakpoint family, member 4	no	no
16888963	NABP1	ENSG00000173559	nucleic acid binding protein 1	no	no
16993235	N4BP3	ENSG00000145911	NEDD4 binding protein 3	no	no
16777944	N4BP2L1	ENSG00000139597	NEDD4 binding protein 2-like 1	no	no
16826367	N4BP1	ENSG00000102921	NEDD4 binding protein 1	no	no
16809971	MYO1E	ENSG00000157483	myosin IE	no	no
16888912	MYO1B	ENSG00000128641	myosin IB	no	no
16934491	MYH9	ENSG00000100345	myosin, heavy chain 9, non-muscle	no	no
16864427	MYH14	ENSG00000105357	myosin, heavy chain 14, non-muscle	no	no
16939127	MYD88	ENSG00000172936	myeloid differentiation primary response gene	no	no
17072669	MYC	ENSG00000136997	v-myc myelocytomatosis viral oncogene homolog	no	no
16922959	MX2	ENSG00000183486	myxovirus	no	no
16817692	MVP	ENSG00000013364	major vault protein	no	no
16773346	MTMR6	ENSG00000139505	myotubularin related protein 6	no	no
16836375	MSI2	ENSG00000153944	musashi homolog 2	no	no
16745002	MPZL2	ENSG00000149573	myelin protein zero-like 2	no	no
16717224	MORN4	ENSG00000171160	MORN repeat containing 4	no	no
16914395	MMP9	ENSG00000100985	matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)	no	no
16954759	MIRLET7G	ENSG00000199150	microRNA let-7g	no	no
16851349	MIR320C1	ENSG00000221493	microRNA 320c-1	no	no
17081516	MIR30B	ENSG00000207582	microRNA 30b	no	no
16698782	MIR29C	ENSG00000207966	microRNA 29c	no	no
17062941	MIR29A	ENSG00000198981	microRNA 29a	no	no
16869492	MIR27A	ENSG00000207808	microRNA 27a	no	no
16766787	MIR26A2	ENSG00000207789	microRNA 26a-2	no	no
16869489	MIR24-2	ENSG00000209707	microRNA 24-2	no	no
16836624	MIR21	ENSG00000199004	microRNA 21	no	no

16747663	MIR141	ENSG00000207708	microRNA 141	no	no
16864741	MIR125A	ENSG00000208008	microRNA 125a	no	no
16900875	MGAT4A	ENSG00000071073	mannosyl (alpha-1,3-)-glycoprotein beta-1,4-N-acetylglucosaminyltransferase, isozyme A	no	no
17073908	MFSD3	ENSG00000167700	major facilitator superfamily domain containing 3	no	no
16813038	MFGE8	ENSG00000140545	milk fat globule-EGF factor 8 protein	no	no
16694593	MEF2D	ENSG00000116604	myocyte enhancer factor 2D	no	no
17037884	MDC1	ENSG00000137337	mediator of DNA-damage checkpoint 1	no	no
16692775	MCL1	ENSG00000143384	myeloid cell leukemia sequence 1	no	no
16894283	MBOAT2	ENSG00000143797	membrane bound O-acyltransferase domain containing 2	no	no
16936397	MAPK12	ENSG00000188130	mitogen-activated protein kinase 12	no	no
16703659	MAP3K8	ENSG00000107968	mitogen-activated protein kinase kinase kinase 8	no	no
17055657	MACC1	ENSG00000183742	metastasis associated in colon cancer 1	no	no
16700806	LYST	ENSG00000143669	lysosomal trafficking regulator	no	no
16886417	LYPD6B	ENSG00000150556	LY6/PLAUR domain containing 6B	no	no
17069063	LYN	ENSG00000254087	v-yes-1 Yamaguchi sarcoma viral related oncogene homolog	no	no
16822356	LUC7L	ENSG00000007392	LUC7-like	no	no
16860946	LSR	ENSG00000105699	lipolysis stimulated lipoprotein receptor	no	no
17024653	LRP11	ENSG00000120256	low density lipoprotein receptor-related protein 11	no	no
16782207	LRP10	ENSG00000197324	low density lipoprotein receptor-related protein 10	no	no
16949467	LPP	ENSG00000145012	LIM domain containing preferred translocation partner in lipoma	no	no
16779006	LPAR6	ENSG00000139679	lysophosphatidic acid receptor 6	no	no
16818501	LOC653562	ENSG00000214617	---	no	no
16734927	LOC1006533:NA	---	---	no	no
16852296	LIPG	ENSG00000101670	lipase, endothelial	no	no
16932486	LINC00281	NA	long intergenic non-protein coding RNA 281	no	no
16966304	LIMCH1	ENSG00000064042	LIM and calponin homology domains 1	no	no
16933760	LIF	ENSG00000128342	leukemia inhibitory factor	no	no
16997503	LHFPL2	ENSG00000145685	lipoma HMGIC fusion partner-like 2	no	no
16796060	LGMN	ENSG00000100600	legumain	no	no
16842403	LGALS9B	ENSG00000170298	lectin, galactoside-binding, soluble, 9B	no	no
16849576	LGALS3BP	ENSG00000108679	lectin, galactoside-binding, soluble, 3 binding protein	no	no
16965313	LAP3	ENSG00000002549	leucine aminopeptidase 3	no	no
16698883	LAMB3	ENSG00000196878	laminin, beta 3	no	no
16851486	LAMA3	ENSG00000053747	laminin, alpha 3	no	no
16697893	LAD1	ENSG00000159166	ladinin 1	no	no
16886174	KYNU	ENSG00000115919	kynureninase	no	no
16924920	KRTAP19-8	ENSG00000206102	keratin associated protein 19-8	no	no
16751518	KRT86	ENSG00000170442	keratin 86	no	no
16764833	KRT83	ENSG00000170523	keratin 83	no	no
16764817	KRT81	ENSG00000205426	keratin 81	no	no
16764791	KRT80	ENSG00000167767	keratin 80	no	no
16764811	KRT7	ENSG00000135480	keratin 7	no	no
16844509	KRT23	ENSG00000108244	keratin 23	no	no
16841817	KRT17P1	NA	keratin 17 pseudogene 1	no	no
17060211	KPNA7	ENSG00000185467	karyopherin alpha 7	no	no
16761350	KLRC3	ENSG00000205810	killer cell lectin-like receptor subfamily C, member 3	no	no
16966049	KLHL5	ENSG00000109790	kelch-like 5	no	no
17080809	KLHL38	ENSG00000175946	kelch-like 38	no	no
16931766	KLHDC7B	ENSG00000130487	kelch domain containing 7B	no	no
16711280	KLF6	ENSG00000067082	Kruppel-like factor 6	no	no
16789258	KLC1	ENSG00000126214	kinesin light chain 1	no	no
16895452	KIF3C	ENSG00000084731	kinesin family member 3C	no	no
16828810	KIAA1609	ENSG00000140950	KIAA1609	no	no
16706135	KIAA0913	ENSG00000214655	KIAA0913	no	no
16830754	KDM6B	ENSG00000132510	lysine	no	no
16942511	KBTBD8	ENSG00000163376	kelch repeat and BTB	no	no
16687875	JUN	ENSG00000177606	jun proto-oncogene	no	no
16862324	ITPKC	ENSG00000086544	inositol-trisphosphate 3-kinase C	no	no
16904193	ITGB6	ENSG00000115221	integrin, beta 6	no	no
16818239	ITGAM	ENSG00000169896	integrin, alpha M (complement component 3 receptor 3 subunit)	no	no
16835672	ITGA3	ENSG00000005884	integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor)	no	no
16984689	ITGA2	ENSG00000164171	integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)	no	no
16911517	ISM1	ENSG00000101230	isthmin 1 homolog	no	no
16804490	ISG20	ENSG00000172183	interferon stimulated exonuclease gene 20kDa	no	no
16657594	ISG15	ENSG00000187608	ISG15 ubiquitin-like modifier	no	no
16733995	IRF7	ENSG00000185507	interferon regulatory factor 7	no	no
16698923	IRF6	ENSG00000117595	interferon regulatory factor 6	no	no
16700673	IRF2BP2	ENSG00000168264	interferon regulatory factor 2 binding protein 2	no	no
16999776	IRF1	ENSG00000125347	interferon regulatory factor 1	no	no
16937579	IRAK2	ENSG00000134070	interleukin-1 receptor-associated kinase 2	no	no
16671457	IL6R	ENSG00000160712	interleukin 6 receptor	no	no
16817254	IL4R	ENSG00000077238	interleukin 4 receptor	no	no
16815355	IL32	ENSG00000008517	interleukin 32	no	no
16861953	IL28A	ENSG00000183709	---	no	no
16676682	IL24	ENSG00000162892	interleukin 24	no	no
16676673	IL20	ENSG00000162891	interleukin 20	no	no
16884629	IL1RN	ENSG00000136689	interleukin 1 receptor antagonist	no	no
16711484	IL15RA	ENSG00000134470	interleukin 15 receptor, alpha	no	no
16927742	IGLV7-46	NA	immunoglobulin lambda variable 7-46	no	no
16962333	IGF2BP2	ENSG00000073792	insulin-like growth factor 2 mRNA binding protein 2	no	no
16922275	IFNGR2	ENSG00000159128	interferon gamma receptor 2	no	no
16733851	IFITM3	ENSG00000142089	interferon induced transmembrane protein 3	no	no
16720085	IFITM1	ENSG00000185885	interferon induced transmembrane protein 1	no	no
16707202	IFIT5	ENSG00000152778	interferon-induced protein with tetratricopeptide repeats 5	no	no
16707196	IFIT1	ENSG00000185745	interferon-induced protein with tetratricopeptide repeats 1	no	no

16904365	IFIH1	ENSG00000115267	interferon induced with helicase C domain 1	no	no
16666485	IFI44L	ENSG00000137959	interferon-induced protein 44-like	no	no
16666509	IFI44	ENSG00000137965	interferon-induced protein 44	no	no
16834545	IFI35	ENSG00000068079	interferon-induced protein 35	no	no
16859763	IFI30	ENSG00000216490	interferon, gamma-inducible protein 30	no	no
16787814	IFI27	ENSG00000165949	interferon, alpha-inducible protein 27	no	no
16672390	IFI16	ENSG00000163565	interferon, gamma-inducible protein 16	no	no
16674618	IER5	ENSG00000162783	immediate early response 5	no	no
17017018	IER3	ENSG00000137331	immediate early response 3	no	no
17028909	IER3	ENSG00000137331	immediate early response 3	no	no
17031687	IER3	ENSG00000137331	immediate early response 3	no	no
17034143	IER3	ENSG00000137331	immediate early response 3	no	no
17041752	IER3	ENSG00000137331	immediate early response 3	no	no
17039184	IER3	ENSG00000137331	immediate early response 3	no	no
16858830	IER2	ENSG00000160888	immediate early response 2	no	no
16858137	ICAM1	ENSG00000090339	intercellular adhesion molecule 1	no	no
16683105	HSPG2	ENSG00000142798	heparan sulfate proteoglycan 2	no	no
16859281	HSH2D	ENSG00000196684	hematopoietic SH2 domain containing	no	no
16946787	HPS3	ENSG00000163755	Hermansky-Pudlak syndrome 3	no	no
16877048	HPCAL1	ENSG00000115756	hippocalcin-like 1	no	no
16848739	HN1	ENSG00000189159	hematological and neurological expressed 1	no	no
16800642	HMGN2P46	ENSG00000179362	high mobility group nucleosomal binding domain 2 pseudogene 46	no	no
17032957	HLA-L	ENSG00000243753	major histocompatibility complex, class I, L (pseudogene)	no	no
17006222	HLA-L	ENSG00000243753	major histocompatibility complex, class I, L (pseudogene)	no	no
17037658	HLA-G	NA	major histocompatibility complex, class I, G	no	no
17027330	HLA-G	ENSG00000204632	major histocompatibility complex, class I, G	no	no
17040375	HLA-G	ENSG00000204632	major histocompatibility complex, class I, G	no	no
17027301	HLA-F	NA	major histocompatibility complex, class I, F	no	no
17030147	HLA-F	NA	major histocompatibility complex, class I, F	no	no
17032837	HLA-F	NA	major histocompatibility complex, class I, F	no	no
17006087	HLA-F	ENSG00000204642	major histocompatibility complex, class I, F	no	no
17027443	HLA-E	ENSG00000204592	major histocompatibility complex, class I, E	no	no
17030288	HLA-E	ENSG00000204592	major histocompatibility complex, class I, E	no	no
17037774	HLA-E	ENSG00000204592	major histocompatibility complex, class I, E	no	no
17040488	HLA-E	ENSG00000204592	major histocompatibility complex, class I, E	no	no
17006261	HLA-E	ENSG00000204592	major histocompatibility complex, class I, E	no	no
17032993	HLA-E	ENSG00000204592	major histocompatibility complex, class I, E	no	no
17035115	HLA-E	ENSG00000204592	major histocompatibility complex, class I, E	no	no
17017126	HLA-C	ENSG00000204525	major histocompatibility complex, class I, C	no	no
17036504	HLA-B	NA	major histocompatibility complex, class I, B	no	no
17017147	HLA-B	ENSG00000234745	major histocompatibility complex, class I, B	no	no
17030188	HLA-A	ENSG00000206503	major histocompatibility complex, class I, A	no	no
17035049	HLA-A	ENSG00000206503	major histocompatibility complex, class I, A	no	no
17026109	HLA-A	ENSG00000206503	major histocompatibility complex, class I, A	no	no
17027344	HLA-A	ENSG00000206503	major histocompatibility complex, class I, A	no	no
17037670	HLA-A	ENSG00000206503	major histocompatibility complex, class I, A	no	no
17040387	HLA-A	ENSG00000206503	major histocompatibility complex, class I, A	no	no
17032882	HLA-A	ENSG00000206503	major histocompatibility complex, class I, A	no	no
17073739	HEATR7A	ENSG00000179832	HEAT repeat containing 7A	no	no
16845537	HDAC5	ENSG00000108840	histone deacetylase 5	no	no
16660757	GRHL3	ENSG00000158055	grainyhead-like 3	no	no
16811359	GRAMD2	ENSG00000175318	GRAM domain containing 2	no	no
16860834	GRAMD1A	ENSG00000089351	GRAM domain containing 1A	no	no
16960567	GPR87	ENSG00000138271	G protein-coupled receptor 87	no	no
17009446	GPR115	ENSG00000153294	G protein-coupled receptor 115	no	no
16698304	GOLT1A	ENSG00000174567	golgi transport 1A	no	no
16708089	GOLGA7B	ENSG00000155265	golgin A7 family, member B	no	no
16804165	GOLGA6L4	ENSG00000197978	golgin A6 family-like 4	no	no
16688929	GNG5	ENSG00000174021	guanine nucleotide binding protein (G protein), gamma 5	no	no
16932117	GGT3P	ENSG00000197421	gamma-glutamyltransferase 3 pseudogene	no	no
16742244	GDPD5	ENSG00000158555	glycerophosphodiester phosphodiesterase domain containing 5	no	no
16689384	GBP4	ENSG00000162654	guanylate binding protein 4	no	no
16689352	GBP2	ENSG00000162645	guanylate binding protein 2, interferon-inducible	no	no
16689332	GBP1	ENSG00000117228	guanylate binding protein 1, interferon-inducible	no	no
16728141	GAL	ENSG00000069482	galanin prepropeptide	no	no
16907691	FZD5	ENSG00000163251	frizzled family receptor 5	no	no
16793942	FUT8	NA	fucosyltransferase 8 (alpha (1,6) fucosyltransferase)	no	no
16804942	FURIN	ENSG00000140564	furin	no	no
16864756	FPR3	ENSG00000187474	formyl peptide receptor 3	no	no
16778392	FOXO1	ENSG00000150907	forkhead box O1	no	no
16992197	FOXI1	ENSG00000168269	forkhead box I1	no	no
16740630	FOSL1	ENSG00000175592	FOS-like antigen 1	no	no
16863287	FOSB	ENSG00000125740	FBJ murine osteosarcoma viral oncogene homolog B	no	no
16786587	FOS	ENSG00000170345	FBJ murine osteosarcoma viral oncogene homolog	no	no
16886564	FMNL2	ENSG00000157827	formin-like 2	no	no
16850656	FLJ35776	ENSG00000177337	uncharacterized LOC649446	no	no
16723662	FJX1	ENSG00000179431	four jointed box 1	no	no
16768675	FGD6	ENSG00000180263	FYVE, RhoGEF and PH domain containing 6	no	no
17024448	FBXO30	ENSG00000118496	F-box protein 30	no	no
16938724	FBXL2	ENSG00000153558	F-box and leucine-rich repeat protein 2	no	no
16726936	FAM89B	ENSG00000176973	family with sequence similarity 89, member B	no	no
17016221	FAM65B	ENSG00000111913	family with sequence similarity 65, member B	no	no
17021092	FAM46A	ENSG00000112773	family with sequence similarity 46, member A	no	no
16915009	FAM210B	ENSG00000124098	family with sequence similarity 210, member B	no	no
16739165	FADS3	ENSG00000221968	fatty acid desaturase 3	no	no

16986417	F2RL1	ENSG00000164251	coagulation factor II	no	no
16845410	ETV4	ENSG00000175832	ets variant 4	no	no
16811906	ETFA	ENSG00000140374	electron-transfer-flavoprotein, alpha polypeptide	no	no
16967843	EREG	ENSG00000124882	epiregulin	no	no
16998368	ERAP1	ENSG00000164307	endoplasmic reticulum aminopeptidase 1	no	no
16682098	EPHA2	ENSG00000142627	EPH receptor A2	no	no
17075529	ENTPD4	ENSG00000197217	ectonucleoside triphosphate diphosphohydrolase 4	no	no
16939479	ENTPD3	ENSG00000168032	ectonucleoside triphosphate diphosphohydrolase 3	no	no
16748590	EMP1	ENSG00000134531	epithelial membrane protein 1	no	no
16996564	ELOVL7	ENSG00000164181	ELOVL fatty acid elongase 7	no	no
16786548	EIF2B2	ENSG00000119718	eukaryotic translation initiation factor 2B, subunit 2 beta, 39kDa	no	no
16899032	EGR4	ENSG00000135625	early growth response 4	no	no
17004903	EDN1	ENSG00000078401	endothelin 1	no	no
17070408	E2F5	ENSG00000133740	E2F transcription factor 5, p130-binding	no	no
16734271	DUSP8	ENSG00000184545	dual specificity phosphatase 8	no	no
17075973	DUSP4	ENSG00000120875	dual specificity phosphatase 4	no	no
16761631	DUSP16	ENSG00000111266	dual specificity phosphatase 16	no	no
16699533	DUSP10	ENSG00000143507	dual specificity phosphatase 10	no	no
16851866	DTNA	ENSG00000134769	dystrobrevin, alpha	no	no
16854486	DSC2	ENSG00000134755	desmocollin 2	no	no
16799724	DLL4	ENSG00000128917	delta-like 4	no	no
16795285	DIO2	ENSG00000211448	deiodinase, iodothyronine, type II	no	no
17073078	DENND3	ENSG00000105339	DENN/MADD domain containing 3	no	no
16981266	DDX60L	ENSG00000181381	DEAD	no	no
16981219	DDX60	ENSG00000137628	DEAD	no	no
17027581	DDR1	ENSG00000204580	discoidin domain receptor tyrosine kinase 1	no	no
17033131	DDR1	ENSG00000204580	discoidin domain receptor tyrosine kinase 1	no	no
17037907	DDR1	ENSG00000204580	discoidin domain receptor tyrosine kinase 1	no	no
17030426	DDR1	ENSG00000204580	discoidin domain receptor tyrosine kinase 1	no	no
16829426	DBNDD1	ENSG00000003249	dysbindin	no	no
16969229	DAPP1	ENSG00000070190	dual adaptor of phosphotyrosine and 3-phosphoinositides	no	no
16810473	DAPK2	ENSG00000035664	death-associated protein kinase 2	no	no
16859132	CYP4F3	ENSG00000186529	cytochrome P450, family 4, subfamily F, polypeptide 3	no	no
16977045	CXCL9	ENSG00000138755	chemokine	no	no
16840113	CXCL16	ENSG00000161921	chemokine	no	no
16977058	CXCL11	ENSG00000169248	chemokine	no	no
16921664	CXADR	ENSG00000154639	coxsackie virus and adenovirus receptor	no	no
16692834	CTSS	ENSG00000163131	cathepsin S	no	no
16812245	CTSH	ENSG00000103811	cathepsin H	no	no
16676547	CTSE	ENSG00000196188	cathepsin E	no	no
16992557	CPEB4	ENSG00000113742	cytoplasmic polyadenylation element binding protein 4	no	no
17077974	CPA6	ENSG00000165078	carboxypeptidase A6	no	no
16828826	COTL1	ENSG00000103187	coactosin-like 1	no	no
16766035	CNPY2	ENSG00000257727	canopy 2 homolog	no	no
16834243	CNP	ENSG00000260283	2',3'-cyclic nucleotide 3' phosphodiesterase	no	no
16894127	CMPK2	ENSG00000134326	cytidine monophosphate (UMP-CMP) kinase 2, mitochondrial	no	no
16815306	CLDN9	ENSG00000213937	claudin 9	no	no
16962661	CLDN1	ENSG00000163347	claudin 1	no	no
16740969	CLCF1	ENSG00000175505	cardiotrophin-like cytokine factor 1	no	no
16908822	CHPF	ENSG00000123989	chondroitin polymerizing factor	no	no
17021437	CGA	ENSG00000135346	glycoprotein hormones, alpha polypeptide	no	no
16791898	CFL2	ENSG00000165410	cofilin 2	no	no
17006949	CFB	ENSG00000243649	complement factor B	no	no
16841768	CENPV	ENSG00000166582	centromere protein V	no	no
16738094	CELF1	ENSG00000149187	CUGBP, Elav-like family member 1	no	no
16862563	CEACAM6	ENSG00000086548	carcinoembryonic antigen-related cell adhesion molecule 6	no	no
16872803	CEACAM1	ENSG00000079385	carcinoembryonic antigen-related cell adhesion molecule 1	no	no
16841660	CDRT1	NA	CMT1A duplicated region transcript 1	no	no
17008007	CDKN1A	ENSG00000124762	cyclin-dependent kinase inhibitor 1A (p21, Cip1)	no	no
16858970	CD97	ENSG00000123146	CD97 molecule	no	no
16737200	CD59	ENSG00000085063	CD59 molecule, complement regulatory protein	no	no
16860992	CD22	ENSG00000012124	CD22 molecule	no	no
17010354	CD109	ENSG00000156535	CD109 molecule	no	no
16833204	CCL2	ENSG00000108691	chemokine	no	no
16729693	CCDC83	ENSG00000150676	coiled-coil domain containing 83	no	no
16855358	CCDC68	ENSG00000166510	coiled-coil domain containing 68	no	no
16831527	CCDC144A	NA	coiled-coil domain containing 144A	no	no
16831486	CCDC144A	ENSG00000170160	coiled-coil domain containing 144A	no	no
16987468	CAST	ENSG00000153113	calpastatin	no	no
16677863	CAPN2	ENSG00000162909	calpain 2, (m/II) large subunit	no	no
16765404	CALCOCO1	ENSG00000012822	calcium binding and coiled-coil domain 1	no	no
16744616	CADM1	ENSG00000182985	cell adhesion molecule 1	no	no
16846711	CACNA1G	NA	calcium channel, voltage-dependent, T type, alpha 1G subunit	no	no
16836655	CA4	ENSG00000167434	carbonic anhydrase IV	no	no
17060481	C7orf43	ENSG00000146826	chromosome 7 open reading frame 43	no	no
16989038	C5orf56	ENSG00000197536	chromosome 5 open reading frame 56	no	no
16943919	C3orf52	ENSG00000114529	chromosome 3 open reading frame 52	no	no
16681974	C1orf126	NA	chromosome 1 open reading frame 126	no	no
16858080	C19orf66	ENSG00000130813	chromosome 19 open reading frame 66	no	no
16861641	C19orf33	ENSG00000167644	chromosome 19 open reading frame 33	no	no
16800630	C15orf48	ENSG00000166920	chromosome 15 open reading frame 48	no	no
16712421	C10orf113	ENSG00000204683	chromosome 10 open reading frame 113	no	no
17005655	BTN3A1	ENSG00000026950	butyrophilin, subfamily 3, member A1	no	no
16664028	BTBD19	ENSG00000222009	BTB	no	no
16870200	BST2	ENSG00000130303	bone marrow stromal cell antigen 2	no	no

16925749	BRWD1-IT2	NA	BRWD1 intronic transcript 2	no	no
17048738	BRI3	ENSG00000164713	brain protein I3	no	no
17048727	BRI3	ENSG00000164713	brain protein I3	no	no
16762470	BHLHE41	ENSG00000123095	basic helix-loop-helix family, member e41	no	no
16884335	BCL2L11	ENSG00000153094	BCL2-like 11	no	no
16740238	BATF2	ENSG00000168062	basic leucine zipper transcription factor, ATF-like 2	no	no
16786616	BATF	ENSG00000156127	basic leucine zipper transcription factor, ATF-like	no	no
16800450	B2M	ENSG00000166710	beta-2-microglobulin	no	no
16877097	ATP6V1C2	ENSG00000143882	ATPase, H+ transporting, lysosomal 42kDa, V1 subunit C2	no	no
16677278	ATF3	ENSG00000162772	activating transcription factor 3	no	no
16947607	ARL14	ENSG00000179674	ADP-ribosylation factor-like 14	no	no
16882999	ARID5A	ENSG00000196843	AT rich interactive domain 5A	no	no
16730429	ARHGAP42	ENSG00000165895	Rho GTPase activating protein 42	no	no
16845929	ARHGAP27	ENSG00000159314	Rho GTPase activating protein 27	no	no
16712531	ARHGAP21	ENSG00000107863	Rho GTPase activating protein 21	no	no
16975084	ARAP2	ENSG00000047365	ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 2	no	no
16929615	APOL6	ENSG00000221963	apolipoprotein L, 6	no	no
16929631	APOL1	ENSG00000100342	apolipoprotein L	no	no
16980742	ANXA2P1	NA	annexin A2 pseudogene 1	no	no
16810065	ANXA2	ENSG00000182718	annexin A2	no	no
16750325	ANO6	ENSG00000177119	anoctamin 6	no	no
16857886	ANGPTL4	ENSG00000167772	angiopoietin-like 4	no	no
16840817	ALOXE3	ENSG00000179148	arachidonate lipoxygenase 3	no	no
17051827	AKR1B10	ENSG00000198074	aldo-keto reductase family 1, member B10	no	no
16946341	ACPL2	ENSG00000155893	acid phosphatase-like 2	no	no
16977868	ABCG2	ENSG00000118777	ATP-binding cassette, sub-family G (WHITE), member 2	no	no
16836021	ABCC3	ENSG00000108846	ATP-binding cassette, sub-family C (CFTR/MRP), member 3	no	no
16708192	ABCC2	ENSG00000023839	ATP-binding cassette, sub-family C	no	no
16816214	ABCC1	ENSG00000103222	ATP-binding cassette, sub-family C	no	no
16761012	A2M	ENSG00000175899	alpha-2-macroglobulin	no	no
16700987	---	NA	ENST00000516481	no	no
17009052	---	NA	ENST00000516409	no	no
16988085	---	NA	ENST00000515932	no	no
17076510	---	NA	ENST00000384470	no	no
16992322	---	NA	ENST00000384182	no	no
16917466	---	NA	ENST00000365390	no	no
16780891	---	NA	ENST00000364977	no	no
17008211	---	NA	ENST00000363836	no	no
17077308	---	NA	ENST00000362535	no	no
16821365	---	NA	AK127374	no	no
17121740	KRT17P1	NA	keratin 17 pseudogene 1	no	no
17121728	USP32P2	NA	ubiquitin specific peptidase 32 pseudogene 2	na	na
17084428	UBAP1	ENSG00000165006	ubiquitin associated protein 1	na	na
17103951	TSPYL2	ENSG00000184205	TSPY-like 2	na	na
17005836	TRNAI6	NA	transfer RNA isoleucine 6	na	na
17005782	TRNAI2	NA	transfer RNA isoleucine 2	na	na
17126024	TRIM25	NA	tripartite motif containing 25	na	na
17096436	TRIM14	ENSG00000106785	tripartite motif containing 14	na	na
17063838	TRBV30	NA	T cell receptor beta variable 30	na	na
17123266	TRANK1	NA	tetratricopeptide repeat and ankyrin repeat containing 1	na	na
17123262	TRANK1	NA	tetratricopeptide repeat and ankyrin repeat containing 1	na	na
17123260	TRANK1	NA	tetratricopeptide repeat and ankyrin repeat containing 1	na	na
17123268	TRANK1	NA	tetratricopeptide repeat and ankyrin repeat containing 1	na	na
16782010	TRAJ59	NA	T cell receptor alpha joining 59	na	na
17087588	TMEFF1	ENSG00000241697	transmembrane protein with EGF-like and two follistatin-like domains 1	na	na
17103185	TIMP1	ENSG00000102265	TIMP metalloproteinase inhibitor 1	na	na
16882183	TCF7L1-IT1	NA	TCF7L1 intronic transcript 1	na	na
17105753	TCEAL3	ENSG00000196507	transcription elongation factor A (SII)-like 3	na	na
16836868	TANC2	ENSG00000170921	tetratricopeptide repeat, ankyrin repeat and coiled-coil containing 2	na	na
17102396	TAB3	NA	TGF-beta activated kinase 1/MAP3K7 binding protein 3	na	na
17120350	SVIL	NA	supervillin	na	na
17097281	SUSD1	ENSG00000106868	sushi domain containing 1	na	na
16914743	SNORD12B	ENSG00000222365	small nucleolar RNA, C/D box 12B	na	na
17126034	SLC38A2	NA	solute carrier family 38, member 2	na	na
17126144	SLC38A2	NA	solute carrier family 38, member 2	na	na
16787902	SERPINA3	ENSG00000196136	serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 3	na	na
17120452	SDCBP	NA	syndecan binding protein (syntenin)	na	na
17102129	SAT1	ENSG00000130066	spermidine/spermine N1-acetyltransferase 1	na	na
16972293	RNY4P17	NA	RNA, Ro-associated Y4 pseudogene 17	na	na
16774764	RNY3P2	NA	RNA, Ro-associated Y3 pseudogene 2	na	na
16779278	RNY1P6	NA	RNA, Ro-associated Y1 pseudogene 6	na	na
16988295	RNU7-34P	NA	RNA, U7 small nuclear 34 pseudogene	na	na
16802100	RNU5A-1	ENSG00000199568	RNA, U5A small nuclear 1	na	na
16683607	RCAN3AS	NA	RCAN3 antisense	na	na
17095194	RASEF	ENSG00000165105	RAS and EF-hand domain containing	na	na
17024695	RAET1K	ENSG00000218358	retinoic acid early transcript 1K pseudogene	na	na
17099076	PTGES	ENSG00000148344	prostaglandin E synthase	na	na
17096091	PTCH1	ENSG00000185920	patched 1	na	na
16872926	PSG5	ENSG00000204941	pregnancy specific beta-1-glycoprotein 5	na	na
17125794	PRSS3	NA	protease, serine, 3	na	na
17120704	PPFIBP1	NA	PTPRF interacting protein, binding protein 1 (liprin beta 1)	na	na
17120706	PPFIBP1	NA	PTPRF interacting protein, binding protein 1 (liprin beta 1)	na	na
17070926	PDP1	ENSG00000164951	pyruvate dehydrogenase phosphatase catalytic subunit 1	na	na
17111008	NUDT11	ENSG00000196368	nudix (nucleoside diphosphate linked moiety X)-type motif 11	na	na
17087517	NR4A3	ENSG00000119508	nuclear receptor subfamily 4, group A, member 3	na	na

17101856	NHS	ENSG00000188158	Nance-Horan syndrome (congenital cataracts and dental anomalies)	na	na
17095703	NFIL3	ENSG00000165030	nuclear factor, interleukin 3 regulated	na	na
17118190	NEDD9	NA	neural precursor cell expressed, developmentally down-regulated 9	na	na
17118269	NAMPT	NA	nicotinamide phosphoribosyltransferase	na	na
16954295	MST1R	ENSG00000164078	macrophage stimulating 1 receptor	na	na
16974175	MIR95	ENSG00000207807	microRNA 95	na	na
16712936	MIR938	ENSG00000216035	microRNA 938	na	na
16728384	MIR548K	ENSG00000221333	microRNA 548k	na	na
16956978	MIR548AB	ENSG00000265328	microRNA 548ab	na	na
16865044	MIR523	ENSG00000208016	microRNA 523	na	na
16865036	MIR520A	ENSG00000207594	microRNA 520a	na	na
17101871	MIR4768	ENSG00000265465	microRNA 4768	na	na
16800989	MIR4712	ENSG00000264109	microRNA 4712	na	na
16874265	MIR4324	ENSG00000265407	microRNA 4324	na	na
16782958	MIR4307	ENSG00000265165	microRNA 4307	na	na
16908880	MIR4268	ENSG00000266518	microRNA 4268	na	na
16919646	MIR3617	ENSG00000266071	microRNA 3617	na	na
16859800	MIR3189	ENSG00000264175	microRNA 3189	na	na
16804707	MIR3174	ENSG00000265871	microRNA 3174	na	na
16773222	MIR2276	ENSG00000252695	microRNA 2276	na	na
17110367	MIR222	ENSG00000207725	microRNA 222	na	na
17110365	MIR221	ENSG00000207870	microRNA 221	na	na
16700878	MIR1537	ENSG00000222831	microRNA 1537	na	na
16856166	MIR1302-3	NA	microRNA 1302-3	na	na
16657440	MIR1302-11	NA	microRNA 1302-11	na	na
16814060	MIR1302-11	NA	microRNA 1302-11	na	na
17082973	MIR1302-11	ENSG00000267588	microRNA 1302-11	na	na
16865100	MIR1283-2	ENSG00000221548	microRNA 1283-2	na	na
17072727	MIR1207	ENSG00000221176	microRNA 1207	na	na
16856483	MIDN	ENSG00000167470	midnolin	na	na
16694446	MEX3A	ENSG00000254726	mex-3 homolog A	na	na
16700875	LYST-IT2	NA	LYST intronic transcript 2	na	na
16700872	LYST-IT1	NA	LYST intronic transcript 1	na	na
16713048	LOC10050550	ENSG00000215288	putative UPF0607 protein FLJ37424-like	na	na
17005281	LINC00340	ENSG00000238274	long intergenic non-protein coding RNA 340	na	na
17121624	LGALS9	NA	lectin, galactoside-binding, soluble, 9	na	na
17121622	LGALS9	NA	lectin, galactoside-binding, soluble, 9	na	na
17124132	LAP3	NA	leucine aminopeptidase 3	na	na
17115271	L1CAM	ENSG00000198910	L1 cell adhesion molecule	na	na
16939768	KRBOX1	ENSG00000240747	KRAB box domain containing 1	na	na
17111484	ITIH6	ENSG00000102313	inter-alpha-trypsin inhibitor heavy chain family, member 6	na	na
16954620	IQCF5	ENSG00000214681	IQ motif containing F5	na	na
17016760	IFITM4P	ENSG00000235821	interferon induced transmembrane protein 4 pseudogene	na	na
17036173	IFITM4P	ENSG00000235821	interferon induced transmembrane protein 4 pseudogene	na	na
17033890	IFITM4P	ENSG00000235821	interferon induced transmembrane protein 4 pseudogene	na	na
17038932	IFITM4P	ENSG00000235821	interferon induced transmembrane protein 4 pseudogene	na	na
17028653	IFITM4P	ENSG00000235821	interferon induced transmembrane protein 4 pseudogene	na	na
17031434	IFITM4P	ENSG00000235821	interferon induced transmembrane protein 4 pseudogene	na	na
17099027	IERSL	ENSG00000188483	immediate early response 5-like	na	na
17114829	IDS	ENSG00000104004	iduronate 2-sulfatase	na	na
17114241	HS6ST2	ENSG00000171004	heparan sulfate 6-O-sulfotransferase 2	na	na
17117871	HMGA1	NA	high mobility group AT-hook 1	na	na
17041782	HLA-C	NA	major histocompatibility complex, class I, C	na	na
17029003	HLA-C	ENSG00000204525	major histocompatibility complex, class I, C	na	na
17039281	HLA-C	ENSG00000204525	major histocompatibility complex, class I, C	na	na
17031781	HLA-C	ENSG00000204525	major histocompatibility complex, class I, C	na	na
17036486	HLA-C	ENSG00000204525	major histocompatibility complex, class I, C	na	na
17034236	HLA-C	ENSG00000204525	major histocompatibility complex, class I, C	na	na
16793678	HIF1A-AS2	NA	HIF1A antisense RNA 2	na	na
17035371	HCP5	ENSG00000206337	HLA complex P5	na	na
17040665	HCP5	ENSG00000206337	HLA complex P5	na	na
16921171	HAR1B	ENSG00000231133	highly accelerated region 1B	na	na
16922007	GRIK1-AS2	ENSG00000156273	GRIK1 antisense RNA 2	na	na
16922036	GRIK1-AS2	ENSG00000156273	GRIK1 antisense RNA 2	na	na
17118868	GPRC5A	ENSG00000135888	G protein-coupled receptor, family C, group 5, member A	na	na
16748529	GPRC5A	ENSG00000135888	G protein-coupled receptor, family C, group 5, member A	na	na
17107765	GPR50	ENSG00000102195	G protein-coupled receptor 50	na	na
17095423	GOLM1	ENSG00000135052	golgi membrane protein 1	na	na
17096493	GABBR2	ENSG00000136928	gamma-aminobutyric acid (GABA) B receptor, 2	na	na
17107548	FMR1-IT1	NA	FMR1 intronic transcript 1 (non-protein coding)	na	na
17115505	FLNA	ENSG00000196924	filamin A, alpha	na	na
17093441	FAM219A	ENSG00000164970	family with sequence similarity 219, member A	na	na
17098506	FAM129B	ENSG00000136830	family with sequence similarity 129, member B	na	na
16983373	FAM105A	ENSG00000145569	family with sequence similarity 105, member A	na	na
16781181	F10-AS1	NA	F10 antisense RNA 1	na	na
17080450	EXT1	ENSG00000182197	exostosin 1	na	na
17082362	EPPK1	ENSG00000227184	epiplakin 1	na	na
17084034	---	NA	TCONS_I2_00029687-XLOC_I2_014721	na	na
17065873	---	NA	TCONS_I2_00028471-XLOC_I2_014123	na	na
17048460	---	NA	TCONS_I2_00027176-XLOC_I2_013513	na	na
17020099	---	NA	TCONS_I2_00025400-XLOC_I2_013015	na	na
16985497	---	NA	TCONS_I2_00023403-XLOC_I2_011612	na	na
17041517	---	NA	TCONS_00030015-XLOC_014500	na	na
16935225	---	NA	TCONS_00029702-XLOC_014378	na	na
16931763	---	NA	TCONS_00029630-XLOC_014287	na	na

16929362 ---	NA	TCONS_00029413-XLOC_014212	na	na
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16923543 ---	NA	TCONS_00028854-XLOC_013966	na	na
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16996424 ---	NA	TCONS_00010348-XLOC_004836	na	na
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16966071 ---	NA	TCONS_00007517-XLOC_003515	na	na
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16961197 ---	NA	TCONS_00006706-XLOC_003320	na	na
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16903484 ---	NA	TCONS_00004473-XLOC_002353	na	na
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16974581	---	NA	ENST00000515949	na	na
17005894	ZSCAN12P1	ENSG00000219891	zinc finger and SCAN domain containing 12 pseudogene 1	na	na
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16921803	LOC339622	NA	uncharacterized LOC339622	na	na
17065057	LOC10050804	NA	uncharacterized LOC100508047	na	na
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17077191	LOC10050751	NA	uncharacterized LOC100507516	na	na
17063945	LOC10050750	ENSG00000232533	uncharacterized LOC100507507	na	na
17081213	LOC10050711	NA	uncharacterized LOC100507117	na	na
16825443	LOC10050686	NA	uncharacterized LOC100506862	na	na
16998044	LOC10050599	ENSG00000248323	uncharacterized LOC100505994	na	na
16962331	LOC10050578	NA	uncharacterized LOC100505787	na	na
16872621	LOC10050553	NA	uncharacterized LOC100505535	na	na
16813419	LOC10014460	ENSG00000258647	uncharacterized LOC100144604	na	na
16756222	IGANRP	NA	uncharacterized LOC100652933	na	na
17084025	FLJ35282	ENSG00000234840	uncharacterized LOC441389	na	na
16785048	FLJ22447	ENSG00000232774	uncharacterized LOC400221	na	na
17093186	B4GALT1	ENSG0000086062	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 1	na	na
16859643	B3GNT3	ENSG00000179913	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 3	na	na
16780169	RNU6-75	ENSG00000251753	---	na	na
16878729	RN5S90	NA	---	na	na
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16828732	RN5S432	NA	---	na	na
16818594	RN5S422	NA	---	na	na
16786650	RN5S387	NA	---	na	na
16781462	RN5S380	NA	---	na	na
16772702	RN5S379	NA	---	na	na
16763095	RN5S359	NA	---	na	na

16705024	RN5S318	NA	---	na	na
17078887	RN5S272	NA	---	na	na
17015138	RN5S201	NA	---	na	na
16974315	RN5S155	NA	---	na	na
16964904	RN5S152	NA	---	na	na
16959505	RN5S141	NA	---	na	na
16958425	RN5S137	NA	---	na	na
16907780	RN5S117	NA	---	na	na
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17118792	MIR612	NA	---	na	na
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17122674	LOC1002164	NA	---	na	na
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17085399	KGFLP1	ENSG00000227449	---	na	na
17110372	FLJ25917	NA	---	na	na
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17117867	EPAS1	NA	endothelial PAS domain protein 1	na	na
16865009	DPRX	ENSG00000204595	divergent-paired related homeobox	na	na
17116748	DHRX	ENSG00000169084	dehydrogenase/reductase (SDR family) X-linked	na	na
17093090	DDX58	ENSG00000107201	DEAD (Asp-Glu-Ala-Asp) box polypeptide 58	na	na
16924461	D21S2088E	ENSG00000228592	D21S2088E	na	na
17105224	CPXCR1	ENSG00000147183	CPX chromosome region, candidate 1	na	na
17123460	CPHL1P	NA	ceruloplasmin and hephaestin-like 1 pseudogene	na	na
17123458	CPHL1P	NA	ceruloplasmin and hephaestin-like 1 pseudogene	na	na
16907225	CFLAR-AS1	ENSG00000226312	CFLAR antisense RNA 1	na	na
17092901	CDKN2B	ENSG00000147883	cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4)	na	na
17096213	CDC14B	ENSG00000081377	cell division cycle 14B	na	na
17118419	CDC14B	ENSG00000081377	cell division cycle 14B	na	na
16699672	CAPN8	ENSG00000203697	calpain 8	na	na
17093042	C9orf72	ENSG00000147894	chromosome 9 open reading frame 72	na	na
17090042	C9orf106	NA	chromosome 9 open reading frame 106	na	na
16999432	C5orf63	ENSG00000164241	chromosome 5 open reading frame 63	na	na
16964100	C4orf48	ENSG00000243449	chromosome 4 open reading frame 48	na	na
17105694	BEX4	ENSG00000102409	brain expressed, X-linked 4	na	na
17121380	BCAP31	NA	B-cell receptor-associated protein 31	na	na
17121378	BCAP31	NA	B-cell receptor-associated protein 31	na	na
17121504	BCAP31	NA	B-cell receptor-associated protein 31	na	na
17125032	ASNS	NA	asparagine synthetase (glutamine-hydrolyzing)	na	na
17125034	ASNS	NA	asparagine synthetase (glutamine-hydrolyzing)	na	na
17125030	ASNS	NA	asparagine synthetase (glutamine-hydrolyzing)	na	na
16957766	ARHGAP31-A	NA	ARHGAP31 antisense RNA 1	na	na
17093245	AQP3	ENSG00000165272	aquaporin 3 (Gill blood group)	na	na
17122620	AOX2P	NA	aldehyde oxidase 2 pseudogene	na	na
17084363	ANXA2P2	ENSG00000231991	annexin A2 pseudogene 2	na	na
16657598	AGRN	ENSG00000188157	agrin	na	na
16794318	ADAM20P1	ENSG00000259158	ADAM metallopeptidase domain 20 pseudogene 1	na	na
17109780	ACOT9	ENSG00000123130	acyl-CoA thioesterase 9	na	na
17108096	ABCD1	ENSG00000101986	ATP-binding cassette, sub-family D (ALD), member 1	na	na
16941942	---	NA	ENST00000472243	na	na
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16911593 ---	NA	ENST00000364310	na	na
16895429 ---	NA	ENST00000364290	na	na
17083853 ---	NA	ENST00000364248	na	na
16816625 ---	NA	ENST00000364023	na	na
16834898 ---	NA	ENST00000364018	na	na
16836765 ---	NA	ENST00000363972	na	na
16848464 ---	NA	ENST00000363913	na	na
17044007 ---	NA	ENST00000363883	na	na

17065933 ---	NA	ENST00000363760	na	na
16751163 ---	NA	ENST00000363558	na	na
16685477 ---	NA	ENST00000363551	na	na
16998508 ---	NA	ENST00000363481	na	na
16742333 ---	NA	ENST00000363386	na	na
16801602 ---	NA	ENST00000363382	na	na
16871640 ---	NA	ENST00000363309	na	na
16729538 ---	NA	ENST00000363276	na	na
16817318 ---	NA	ENST00000363268	na	na
16770505 ---	NA	ENST00000363029	na	na
16809919 ---	NA	ENST00000362860	na	na
17049060 ---	NA	ENST00000362841	na	na
16732732 ---	NA	ENST00000362839	na	na
16815903 ---	NA	ENST00000362798	na	na
16854299 ---	NA	ENST00000362496	na	na
17011669 ---	NA	ENST00000362490	na	na
16919343 ---	NA	ENST00000362417	na	na
16754956 ---	NA	ENST00000362375	na	na
16741435 ---	NA	ENST00000324630	na	na
16932081 ---	NA	BX648058	na	na
16659904 ---	NA	AK097742	na	na
17074911 ---	NA	AK054741	na	na
17007632 ---	NA	AK026168	na	na
17023465 ---	NA	AK025196	na	na
17023467 ---	NA	AK022139	na	na
16660518 ---	NA	AF086337	na	na
17101873 ---	NA	---	na	na
17117112 ---	NA	---	na	na
17100895 ---	NA	---	na	na
17084235 ---	NA	---	na	na
17114687 ---	NA	---	na	na
17087979 ---	NA	---	na	na
17118142 ---	NA	---	na	na
17087008 ---	NA	---	na	na
17117807 ---	NA	---	na	na
17112572 ---	NA	---	na	na
17093315 ---	NA	---	na	na
17116820 ---	NA	---	na	na
17098182 ---	NA	---	na	na
17089847 ---	NA	---	na	na
17086594 ---	NA	---	na	na
17095772 ---	NA	---	na	na
17107021 ---	NA	---	na	na
17109107 ---	NA	---	na	na
17124612 ---	NA	---	na	na
17120688 ---	NA	---	na	na
17122592 ---	NA	---	na	na
17123264 ---	NA	---	na	na
17123270 ---	NA	---	na	na
17124256 ---	NA	---	na	na
17118996 ---	NA	---	na	na
17124726 ---	NA	---	na	na
17125162 ---	NA	---	na	na
17125028 ---	NA	---	na	na
17125668 ---	NA	---	na	na
17120208 ---	NA	---	na	na
17120898 ---	NA	---	na	na
17123256 ---	NA	---	na	na
17121358 ---	NA	---	na	na
17123822 ---	NA	---	na	na
17119922 ---	NA	---	na	na
17125306 ---	NA	---	na	na
17120248 ---	NA	---	na	na
17122748 ---	NA	---	na	na
17124810 ---	NA	---	na	na
17119060 ---	NA	---	na	na
17119502 ---	NA	---	na	na
17119538 ---	NA	---	na	na
17123892 ---	NA	---	na	na
17123894 ---	NA	---	na	na
17119430 ---	NA	---	na	na
17122488 ---	NA	---	na	na
17124878 ---	NA	---	na	na
17122070 ---	NA	---	na	na
17118874 ---	NA	---	na	na
17125036 ---	NA	---	na	na
17119918 ---	NA	---	na	na
17125150 ---	NA	---	na	na
17120180 ---	NA	---	na	na
17125302 ---	NA	---	na	na
16826072 ---	ENSG00000260402	---	na	na
17023994 ---	ENSG00000227844	---	na	na
17083988 ---	ENSG00000099810	---	na	na

Table S5. Gene listing comparing PKC-θ binding regions by ChIP sequencing with gene expression microarray analysis from HMLE-IM and MCF-IM.

space	start	end	ensembl_gene_id	external_ξ	description	region	ZINBA ζ	Callec	reads	reads	TGF	PMA	CSC	PKC dependent
chr1	20959376	20960625	ENSG00000158828	PINK1	PTEN induced put	5UTR	0.004	NO	1.42	2.89	up	up	down	no
chr22	29195876	29197375	ENSG00000100219	XBP1	X-box binding pro	5UTR	0.000	NO	3.90	5.37	up	up	down	no
chr8	124552751	124554250	ENSG00000156804	FBXO32	F-box protein 32	5UTR	0.000	YES	3.19	9.29	up	up	-	yes
chr19	12901501	12903125	ENSG00000171223	JUNB	jun B proto-onco	5UTR	0.000	YES	2.98	5.99	up	up	-	yes
chr19	12903876	12905125	ENSG00000171223	JUNB	jun B proto-onco	3UTR	0.000	NO	2.76	3.30	up	up	-	yes
chr20	56222251	56223500	ENSG00000124225	PMEPA1	prostate transme	3UTR	0.045	NO	1.70	5.16	up	up	-	yes
chr3	5027001	5028250	ENSG00000134107	BHLHE40	basic helix-loop-h	3UTR	0.012	NO	2.13	4.75	up	up	-	yes
chr20	56284251	56285625	ENSG00000124225	PMEPA1	prostate transme	5UTR	0.007	NO	3.19	6.40	up	up	-	yes
chr3	5020751	5022000	ENSG00000134107	BHLHE40	basic helix-loop-h	5UTR	0.005	NO	2.20	7.23	up	up	-	yes
chr5	179246001	179247250	ENSG00000161011	SQSTM1	sequestosome 1	5UTR	0.023	NO	1.42	4.75	up	up	-	yes
chr1	183109001	183110250	ENSG00000135862	LAMC1	laminin, gamma 1	exon	0.013	NO	0.57	2.06	up	up	-	yes
chr20	56261376	56262625	ENSG00000124225	PMEPA1	prostate transme	intron	0.018	NO	1.98	5.16	up	up	-	yes
chr3	171881126	171882375	ENSG00000075420	FNDC3B	fibronectin type II	intron	0.034	NO	0.78	2.48	up	up	-	yes
chr8	124535876	124537125	ENSG00000156804	FBXO32	F-box protein 32	intron	0.049	NO	1.28	2.48	up	up	-	yes
chr1	9883626	9885000	ENSG00000171603	CLSTN1	calsyntenin 1	5UTR	0.000	YES	2.41	5.57	up	up	-	no
chr10	134144501	134146625	ENSG00000148814	LRRC27	leucine rich repea	5UTR	0.000	YES	24.32	59.87	up	up	-	no
chr12	132378501	132379875	ENSG00000177169	ULK1	unc-51-like kinase	5UTR	0.000	YES	2.06	8.46	up	up	-	no
chr17	58754501	58755875	ENSG00000141376	BCAS3	breast carcinoma	5UTR	0.001	YES	29.14	42.53	up	up	-	no
chr17	58822626	58824125	ENSG00000141376	BCAS3	breast carcinoma	intron	0.007	YES	12.97	14.24	up	up	-	no
chr2	20646126	20647625	ENSG00000143878	RHOB	ras homolog fami	5UTR	0.000	YES	4.75	8.67	up	up	-	no
chr2	71294876	71296375	ENSG00000124357	NAGK	N-acetylglucosam	5UTR	0.000	YES	7.16	17.34	up	up	-	no
chr1	114518001	114519250	ENSG00000163349	HIPK1	homeodomain int	3UTR	0.042	NO	5.32	7.23	up	up	-	no
chr1	25756501	25757875	ENSG00000204178	TMEM57	transmembrane ζ	5UTR	0.005	NO	2.41	2.89	up	up	-	no
chr15	63339876	63341250	ENSG00000140416	TPM1	tropomyosin 1 (al	5UTR	0.001	NO	1.56	4.75	up	up	-	no
chr16	56965251	56966625	ENSG00000051108	HERPUD1	homocysteine-inc	5UTR	0.001	NO	2.48	4.13	up	up	-	no
chr4	2263251	2264750	ENSG00000123933	MXD4	MAX dimerizatio	5UTR	0.000	NO	1.84	4.13	up	up	-	no
chr12	51476626	51477875	ENSG00000110925	CSRNP2	cysteine-serine-ri	exon	0.003	NO	2.34	4.75	up	up	-	no
chr4	39639751	39641375	ENSG00000163683	SMIM14	small integral me	exon	0.000	NO	2.91	6.40	up	up	-	no
chr1	114479001	114480250	ENSG00000163349	HIPK1	homeodomain int	intron	0.039	NO	3.54	5.16	up	up	-	no

chr1	114502376	114503625	ENSG00000163349	HIPK1	homeodomain int	intron	0.021	NO	5.95	6.19	up	up	-	no
chr1	183683126	183684375	ENSG00000143344	RGL1	ral guanine nucle	intron	0.026	NO	0.43	2.06	up	up	-	no
chr17	58853001	58854250	ENSG00000141376	BCAS3	breast carcinoma	intron	0.005	NO	4.68	6.81	up	up	-	no
chr17	58832001	58833250	ENSG00000141376	BCAS3	breast carcinoma	intron	0.048	NO	9.50	11.15	up	up	-	no
chr17	59341126	59342375	ENSG00000141376	BCAS3	breast carcinoma	intron	0.018	NO	6.45	7.23	up	up	-	no
chr17	58866376	58867625	ENSG00000141376	BCAS3	breast carcinoma	intron	0.033	NO	8.22	8.46	up	up	-	no
chr17	59342626	59343875	ENSG00000141376	BCAS3	breast carcinoma	intron	0.008	NO	12.26	11.97	up	up	-	no
chr20	60092626	60094000	ENSG00000179242	CDH4	cadherin 4, type 1	intron	0.004	NO	0.71	2.48	up	up	-	no
chr19	11265876	11267375	ENSG00000161888	SPC24	SPC24, NDC80 kin	5UTR	0.000	YES	2.69	4.54	up	dowr	down	no
chr17	7387126	7388625	ENSG00000181222	POLR2A	polymerase (RNA	5UTR	0.001	NO	3.47	5.57	up	dowr	down	no
chr19	20149626	20151000	ENSG00000197124	ZNF682	zinc finger protei	5UTR	0.003	NO	0.92	2.48	up	dowr	down	no
chr5	169010001	169011375	ENSG00000040275	SPDL1	spindle apparatus	5UTR	0.000	NO	1.91	3.72	up	dowr	down	no
chr6	33167501	33168750	ENSG00000112473	SLC39A7	solute carrier fam	5UTR	0.012	NO	1.70	5.78	up	dowr	down	no
chr1	215188126	215189375	ENSG00000082482	KCNK2	potassium channe	intron	0.015	NO	1.98	3.30	up	dowr	down	no
chr1	85884251	85885500	ENSG00000153904	DDAH1	dimethylarginine	intron	0.045	NO	0.85	2.06	up	dowr	down	no
chr5	112042501	112043875	ENSG00000134982	APC	adenomatous pol	5UTR	0.001	YES	2.06	4.95	up	dowr	-	no
chr6	30709376	30710625	ENSG00000137312	FLOT1	flotillin 1 [Source:	5UTR	0.001	YES	4.75	8.05	up	dowr	-	no
chr6	30709751	30711375	ENSG00000137312	FLOT1	flotillin 1 [Source:	5UTR	0.000	YES	4.96	9.29	up	dowr	-	no
chr17	47754251	47755750	ENSG00000121067	SPOP	speckle-type POZ	exon	0.000	YES	6.03	9.50	up	dowr	-	no
chr2	3521751	3524000	ENSG00000182551	ADI1	acireductone dio	5UTR	0.000	YES	15.31	42.11	up	dowr	-	no
chr1	52862501	52863875	ENSG00000085840	ORC1	origin recognition	exon	0.002	YES	0.28	3.10	up	dowr	-	no
chr19	6424251	6426125	ENSG00000088247	KHSRP	KH-type splicing	r 5UTR	0.000	YES	3.40	6.81	up	dowr	-	no
chr19	44258376	44259875	ENSG00000105771	SMG9	smg-9 homolog, r	exon	0.000	YES	3.69	9.08	up	dowr	-	no
chr2	190525376	190526875	ENSG00000138381	ASNSD1	asparagine synth	5UTR	0.000	YES	4.82	4.13	up	dowr	-	no
chr19	50815126	50816375	ENSG00000131398	KCNC3	potassium voltage	3UTR	0.011	NO	1.56	2.48	up	dowr	-	no
chr13	30423751	30425000	ENSG00000122042	UBL3	ubiquitin-like 3	[S 5UTR	0.017	NO	3.33	4.34	up	dowr	-	no
chr19	36545126	36546375	ENSG00000075702	WDR62	WD repeat domai	5UTR	0.024	NO	1.77	4.13	up	dowr	-	no
chr22	46692126	46693375	ENSG00000075218	GTSE1	G-2 and S-phase	5UTR	0.029	NO	0.99	2.27	up	dowr	-	no
chr4	140374626	140375875	ENSG00000172007	RAB33B	RAB33B, member	5UTR	0.002	NO	2.13	3.72	up	dowr	-	no
chr5	172754751	172756375	ENSG00000113739	STC2	stanniocalcin 2	[S 5UTR	0.000	NO	5.39	6.40	up	dowr	-	no
chr13	29292376	29293750	ENSG00000139508	SLC46A3	solute carrier fam	exon	0.000	NO	3.47	6.61	up	dowr	-	no

chr16	67752626	67754000	ENSG00000141098	GFOD2	glucose-fructose (exon	0.001	NO	3.05	4.34	up	dowr-	no	
chr4	2243251	2244500	ENSG00000214367	HAUS3	HAUS augmin-like exon	0.009	NO	0.71	2.06	up	dowr-	no	
chr20	9212001	9213625	ENSG00000101333	PLCB4	phospholipase C, intron	0.002	NO	0.99	2.89	up	dowr-	no	
chr20	9212751	9214000	ENSG00000101333	PLCB4	phospholipase C, intron	0.005	NO	0.85	2.27	up	dowr-	no	
chr20	9263626	9265125	ENSG00000101333	PLCB4	phospholipase C, intron	0.016	NO	1.28	2.68	up	dowr-	no	
chr20	61558751	61560125	ENSG00000101191	DIDO1	death inducer-obl intron	0.003	NO	0.71	2.89	up	dowr-	no	
chr18	46478376	46479750	ENSG00000101665	SMAD7	SMAD family member upstre	0.001	NO	1.13	2.89	up	dowr-	no	
chr9	128003001	128004500	ENSG00000044574	HSPA5	heat shock 70kDa 5UTR	0.000	YES	3.76	7.64	up	-	up	no
chr16	87425001	87426500	ENSG00000140941	MAP1LC3L	microtubule-asso 5UTR	0.000	YES	4.96	8.05	up	-	up	no
chr2	74425001	74426500	ENSG00000065911	MTHFD2	methylenetetrahy 5UTR	0.000	YES	2.48	4.75	up	-	up	no
chr9	74525376	74526750	ENSG00000155621	C9orf85	chromosome 9 or 5UTR	0.003	NO	1.21	3.92	up	-	up	no
chr10	6244251	6245625	ENSG00000170525	PFKFB3	6-phosphofructo- 5UTR	0.000	YES	2.62	5.16	up	-	down	yes
chr4	170947001	170948250	ENSG00000198948	MFAP3L	microfibrillar-assc exon	0.006	NO	0.85	2.48	up	-	down	yes
chr10	6205001	6206375	ENSG00000170525	PFKFB3	6-phosphofructo- intron	0.011	NO	3.90	4.75	up	-	down	yes
chr5	79783126	79784375	ENSG00000152380	FAM151B	family with seque 5UTR	0.000	NO	1.28	4.34	up	-	down	no
chrX	54834751	54836000	ENSG00000102316	MAGED2	melanoma antigen 5UTR	0.042	NO	0.92	1.45	up	-	down	no
chr5	149379501	149380875	ENSG00000113716	HMGXB3	HMG box domain 5UTR	0.000	YES	2.62	4.54	up	-	-	yes
chr8	103667251	103668875	ENSG00000155090	KLF10	Kruppel-like factor 5UTR	0.000	YES	5.25	9.91	up	-	-	yes
chr3	185826251	185827500	ENSG00000244405	ETV5	ets variant 5 [Sou 5UTR	0.011	NO	2.41	4.54	up	-	-	yes
chr5	172197501	172198875	ENSG00000120129	DUSP1	dual specificity ph 5UTR	0.001	NO	4.40	6.81	up	-	-	yes
chr3	64216501	64218000	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	YES	9.50	12.59	up	-	-	no
chr3	123342751	123344000	ENSG00000065534	MYLK	myosin light chain 5UTR	0.000	YES	1.63	3.30	up	-	-	no
chr3	157815251	157816750	ENSG00000168779	SHOX2	short stature homeo 3UTR	0.000	YES	4.11	10.53	up	-	-	no
chr5	15513751	15515000	ENSG00000183580	FBXL7	F-box and leucine intron	0.034	YES	0.64	2.68	up	-	-	no
chr5	133561126	133562750	ENSG00000113558	SKP1	S-phase kinase-asso 5UTR	0.000	YES	6.66	10.94	up	-	-	no
chr5	159546001	159547250	ENSG00000170234	PWWP2A	PWWP domain cc 5UTR	0.004	YES	2.13	5.16	up	-	-	no
chr6	27114126	27115500	ENSG00000184825	HIST1H2A	histone cluster 1, 5UTR	0.000	YES	3.33	4.13	up	-	-	no
chr6	158428751	158430250	ENSG00000078269	SYNJ2	synaptojanin 2 [Sintron	0.000	YES	2.76	8.26	up	-	-	no
chr7	75543501	75545125	ENSG00000127948	POR	P450 (cytochrome c 5UTR	0.000	YES	2.62	6.40	up	-	-	no
chr7	104653001	104654750	ENSG00000005483	MLL5	myeloid/lymphoid 5UTR	0.000	YES	6.31	8.05	up	-	-	no
chr7	137686126	137687625	ENSG00000182158	CREB3L2	cAMP responsive 5UTR	0.000	YES	3.40	4.13	up	-	-	no

chr7	149570251	149571875	ENSG00000171130	ATP6V0E2	ATPase, H+ transp	5UTR	0.000	YES	7.16	15.90	up	-	-	no
chr9	101983501	101985000	ENSG00000106803	SEC61B	Sec61 beta subun	5UTR	0.000	YES	1.91	5.16	up	-	-	no
chr9	134377626	134379000	ENSG00000130714	POMT1	protein-O-manno	5UTR	0.000	YES	2.13	4.54	up	-	-	no
chr11	62572251	62573625	ENSG00000162231	NXF1	nuclear RNA expo	5UTR	0.000	YES	4.25	5.16	up	-	-	no
chr16	2390126	2391625	ENSG00000167972	ABCA3	ATP-binding casse	exon	0.000	YES	4.96	10.32	up	-	-	no
chr16	72860376	72861625	ENSG00000140836	ZFHX3	zinc finger homec	intron	0.013	YES	1.06	2.68	up	-	-	no
chr16	89939251	89940625	ENSG00000141002	TCF25	transcription facti	5UTR	0.000	YES	4.11	7.64	up	-	-	no
chr17	259126	260500	ENSG00000187624	C17orf97	chromosome 17 c	5UTR	0.000	YES	1.13	5.99	up	-	-	no
chr17	43225126	43226500	ENSG00000186834	HEXIM1	hexamethylene b	5UTR	0.000	YES	5.95	6.81	up	-	-	no
chr1	153894751	153896250	ENSG00000143614	GATAD2B	GATA zinc finger c	exon	0.000	YES	2.55	8.67	up	-	-	no
chr1	196297626	196298875	ENSG00000162687	KCNT2	potassium channε	intron	0.018	YES	0.35	2.27	up	-	-	no
chr2	118771126	118772500	ENSG00000125633	CCDC93	coiled-coil domai	5UTR	0.000	YES	2.13	5.57	up	-	-	no
chr19	2475501	2476875	ENSG00000099860	GADD45B	growth arrest anc	5UTR	0.000	YES	1.84	4.13	up	-	-	no
chr2	174829501	174831000	ENSG00000172845	SP3	Sp3 transcription	5UTR	0.000	YES	3.26	7.43	up	-	-	no
chr19	42723626	42725125	ENSG00000167625	ZNF526	zinc finger proteir	5UTR	0.000	YES	2.62	5.57	up	-	-	no
chr22	24666001	24667375	ENSG00000100014	SPECC1L	sperm antigen wii	5UTR	0.000	YES	3.47	5.78	up	-	-	no
chr21	46707251	46708625	ENSG00000186866	POFUT2	protein O-fucosyl	5UTR	0.000	YES	4.32	5.99	up	-	-	no
chr2	220042126	220043625	ENSG00000144567	FAM134A	family with seque	5UTR	0.000	YES	1.98	5.16	up	-	-	no
chr20	45837501	45838875	ENSG00000101040	ZMYND8	zinc finger, MYND	3UTR	0.018	NO	14.60	18.99	up	-	-	no
chr1	1166876	1168125	ENSG00000176022	B3GALT6	UDP-Gal:betaGal	5UTR	0.025	NO	1.21	2.68	up	-	-	no
chr1	16173376	16174875	ENSG00000065526	SPEN	spen homolog, trε	5UTR	0.003	NO	3.05	4.34	up	-	-	no
chr1	222816876	222818125	ENSG00000154305	MIA3	melanoma inhibit	5UTR	0.024	NO	1.49	2.48	up	-	-	no
chr1	43232126	43233500	ENSG00000117385	LEPRE1	leucine proline-er	5UTR	0.014	NO	1.77	3.51	up	-	-	no
chr10	1094126	1095500	ENSG00000047056	WDR37	WD repeat domai	5UTR	0.000	NO	5.18	4.34	up	-	-	no
chr11	66444751	66446000	ENSG00000173914	RBM4B	RNA binding moti	5UTR	0.001	NO	2.91	3.72	up	-	-	no
chr11	73881376	73882750	ENSG00000168014	C2CD3	C2 calcium-depen	5UTR	0.000	NO	3.12	6.19	up	-	-	no
chr12	121124376	121125625	ENSG00000110917	MLEC	malectin [Source:	5UTR	0.047	NO	1.77	2.89	up	-	-	no
chr14	103523626	103524875	ENSG00000198752	CDC42BPE	CDC42 binding pr	5UTR	0.011	NO	2.13	2.68	up	-	-	no
chr15	83477626	83478875	ENSG00000156232	WHAMM	WAS protein hom	5UTR	0.004	NO	1.28	3.51	up	-	-	no
chr16	4421251	4422625	ENSG00000168140	VASN	vasorin [Source:H	5UTR	0.013	NO	2.34	4.13	up	-	-	no
chr16	30668626	30669875	ENSG00000156860	FBRS	fibrosin [Source:H	5UTR	0.020	NO	3.47	4.34	up	-	-	no

chr16	11835876	11837125	ENSG00000153066	TXNDC11	thioredoxin doma	5UTR	0.041	NO	1.42	4.54	up	-	-	no
chr19	7894001	7895375	ENSG00000142459	EVI5L	ecotropic viral int	5UTR	0.006	NO	1.77	3.10	up	-	-	no
chr19	18793876	18795125	ENSG00000105662	CRTC1	CREB regulated tr	5UTR	0.038	NO	1.49	4.34	up	-	-	no
chr19	19495876	19497125	ENSG00000167491	GATAD2A	GATA zinc finger c	5UTR	0.019	NO	2.69	2.48	up	-	-	no
chr19	44099626	44101125	ENSG00000124444	ZNF576	zinc finger proteir	5UTR	0.000	NO	4.61	3.51	up	-	-	no
chr19	47633376	47634750	ENSG00000142230	SAE1	SUMO1 activating	5UTR	0.004	NO	2.41	3.30	up	-	-	no
chr2	148777626	148778875	ENSG00000204406	MBD5	methyl-CpG bindi	5UTR	0.019	NO	1.13	3.72	up	-	-	no
chr2	55277126	55278375	ENSG00000115310	RTN4	reticulon 4 [Sourc	5UTR	0.004	NO	2.76	3.51	up	-	-	no
chr2	85554501	85555750	ENSG00000152291	TGOLN2	trans-golgi netwo	5UTR	0.001	NO	1.70	2.48	up	-	-	no
chr20	35088876	35090375	ENSG00000080845	DLGAP4	discs, large (Dros	5UTR	0.004	NO	2.20	4.13	up	-	-	no
chr22	40439626	40440875	ENSG00000100354	TNRC6B	trinucleotide repe	5UTR	0.014	NO	2.69	2.68	up	-	-	no
chr3	12598001	12599250	ENSG00000075975	MKRN2	makorin ring fing	5UTR	0.000	NO	2.84	6.19	up	-	-	no
chr3	194406001	194407250	ENSG00000185112	FAM43A	family with seque	5UTR	0.007	NO	3.97	3.92	up	-	-	no
chr3	48593876	48595125	ENSG00000114268	PFKFB4	6-phosphofructo-	5UTR	0.029	NO	2.27	2.68	up	-	-	no
chr5	143549626	143550875	ENSG00000183775	KCTD16	potassium chann	5UTR	0.030	NO	1.98	3.30	up	-	-	no
chr6	27805626	27806875	ENSG00000233822	HIST1H2B	histone cluster 1,	5UTR	0.014	NO	1.63	3.30	up	-	-	no
chr6	24720376	24721625	ENSG00000112308	C6orf62	chromosome 6 or	5UTR	0.000	NO	2.20	3.51	up	-	-	no
chr6	111136126	111137500	ENSG00000155111	CDK19	cyclin-dependent	5UTR	0.004	NO	1.98	3.10	up	-	-	no
chr7	92218876	92220125	ENSG00000234545	FAM133B	family with seque	5UTR	0.005	NO	1.49	4.75	up	-	-	no
chr8	145158626	145160000	ENSG00000179632	MAF1	MAF1 homolog (S	5UTR	0.007	NO	3.19	4.95	up	-	-	no
chr8	71520001	71521250	ENSG00000067167	TRAM1	translocation assc	5UTR	0.015	NO	2.48	4.95	up	-	-	no
chr9	95055376	95056750	ENSG00000196305	IARS	isoleucyl-tRNA sy	5UTR	0.001	NO	3.05	3.72	up	-	-	no
chr9	140099501	140100750	ENSG00000187713	TMEM203	transmembrane p	5UTR	0.030	NO	1.42	2.48	up	-	-	no
chr1	156234876	156236125	ENSG00000198952	SMG5	smg-5 homolog, r	exon	0.017	NO	0.57	2.48	up	-	-	no
chr12	53876501	53877750	ENSG00000139625	MAP3K12	mitogen-activate	exon	0.021	NO	2.06	4.13	up	-	-	no
chr20	34795626	34797000	ENSG00000088367	EPB41L1	erythrocyte mem	exon	0.023	NO	1.42	2.06	up	-	-	no
chr3	12705001	12706250	ENSG00000132155	RAF1	v-raf-1 murine le	exon	0.016	NO	3.40	5.57	up	-	-	no
chr3	62478251	62479500	ENSG00000163618	CADPS	Ca ⁺⁺ -dependent	exon	0.001	NO	4.18	6.40	up	-	-	no
chr4	83769376	83770625	ENSG00000138674	SEC31A	SEC31 homolog A	exon	0.045	NO	0.35	1.45	up	-	-	no
chr1	176511001	176512250	ENSG00000116183	PAPPA2	pappalysin 2 [Sou	intron	0.040	NO	0.71	2.48	up	-	-	no
chr1	204892001	204893250	ENSG00000163531	NFASC	neurofascin [Sour	intron	0.022	NO	1.70	3.10	up	-	-	no

chr1	153845001	153846250	ENSG00000143614	GATAD2B	GATA zinc finger c intron	0.047	NO	0.64	1.86	up	-	-	no
chr10	14186251	14187500	ENSG00000151474	FRMD4A	FERM domain cor intron	0.030	NO	0.85	3.10	up	-	-	no
chr19	11773126	11774500	ENSG00000197332	ZNF833P	zinc finger proteir intron	0.030	NO	0.64	2.48	up	-	-	no
chr20	39902001	39903250	ENSG00000174306	ZHX3	zinc fingers and h intron	0.040	NO	1.35	2.27	up	-	-	no
chr20	39884876	39886125	ENSG00000174306	ZHX3	zinc fingers and h intron	0.023	NO	2.13	2.89	up	-	-	no
chr20	45962376	45963625	ENSG00000101040	ZMYND8	zinc finger, MYND intron	0.047	NO	2.34	3.72	up	-	-	no
chr20	45913126	45914625	ENSG00000101040	ZMYND8	zinc finger, MYND intron	0.010	NO	11.63	11.56	up	-	-	no
chr20	45841876	45843125	ENSG00000101040	ZMYND8	zinc finger, MYND intron	0.010	NO	17.30	14.45	up	-	-	no
chr3	62809001	62810250	ENSG00000163618	CADPS	Ca+++dependent :intron	0.000	NO	3.19	6.19	up	-	-	no
chr3	62815751	62817000	ENSG00000163618	CADPS	Ca+++dependent :intron	0.000	NO	3.05	5.16	up	-	-	no
chr3	62643751	62645250	ENSG00000163618	CADPS	Ca+++dependent :intron	0.027	NO	4.68	7.84	up	-	-	no
chr3	62538251	62539500	ENSG00000163618	CADPS	Ca+++dependent :intron	0.030	NO	5.39	8.46	up	-	-	no
chr3	62511001	62512500	ENSG00000163618	CADPS	Ca+++dependent :intron	0.001	NO	5.60	8.67	up	-	-	no
chr3	62602501	62604000	ENSG00000163618	CADPS	Ca+++dependent :intron	0.036	NO	5.74	7.43	up	-	-	no
chr3	62617251	62618500	ENSG00000163618	CADPS	Ca+++dependent :intron	0.048	NO	5.60	5.37	up	-	-	no
chr3	64156501	64157750	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.022	NO	5.60	9.91	up	-	-	no
chr3	64415501	64416750	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.002	NO	5.18	9.08	up	-	-	no
chr3	64310251	64311500	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.026	NO	5.10	8.46	up	-	-	no
chr3	64157251	64158500	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.003	NO	5.60	8.67	up	-	-	no
chr3	64395251	64396750	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.003	NO	5.60	8.67	up	-	-	no
chr3	64238001	64239250	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.040	NO	7.51	11.56	up	-	-	no
chr3	64411251	64412750	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.001	NO	6.24	8.67	up	-	-	no
chr3	64238501	64240000	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	NO	10.28	14.04	up	-	-	no
chr3	64165001	64166250	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.001	NO	4.40	5.99	up	-	-	no
chr3	64309501	64311000	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.017	NO	7.30	9.91	up	-	-	no
chr3	64205251	64206500	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	NO	8.86	11.97	up	-	-	no
chr3	64180251	64181500	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.041	NO	6.59	8.88	up	-	-	no
chr3	64281501	64282750	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	NO	6.81	9.08	up	-	-	no
chr3	64258501	64259750	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.040	NO	7.94	10.32	up	-	-	no
chr3	64407501	64408750	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	NO	6.52	8.46	up	-	-	no
chr3	64263251	64264500	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.001	NO	7.16	9.29	up	-	-	no

chr3	64126001	64127750	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	NO	12.19	15.69	up	-	-	no
chr3	64204751	64206000	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.005	NO	10.00	12.39	up	-	-	no
chr3	64166251	64167500	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.001	NO	7.51	9.29	up	-	-	no
chr3	64341001	64342250	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.026	NO	8.29	10.12	up	-	-	no
chr3	64250501	64252000	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	NO	9.50	11.56	up	-	-	no
chr3	64182001	64183250	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.017	NO	5.39	6.40	up	-	-	no
chr3	64292501	64294000	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.006	NO	7.51	8.88	up	-	-	no
chr3	64321751	64323000	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	NO	5.67	6.61	up	-	-	no
chr3	64151501	64153000	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	NO	9.57	11.15	up	-	-	no
chr3	64259001	64260250	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.034	NO	6.59	7.64	up	-	-	no
chr3	64269751	64271250	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	NO	6.24	7.02	up	-	-	no
chr3	64258001	64259250	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.009	NO	9.15	9.70	up	-	-	no
chr3	64296501	64298000	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.001	NO	7.23	7.64	up	-	-	no
chr3	64208251	64209500	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.030	NO	10.56	11.15	up	-	-	no
chr3	64214251	64215500	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.023	NO	9.29	9.70	up	-	-	no
chr3	64215001	64216250	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.000	NO	9.29	9.70	up	-	-	no
chr3	64208751	64210000	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.004	NO	10.92	11.15	up	-	-	no
chr3	64342001	64343250	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.001	NO	10.00	9.08	up	-	-	no
chr3	64359501	64360750	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.024	NO	7.09	6.40	up	-	-	no
chr3	64299501	64300750	ENSG00000163637	PRICKLE2	prickle homolog 2 intron	0.003	NO	7.30	6.19	up	-	-	no
chr4	169789626	169790875	ENSG00000129116	PALLD	palladin, cytoskel intron	0.026	NO	1.13	2.89	up	-	-	no
chr1	110567001	110568250	ENSG00000143093	STRIP1	striatin interactin, upstre	0.013	NO	0.28	2.27	up	-	-	no
chr15	65587876	65589250	ENSG00000199568	RNU5A-1	RNA, U5A small n exon	0.007	YES	4.68	3.10	na	na	na	yes
chr3	52569751	52571250	ENSG00000168273	SMIM4	small integral mei5UTR	0.008	YES	1.84	4.75	na	na	na	no
chr3	62958751	62960000	ENSG00000244342	LINC00698	long intergenic nc intron	0.000	YES	3.05	6.61	na	na	na	no
chr3	63417001	63418250	ENSG00000241359	SYNPR-AS	SYNPR antisense lintron	0.049	YES	2.91	6.81	na	na	na	no
chr1	11967626	11969125	ENSG00000199347	RNU5E-1	RNA, U5E small n exon	0.000	YES	6.73	5.37	na	na	na	no
chr3	64717751	64719000	ENSG00000241684	ADAMTS9	ADAMTS9 antiser intron	0.000	YES	5.46	8.88	na	na	na	no
chr3	64718251	64719500	ENSG00000241684	ADAMTS9	ADAMTS9 antiser intron	0.002	YES	7.59	10.73	na	na	na	no
chr3	162919626	162920875	ENSG00000241369	CT64	cancer/testis anti, exon	0.020	YES	1.56	2.89	na	na	na	no
chr6	125293251	125294500	ENSG00000146373	RNF217	ring finger proteir intron	0.048	YES	0.50	2.27	na	na	na	no

chr7	148376	150250	ENSG00000240859	AC093627.10	exon	0.000	YES	18.72	36.13	na	na	na	no	
chr7	6542626	6544125	ENSG00000215045	GRID2IP	glutamate receptor	exon	0.000	YES	6.81	6.81	na	na	na	no
chr7	44621126	44622750	ENSG00000158604	TMED4	transmembrane protein	5UTR	0.000	YES	4.47	8.26	na	na	na	no
chr7	108209501	108211000	ENSG00000177683	THAP5	THAP domain containing	5UTR	0.000	YES	2.76	6.81	na	na	na	no
chr8	117180126	117181375	ENSG00000249917	LINC00536	long intergenic non-coding	intron	0.017	YES	0.85	2.89	na	na	na	no
chr8	117886376	117887875	ENSG00000253327	RAD21-AS	RAD21 antisense	5UTR	0.000	YES	5.32	11.15	na	na	na	no
chr9	139010126	139011500	ENSG00000238227	C9orf69	chromosome 9 open reading	exon	0.000	YES	3.69	10.32	na	na	na	no
chr11	65189501	65191125	ENSG00000245532	NEAT1	nuclear paraspeckle	exon	0.000	YES	7.23	11.15	na	na	na	no
chr11	65190251	65191750	ENSG00000245532	NEAT1	nuclear paraspeckle	exon	0.000	YES	6.81	11.35	na	na	na	no
chr11	74203501	74205125	ENSG00000077514	POLD3	polymerase (DNA replication)	5UTR	0.000	YES	2.48	15.48	na	na	na	no
chr12	12939251	12940750	ENSG00000178878	APOLD1	apolipoprotein L class 1	3UTR	0.000	YES	3.47	7.02	na	na	na	no
chr12	13079876	13081250	ENSG00000247498	RP11-392P7.6		exon	0.000	YES	1.63	4.34	na	na	na	no
chr16	2264251	2265750	ENSG00000184207	PGP	phosphoglycolate phosphatase	5UTR	0.000	YES	8.15	7.64	na	na	na	no
chr16	10976126	10977500	ENSG00000179583	CIITA	class II, major histocompatibility	intron	0.001	YES	1.98	4.75	na	na	na	no
chr17	48943001	48944500	ENSG00000229980	TOB1-AS1	TOB1 antisense	R exon	0.000	YES	5.32	8.88	na	na	na	no
chr1	25347376	25348875	ENSG00000264371	MIR4425	microRNA 4425	[5' upstream]	0.000	YES	1.63	4.95	na	na	na	no
chr1	109642126	109643625	ENSG00000238881	SCARNA2	small Cajal body-specific RNA	5' exon	0.000	YES	1.77	4.34	na	na	na	no
chr17	62222751	62224000	ENSG00000266402	RP11-329L6.1		exon	0.009	YES	5.03	6.19	na	na	na	no
chr17	73401126	73402500	ENSG00000264511	MIR3678	microRNA 3678	[5' exon]	0.005	YES	4.18	7.02	na	na	na	no
chr17	79790501	79791875	ENSG00000182676	PPP1R27	protein phosphatase 1 regulatory	3UTR	0.017	YES	2.06	3.30	na	na	na	no
chr18	74336876	74338125	ENSG00000266256	LINC00681	long intergenic non-coding	exon	0.000	YES	1.28	2.89	na	na	na	no
chr1	28974501	28976000	ENSG00000209804	RNU11	RNA, U11 small nuclear	exon	0.000	YES	10.42	7.02	na	na	na	no
chr1	150487501	150488875	ENSG00000228126	LINC00561	long intergenic non-coding	exon	0.000	YES	2.34	5.78	na	na	na	no
chr1	155532376	155533625	ENSG00000235919	ASH1L-AS	ASH1L antisense	5' exon	0.004	YES	1.91	4.34	na	na	na	no
chr1	190725876	190727250	ENSG00000231175	RP11-463J7.2		intron	0.005	YES	0.92	2.06	na	na	na	no
chr20	48729001	48730500	ENSG00000244687	UBE2V1	ubiquitin-conjugating enzyme E2	5UTR	0.000	YES	3.83	7.43	na	na	na	no
chr1	228269626	228271000	ENSG00000143761	ARF1	ADP-ribosylation factor 1	5UTR	0.002	YES	1.28	2.06	na	na	na	no
chr1	228353001	228354375	ENSG00000181873	IBA57	IBA57, iron-sulfur domain	5UTR	0.000	YES	1.56	4.95	na	na	na	no
chr1	228645126	228646375	ENSG00000196890	HIST3H2B	histone cluster 3, H2B	5UTR	0.000	YES	2.34	2.48	na	na	na	no
chr1	48419751	48421000	ENSG00000204018	TRABD2B	TraB domain containing	intron	0.006	YES	0.78	1.86	na	na	na	no
chr2	74733876	74735375	ENSG00000115289	PCGF1	polycomb group protein	5UTR	0.000	YES	3.62	5.57	na	na	na	no

chr2	135675501	135677000	ENSG00000082258	CCNT2	cyclin T2 [Source: 5UTR	0.000	YES	4.47	9.50	na	na	na	no
chr19	34849501	34851000	ENSG00000105220	GPI	glucose-6-phosph5UTR	0.000	YES	3.12	5.78	na	na	na	no
chr19	44123001	44124375	ENSG00000131116	ZNF428	zinc finger proteir exon	0.000	YES	1.70	3.92	na	na	na	no
chr19	48866501	48868125	ENSG00000161558	TMEM143	transmembrane ꝑ5UTR	0.000	YES	5.46	13.21	na	na	na	no
chr19	51160876	51162375	ENSG00000235034	C19orf81	chromosome 19 c exon	0.000	YES	4.18	10.73	na	na	na	no
chr19	51161626	51163125	ENSG00000235034	C19orf81	chromosome 19 c 3UTR	0.000	YES	4.25	9.91	na	na	na	no
chr12	54411126	54412375	ENSG00000198353	HOXC4	homeobox C4 [So 5UTR	0.005	NO	1.06	2.89	na	na	na	no
chr4	667376	668875	ENSG00000215375	MYL5	myosin, light chai 5UTR	0.000	NO	2.69	7.23	na	na	na	no
chr11	61276251	61277625	ENSG00000204950	LRRC10B	leucine rich repea5UTR	0.000	NO	1.91	4.34	na	na	na	no
chr14	105956876	105958250	ENSG00000185347	C14orf80	chromosome 14 c 5UTR	0.031	NO	4.18	7.84	na	na	na	no
chr8	103875751	103877250	ENSG00000253320	KB-1507C	HCG15011, isofo 5UTR	0.000	NO	4.82	8.26	na	na	na	no
chr6	26198876	26200375	ENSG00000197846	HIST1H2B	histone cluster 1, 5UTR	0.010	NO	2.27	3.72	na	na	na	no
chr5	134181001	134182250	ENSG00000181904	C5orf24	chromosome 5 oꝑ5UTR	0.000	NO	2.55	3.92	na	na	na	no
chr19	46498001	46499375	ENSG00000104983	CCDC61	coiled-coil domair 5UTR	0.017	NO	3.05	3.51	na	na	na	no
chr11	65213001	65215000	ENSG00000245532	NEAT1	nuclear paraspecl exon	0.000	NO	4.68	12.80	na	na	na	no
chr15	69754626	69756000	ENSG00000245750	RP11-279F6.1	exon	0.019	NO	1.06	2.27	na	na	na	no
chr3	64795501	64796750	ENSG00000241684	ADAMTS9	ADAMTS9 antiser exon	0.002	NO	5.53	11.15	na	na	na	no
chr11	65212251	65213750	ENSG00000245532	NEAT1	nuclear paraspecl exon	0.000	NO	5.25	10.12	na	na	na	no
chr3	64794751	64796250	ENSG00000241684	ADAMTS9	ADAMTS9 antiser exon	0.000	NO	7.30	14.04	na	na	na	no
chr1	152338001	152339375	ENSG00000237975	FLG-AS1	FLG antisense RN. exon	0.021	NO	2.06	3.72	na	na	na	no
chr20	22380251	22381750	ENSG00000204684	RP5-1004I9.1	exon	0.008	NO	1.28	2.27	na	na	na	no
chr11	65210376	65211875	ENSG00000245532	NEAT1	nuclear paraspecl exon	0.000	NO	4.75	8.26	na	na	na	no
chr11	65210001	65211250	ENSG00000245532	NEAT1	nuclear paraspecl exon	0.016	NO	4.04	7.02	na	na	na	no
chr19	12605626	12606875	ENSG00000242852	ZNF709	zinc finger proteir exon	0.000	NO	1.56	2.48	na	na	na	no
chr3	64728251	64729500	ENSG00000241684	ADAMTS9	ADAMTS9 antiser exon	0.011	NO	4.68	7.43	na	na	na	no
chr3	169482001	169483250	ENSG00000200182	TERC	telomerase RNA c exon	0.033	NO	2.27	3.51	na	na	na	no
chr3	14989501	14990750	ENSG00000225733	FGD5-AS1	FGD5 antisense R exon	0.017	NO	2.91	4.34	na	na	na	no
chr1	108536001	108537250	ENSG00000230489	VAV3-AS1	VAV3 antisense R exon	0.025	NO	1.70	2.48	na	na	na	no
chr9	139622001	139623250	ENSG00000233016	SNHG7	small nucleolar RI exon	0.046	NO	1.91	2.68	na	na	na	no
chr3	64726001	64727500	ENSG00000241684	ADAMTS9	ADAMTS9 antiser exon	0.000	NO	9.36	12.80	na	na	na	no
chr11	65203626	65204875	ENSG00000245532	NEAT1	nuclear paraspecl exon	0.008	NO	3.12	4.13	na	na	na	no

chr3	64729001	64731000	ENSG00000241684	ADAMTS9	ADAMTS9 antisense	exon	0.005	NO	12.12	15.90	na	na	na	no
chr11	65202501	65203875	ENSG00000245532	NEAT1	nuclear paraspeckle	exon	0.006	NO	4.61	5.37	na	na	na	no
chr4	775001	776375	ENSG00000249592	RP11-440L14.1		exon	0.000	NO	2.69	3.10	na	na	na	no
chr3	63990751	63992750	ENSG00000239653	PSMD6-AS1	PSMD6 antisense	exon	0.000	NO	19.00	21.06	na	na	na	no
chr3	64787001	64788250	ENSG00000241684	ADAMTS9	ADAMTS9 antisense	exon	0.029	NO	10.00	10.53	na	na	na	no
chr3	64787501	64789250	ENSG00000241684	ADAMTS9	ADAMTS9 antisense	exon	0.001	NO	13.61	14.04	na	na	na	no
chr16	3173501	3174875	ENSG00000263072	RP11-473M20.14		exon	0.000	NO	4.89	4.54	na	na	na	no
chr11	65197626	65198875	ENSG00000245532	NEAT1	nuclear paraspeckle	exon	0.033	NO	5.95	3.92	na	na	na	no
chr11	65197001	65198250	ENSG00000245532	NEAT1	nuclear paraspeckle	exon	0.011	NO	7.66	4.75	na	na	na	no
chr15	65596501	65597750	ENSG00000200156	RNU5B-1	RNA, U5B small nuclear	exon	0.046	NO	7.37	2.89	na	na	na	no
chr1	45186876	45188125	ENSG00000199377	RNU5F-1	RNA, U5F small nuclear	exon	0.019	NO	7.09	2.27	na	na	na	no
chr11	77760501	77761875	ENSG00000259112	NDUFC2-K	NDUFC2-KCTD14	intron	0.003	NO	0.28	3.10	na	na	na	no
chr3	137491126	137492375	ENSG00000239513	RP11-2A4.3		intron	0.033	NO	0.64	2.48	na	na	na	no
chr19	29908501	29909750	ENSG00000264515	CTC-525D6.1		intron	0.019	NO	0.50	1.86	na	na	na	no
chr1	59262251	59263500	ENSG00000234807	RP4-794H19.2		intron	0.044	NO	0.57	2.06	na	na	na	no
chr3	181119126	181120375	ENSG00000242808	SOX2-OT	SOX2 overlapping	intron	0.034	NO	0.71	2.48	na	na	na	no
chr1	15034251	15035500	ENSG00000189337	KAZN	kazrin, periplakin	intron	0.016	NO	0.64	2.06	na	na	na	no
chr3	177182501	177183750	ENSG00000228221	LINC00571	long intergenic non-coding	intron	0.015	NO	1.06	3.30	na	na	na	no
chr8	94348626	94349875	ENSG00000246662	LINC00531	long intergenic non-coding	intron	0.003	NO	0.92	2.68	na	na	na	no
chr20	57133876	57135125	ENSG00000231290	APCDD1L	APCDD1L antisense	intron	0.023	NO	2.34	6.81	na	na	na	no
chr3	168042876	168044125	ENSG00000206120	EGFEM1P	EGF-like and EMI	intron	0.034	NO	1.21	3.51	na	na	na	no
chr20	57118001	57119375	ENSG00000231290	APCDD1L	APCDD1L antisense	intron	0.020	NO	1.91	5.37	na	na	na	no
chr20	58826126	58827500	ENSG00000228340	RP5-1043L13.1		intron	0.020	NO	1.42	3.51	na	na	na	no
chr20	58741376	58742875	ENSG00000228340	RP5-1043L13.1		intron	0.005	NO	1.56	3.72	na	na	na	no
chr19	56998126	56999375	ENSG00000166770	AC004696.2		intron	0.041	NO	0.99	1.86	na	na	na	no
chr3	64692001	64693250	ENSG00000241684	ADAMTS9	ADAMTS9 antisense	intron	0.008	NO	4.68	8.67	na	na	na	no
chr3	181485251	181486500	ENSG00000242808	SOX2-OT	SOX2 overlapping	intron	0.031	NO	1.49	2.68	na	na	na	no
chr3	63526501	63528000	ENSG00000241359	SYNPR-AS	SYNPR antisense	intron	0.019	NO	3.26	5.78	na	na	na	no
chr3	64914501	64915750	ENSG00000241684	ADAMTS9	ADAMTS9 antisense	intron	0.006	NO	6.10	9.70	na	na	na	no
chr3	64704751	64706500	ENSG00000241684	ADAMTS9	ADAMTS9 antisense	intron	0.001	NO	9.15	14.45	na	na	na	no
chr3	64873001	64874250	ENSG00000241684	ADAMTS9	ADAMTS9 antisense	intron	0.022	NO	5.39	8.46	na	na	na	no

chr3	64775251	64776500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.037	NO	7.02	10.53	na	na	na	no
chr3	64924751	64926000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.006	NO	7.37	10.94	na	na	na	no
chr3	64689001	64690250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	5.46	7.64	na	na	na	no
chr3	64684001	64685250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.015	NO	4.75	6.61	na	na	na	no
chr3	64873501	64875000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.010	NO	7.23	9.91	na	na	na	no
chr3	64692501	64694250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.005	NO	10.56	14.45	na	na	na	no
chr3	64774501	64776000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	7.87	10.73	na	na	na	no
chr3	64809001	64810250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.002	NO	7.73	10.32	na	na	na	no
chr3	64899251	64901500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	15.60	20.64	na	na	na	no
chr3	64740001	64741250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	8.51	11.15	na	na	na	no
chr3	64731001	64732500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	8.15	10.53	na	na	na	no
chr3	64677001	64678500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	10.42	13.42	na	na	na	no
chr3	64821751	64823000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	6.45	8.26	na	na	na	no
chr3	64920751	64922000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.002	NO	8.44	10.73	na	na	na	no
chr3	64722251	64723500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	8.01	10.12	na	na	na	no
chr3	64825001	64827000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	13.26	16.51	na	na	na	no
chr3	64913001	64914250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.005	NO	8.29	10.32	na	na	na	no
chr3	64862751	64864500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.005	NO	11.48	14.24	na	na	na	no
chr3	64740501	64741750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	9.00	11.15	na	na	na	no
chr3	64839751	64841000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	7.51	9.29	na	na	na	no
chr3	63071751	63073000	ENSG00000244342	LINC0069	long intergenic nc intron		0.020	NO	5.25	6.40	na	na	na	no
chr3	64900751	64902000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.034	NO	9.00	10.94	na	na	na	no
chr3	63066751	63068000	ENSG00000244342	LINC0069	long intergenic nc intron		0.037	NO	3.40	4.13	na	na	na	no
chr3	64823001	64825000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.005	NO	13.82	16.72	na	na	na	no
chr3	64863751	64865000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	8.22	9.91	na	na	na	no
chr3	64724001	64725500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.016	NO	10.70	12.80	na	na	na	no
chr3	64704001	64705500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.005	NO	10.92	13.01	na	na	na	no
chr3	64894001	64895250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	10.42	12.39	na	na	na	no
chr3	64706251	64707500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	6.10	7.23	na	na	na	no
chr3	64776501	64777750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.038	NO	7.37	8.67	na	na	na	no
chr3	64719501	64720750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	4.25	4.95	na	na	na	no

chr3	64886501	64888000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.011	NO	11.20	12.80	na	na	na	no
chr3	64935001	64936750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.004	NO	11.98	13.62	na	na	na	no
chr3	64775751	64777000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.023	NO	7.23	8.05	na	na	na	no
chr3	64814251	64815500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.002	NO	9.50	10.53	na	na	na	no
chr3	64842251	64843750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.019	NO	10.28	11.35	na	na	na	no
chr3	64945001	64946250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.009	NO	9.00	9.91	na	na	na	no
chr3	64920251	64921500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	9.64	10.53	na	na	na	no
chr3	64867501	64869000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	10.07	10.94	na	na	na	no
chr3	64929751	64931000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.003	NO	10.00	10.73	na	na	na	no
chr3	64679001	64680500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.013	NO	11.34	12.18	na	na	na	no
chr3	64903501	64905000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	10.78	11.56	na	na	na	no
chr3	64693501	64694750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.039	NO	7.73	8.26	na	na	na	no
chr3	64912251	64913500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.049	NO	8.93	9.50	na	na	na	no
chr3	64841751	64843000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.043	NO	8.58	9.08	na	na	na	no
chr3	64760501	64762000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.017	NO	8.93	9.29	na	na	na	no
chr3	64916001	64917500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.005	NO	10.99	11.35	na	na	na	no
chr3	64946251	64947500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.010	NO	7.02	7.23	na	na	na	no
chr3	64945501	64946750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.028	NO	6.88	7.02	na	na	na	no
chr3	64813751	64815000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.017	NO	10.78	10.94	na	na	na	no
chr3	64886001	64887250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.005	NO	11.27	11.35	na	na	na	no
chr3	64877251	64878750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	11.13	11.15	na	na	na	no
chr3	64908001	64909250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.028	NO	9.71	9.70	na	na	na	no
chr3	63992251	63994000	ENSG00000239653	PSMD6-A'	PSMD6	antisense intron	0.006	NO	14.46	14.24	na	na	na	no
chr3	64743751	64745000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	8.51	8.26	na	na	na	no
chr3	64861501	64862750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.002	NO	6.66	6.40	na	na	na	no
chr3	64885501	64886750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.034	NO	9.71	9.29	na	na	na	no
chr3	64836001	64837500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	12.97	12.39	na	na	na	no
chr3	64905001	64906500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.007	NO	10.85	10.32	na	na	na	no
chr3	64890501	64891750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	7.73	7.02	na	na	na	no
chr3	64902751	64904250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.005	NO	12.97	11.77	na	na	na	no
chr3	64818501	64819750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	11.34	10.12	na	na	na	no

chr3	64917001	64918250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.009	NO	10.07	8.88	na	na	na	no
chr3	64944251	64945750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.022	NO	13.04	11.35	na	na	na	no
chr3	64849501	64850750	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	9.29	8.05	na	na	na	no
chr3	64813001	64814250	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.001	NO	10.35	8.67	na	na	na	no
chr3	64778751	64780000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.000	NO	10.56	8.67	na	na	na	no
chr3	64943751	64945000	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.041	NO	12.05	9.70	na	na	na	no
chr3	64888001	64889500	ENSG00000241684	ADAMTS9	ADAMTS9	antiser intron	0.012	NO	11.34	8.67	na	na	na	no
chr20	37858751	37860125	ENSG00000230324	RP4-705O1.1		upstre	0.004	NO	0.57	2.27	na	na	na	no
chr3	5027751	5029250	ENSG00000235831	BHLHE40-	BHLHE40	antisens upstre	0.001	NO	2.69	9.50	na	na	na	no
chr11	65186001	65187250	ENSG00000245532	NEAT1		nuclear paraspecl upstre	0.006	NO	1.42	3.30	na	na	na	no
chr9	96927751	96929125	ENSG00000199165	MIRLET7A		microRNA let-7a- upstre	0.001	NO	3.62	7.23	na	na	na	no
chr9	96928376	96929625	ENSG00000199165	MIRLET7A		microRNA let-7a- upstre	0.047	NO	4.18	7.64	na	na	na	no
chr18	110501	111875	ENSG00000263006	ROCK1P1		Rho-associated, c upstre	0.000	NO	2.41	4.34	na	na	na	no
chr11	65188126	65189625	ENSG00000245532	NEAT1		nuclear paraspecl upstre	0.019	NO	2.91	4.75	na	na	na	no
chr1	64032751	64034000	NA	NA	NA	exon	0.006	YES	0.35	1.65	na	na	na	na
chr1	73259751	73261125	ENSG00000225087	RP4-660H19.1		intron	0.017	YES	0.50	2.68	na	na	na	na
chr1	14109251	14110500	NA	NA	NA	3UTR	0.043	YES	0.21	1.86	na	na	na	na
chr3	95385376	95386625	ENSG00000244681	RP11-219E24.1		intron	0.019	YES	0.92	1.86	na	na	na	na
chr3	152203876	152205250	ENSG00000243305	RP11-362A9.3		intron	0.018	YES	0.78	2.27	na	na	na	na
chr3	156892251	156893500	ENSG00000243176	RP11-550I24.2		exon	0.000	YES	6.31	8.26	na	na	na	na
chr3	176340251	176341500	ENSG00000223715	RP11-71G7.1		intron	0.011	YES	0.21	2.27	na	na	na	na
chr4	1403751	1405000	ENSG00000235608	NKX1-1		NK1 homeobox 1 upstre	0.000	YES	1.21	3.72	na	na	na	na
chr4	19226751	19228000	ENSG00000248238	RP11-3J1.1		intron	0.039	YES	0.21	2.27	na	na	na	na
chr4	36024626	36025875	ENSG00000251160	RP11-399D2.1		intron	0.029	YES	0.21	2.06	na	na	na	na
chr4	42378126	42379375	ENSG00000250781	RP11-63A11.1		intron	0.014	YES	0.14	1.45	na	na	na	na
chr4	76649126	76650500	NA	NA	NA	5UTR	0.000	YES	1.84	5.37	na	na	na	na
chr5	98264126	98265625	ENSG00000248489	CTD-2007H13.3		exon	0.000	YES	4.96	8.67	na	na	na	na
chr6	10403751	10405250	NA	NA	NA	exon	0.000	YES	3.47	7.02	na	na	na	na
chr6	13198501	13199875	NA	NA	NA	intron	0.000	YES	2.27	4.95	na	na	na	na
chr6	28993876	28995125	ENSG00000223677	OR2AD1P		olfactory recepto exon	0.016	YES	0.64	2.06	na	na	na	na
chr7	30067251	30068750	NA	NA	NA	5UTR	0.000	YES	1.21	5.16	na	na	na	na

chr7	139024501	139025875	NA	NA	NA	5UTR	0.000	YES	2.13	5.78	na	na	na	na
chrX	11058751	11060125	ENSG00000234129	RP11-120D5.1		intron	0.000	YES	1.13	2.89	na	na	na	na
chr8	87221126	87222375	ENSG00000253699	CTD-3118D11.3		intron	0.034	YES	1.49	3.72	na	na	na	na
chr8	106819376	106820625	ENSG00000251003	RP11-152P17.2		intron	0.036	YES	1.21	3.30	na	na	na	na
chr8	128716001	128717375	ENSG00000249375	RP11-1136L8.1		intron	0.012	YES	0.64	3.10	na	na	na	na
chr10	7139251	7140625	ENSG00000223581	RP11-393K12.2		exon	0.003	YES	0.57	3.51	na	na	na	na
chr11	62608251	62610000	ENSG00000222328	RNU2-2	RNA, U2 small nu	exon	0.000	YES	15.10	13.42	na	na	na	na
chr12	54672751	54675000	NA	NA	NA	5UTR	0.000	YES	13.89	30.76	na	na	na	na
chr12	54674251	54675625	NA	NA	NA	5UTR	0.000	YES	4.04	10.32	na	na	na	na
chr12	120728751	120730375	ENSG00000202538	RNU4-2	RNA, U4 small nu	exon	0.000	YES	10.78	8.67	na	na	na	na
chr13	40434126	40435375	ENSG00000212553	SNORD110	Small nucleolar R	upstre	0.010	YES	1.13	3.10	na	na	na	na
chr14	87997751	87999000	ENSG00000258859	RP11-594C13.1		intron	0.010	YES	0.28	2.27	na	na	na	na
chr16	66585751	66587125	ENSG00000217555	CKLF	chemokine-like fa	5UTR	0.000	YES	3.47	7.23	na	na	na	na
chr17	10523626	10525125	ENSG00000214970	CTC-297N7.7		exon	0.003	YES	0.71	3.51	na	na	na	na
chr17	50311751	50313000	ENSG00000252109	snoZ178	Small nucleolar R	upstre	0.007	YES	0.85	1.65	na	na	na	na
chr17	56708376	56709875	ENSG00000212195	U3	Small nucleolar R	exon	0.000	YES	30.55	26.22	na	na	na	na
chr17	56735751	56737375	ENSG00000202077	U1	U1 spliceosomal F	exon	0.000	YES	43.17	46.03	na	na	na	na
chr1	108870626	108871875	ENSG00000241361	RP11-483I13.3		intron	0.020	YES	1.91	2.89	na	na	na	na
chr17	59952126	59953375	NA	NA	NA	exon	0.034	YES	12.05	12.18	na	na	na	na
chr17	63551876	63553375	ENSG00000266076	CTD-2535L24.2		intron	0.000	YES	6.38	9.70	na	na	na	na
chr17	80172751	80174125	ENSG00000264548	RP13-516M14.2		exon	0.002	YES	0.50	4.54	na	na	na	na
chr1	114550876	114552375	NA	NA	NA	upstre	0.000	YES	4.40	6.40	na	na	na	na
chr1	117013376	117014875	ENSG00000233154	RP4-655J12.4		intron	0.000	YES	7.09	10.12	na	na	na	na
chr1	145382126	145383500	ENSG00000233396	RP11-458D21.1		exon	0.001	YES	6.24	3.30	na	na	na	na
chr1	147806001	147807500	ENSG00000202408	U1	U1 spliceosomal F	exon	0.000	YES	5.10	5.57	na	na	na	na
chr1	152926501	152927875	ENSG00000224308	RP1-13P20.6		upstre	0.000	YES	1.06	4.34	na	na	na	na
chr1	37939501	37940875	NA	NA	NA	5UTR	0.000	YES	2.55	4.34	na	na	na	na
chr20	34337876	34339250	ENSG00000225357	RPF2P1	ribosome product	upstre	0.000	YES	0.64	1.65	na	na	na	na
chr1	171797126	171798375	ENSG00000224600	RP4-612B18.1		upstre	0.037	YES	0.71	2.48	na	na	na	na
chr20	43991126	43992375	ENSG00000204070	SYS1	SYS1 Golgi-localiz	5UTR	0.000	YES	4.61	5.78	na	na	na	na
chr1	45196001	45197500	ENSG00000200169	RNU5D-1	RNA, U5D small n	exon	0.000	YES	6.52	4.13	na	na	na	na

chr2	27356751	27358250	NA	NA	NA	5UTR	0.000	YES	5.25	12.18	na	na	na	na
chr1	52831251	52832625	NA	NA	NA	exon	0.000	YES	1.91	5.16	na	na	na	na
chr2	88315251	88316625	ENSG00000222724	U2	U2 spliceosomal	Exon	0.001	YES	5.67	4.34	na	na	na	na
chr2	122287876	122289375	ENSG00000265451	RP11-204L24.2		exon	0.000	YES	7.44	6.61	na	na	na	na
chr19	7968001	7969500	ENSG00000214248	AC010336	Uncharacterized	5UTR	0.000	YES	3.26	5.16	na	na	na	na
chr19	14228001	14229375	NA	NA	NA	5UTR	0.000	YES	1.91	3.72	na	na	na	na
chr19	47728626	47730250	NA	NA	NA	exon	0.000	YES	3.62	6.19	na	na	na	na
chr22	19841751	19843250	ENSG00000215012	C22orf29	chromosome 22 c	exon	0.000	YES	3.83	7.23	na	na	na	na
chr21	42932001	42933375	ENSG00000232806	AP001610.9		exon	0.000	YES	3.69	5.57	na	na	na	na
chr22	23212501	23213750	ENSG00000211672	IGLV4-3	immunoglobulin I	5UTR	0.021	NO	0.64	2.27	na	na	na	na
chr11	126173251	126174625	ENSG00000255062	RP11-712I	Uncharacterized	5UTR	0.000	NO	1.28	4.34	na	na	na	na
chr19	36268626	36269875	NA	NA	NA	5UTR	0.036	NO	0.71	1.45	na	na	na	na
chr10	88281001	88282250	NA	NA	NA	5UTR	0.041	NO	1.70	3.10	na	na	na	na
chr1	85741376	85742625	NA	NA	NA	5UTR	0.039	NO	2.91	4.95	na	na	na	na
chr7	100026501	100027875	NA	NA	NA	5UTR	0.002	NO	4.11	6.19	na	na	na	na
chr9	139780126	139781500	NA	NA	NA	5UTR	0.002	NO	3.19	3.10	na	na	na	na
chr17	31259126	31260375	NA	NA	NA	exon	0.014	NO	0.07	1.24	na	na	na	na
chr4	38494876	38496250	ENSG00000249534	RP11-83C7.2		exon	0.037	NO	0.21	2.06	na	na	na	na
chr3	137990626	137991875	NA	NA	NA	exon	0.033	NO	0.35	2.68	na	na	na	na
chr19	32146126	32147375	ENSG00000252780	RNA5SP47	RNA, 5S ribosoma	exon	0.009	NO	0.43	2.27	na	na	na	na
chr6	21601501	21602750	ENSG00000220771	RP3-322L4.2		exon	0.010	NO	0.85	3.92	na	na	na	na
chr22	39319501	39320750	ENSG00000235209	CTA-150C2.13		exon	0.039	NO	0.50	2.27	na	na	na	na
chr20	24426751	24428000	ENSG00000234069	GAPDHP5	glyceraldehyde 3	exon	0.015	NO	0.64	2.68	na	na	na	na
chr20	19738126	19739375	ENSG00000233895	RP1-122P22.2		exon	0.041	NO	1.63	6.40	na	na	na	na
chr3	121719501	121720750	NA	NA	NA	exon	0.043	NO	0.64	2.27	na	na	na	na
chr17	29163876	29165125	NA	NA	NA	exon	0.013	NO	0.35	1.24	na	na	na	na
chr1	174925751	174927000	NA	NA	NA	exon	0.047	NO	0.78	2.68	na	na	na	na
chr21	37413876	37415125	NA	NA	NA	exon	0.035	NO	0.78	2.68	na	na	na	na
chr5	132583751	132585000	ENSG00000249478	CTB-49A3.5		exon	0.008	NO	0.85	2.89	na	na	na	na
chr6	143266751	143268000	ENSG00000224460	RP11-439L18.2		exon	0.001	NO	1.42	4.75	na	na	na	na
chr22	22693876	22695125	ENSG00000225724	LL22NC03-80A10.11		exon	0.031	NO	0.64	2.06	na	na	na	na

chr15	53421251	53422500	ENSG00000259237	RP11-209E8.1	exon	0.006	NO	1.28	4.13	na	na	na	na
chr17	36713876	36715250	NA	NA	NA	exon	0.008	NO	0.92	2.89	na	na	na
chr1	207991751	207993000	ENSG00000203709	C1orf132	chromosome 1 or	exon	0.001	NO	0.99	3.10	na	na	na
chr17	80250126	80251375	ENSG00000265692	RP13-516M14.4		exon	0.040	NO	1.91	5.57	na	na	na
chr19	39330876	39332125	NA	NA	NA	exon	0.016	NO	0.57	1.65	na	na	na
chr3	27673876	27675125	ENSG00000213846	AC098614.2		exon	0.046	NO	0.71	2.06	na	na	na
chr19	6744376	6745750	NA	NA	NA	exon	0.029	NO	1.13	3.10	na	na	na
chr20	13561376	13563125	NA	NA	NA	exon	0.000	NO	1.06	2.89	na	na	na
chr20	30666751	30668000	NA	NA	NA	exon	0.047	NO	0.71	1.86	na	na	na
chr11	46529501	46530750	NA	NA	NA	exon	0.030	NO	1.13	2.89	na	na	na
chr15	92662876	92664125	NA	NA	NA	exon	0.009	NO	0.99	2.48	na	na	na
chr20	25653376	25654625	ENSG00000213742	RP4-694B14.5		exon	0.017	NO	0.78	1.86	na	na	na
chr20	30666251	30667625	NA	NA	NA	exon	0.008	NO	0.78	1.86	na	na	na
chr14	74952501	74953750	NA	NA	NA	exon	0.029	NO	1.35	2.89	na	na	na
chr1	200638251	200639625	ENSG00000260088	RP11-92G12.3		exon	0.009	NO	2.27	4.75	na	na	na
chr3	27673501	27674750	ENSG00000213846	AC098614.2		exon	0.044	NO	0.99	2.06	na	na	na
chr7	1199251	1200625	NA	NA	NA	exon	0.000	NO	1.91	3.92	na	na	na
chr19	11095751	11097125	NA	NA	NA	exon	0.022	NO	1.35	2.68	na	na	na
chr1	8085626	8086875	ENSG00000238290	RP11-431K24.1		exon	0.019	NO	1.77	3.51	na	na	na
chr3	15080251	15081500	NA	NA	NA	exon	0.010	NO	1.91	3.72	na	na	na
chr20	23338251	23339750	ENSG00000232645	RP3-322G13.5		exon	0.003	NO	1.91	3.72	na	na	na
chr7	39988376	39989625	ENSG00000259826	RP11-467D6.1		exon	0.027	NO	2.06	3.92	na	na	na
chr13	26625501	26626875	ENSG00000231983	LINC0041!	long intergenic nc	exon	0.000	NO	2.84	5.37	na	na	na
chr12	11323251	11324500	ENSG00000256537	RP11-785H5.1		exon	0.019	NO	1.21	2.27	na	na	na
chr20	30586501	30588125	ENSG00000260903	RP1-310O13.12		exon	0.003	NO	1.35	2.48	na	na	na
chr1	1004001	1005250	ENSG00000217801	RP11-465B22.3		exon	0.037	NO	2.48	4.54	na	na	na
chr20	20019126	20020500	NA	NA	NA	exon	0.029	NO	1.70	3.10	na	na	na
chr16	3053376	3054750	ENSG00000262362	LA16c-380H5.2		exon	0.002	NO	2.41	4.34	na	na	na
chr20	46112876	46114125	ENSG00000202186	U6	U6 spliceosomal F	exon	0.010	NO	4.47	7.84	na	na	na
chr20	12844251	12846125	ENSG00000233048	RP5-1069C8.2		exon	0.000	NO	1.63	2.68	na	na	na
chr3	48700501	48701750	ENSG00000228350	RP11-148G20.1		exon	0.040	NO	2.41	3.92	na	na	na

chr3	64160001	64161250	ENSG00000239926	PRDX3P4	peroxiredoxin 3 p	exon	0.010	NO	8.08	12.39	na	na	na	na
chr17	58139876	58141250	ENSG00000267526	RP11-178C3.6		exon	0.005	NO	8.51	12.39	na	na	na	na
chr1	107867501	107869125	NA	NA	NA	exon	0.001	NO	8.08	11.77	na	na	na	na
chr20	10153751	10155375	ENSG00000230506	RP11-416N4.4		exon	0.004	NO	1.70	2.48	na	na	na	na
chr3	136471001	136472250	ENSG00000261758	RP11-102M11.2		exon	0.014	NO	3.47	4.75	na	na	na	na
chr3	63733001	63734750	ENSG00000224479	AC136289.1		exon	0.000	NO	12.55	17.13	na	na	na	na
chr20	53204751	53206250	NA	NA	NA	exon	0.000	NO	9.22	12.39	na	na	na	na
chr3	64582001	64583250	NA	NA	NA	exon	0.001	NO	9.57	12.80	na	na	na	na
chr8	128749126	128750500	NA	NA	NA	exon	0.002	NO	6.45	8.46	na	na	na	na
chr3	64159251	64160750	ENSG00000239926	PRDX3P4	peroxiredoxin 3 p	exon	0.000	NO	9.43	12.18	na	na	na	na
chr3	63755251	63756500	ENSG00000224479	AC136289.1		exon	0.015	NO	5.81	7.43	na	na	na	na
chr3	162832376	162833750	ENSG00000244571	RP11-535I24.2		exon	0.018	NO	1.49	1.86	na	na	na	na
chr20	46257876	46259250	ENSG00000229853	RP5-1049G16.4		exon	0.003	NO	6.10	7.43	na	na	na	na
chr1	114445876	114447250	NA	NA	NA	exon	0.000	NO	8.51	10.32	na	na	na	na
chr3	64553001	64554250	NA	NA	NA	exon	0.007	NO	10.92	13.21	na	na	na	na
chr3	64567501	64568750	ENSG00000241158	ADAMTS9	ADAMTS9 antiser	exon	0.000	NO	7.02	8.46	na	na	na	na
chr1	107360876	107362500	ENSG00000237460	RP11-233E12.1		exon	0.000	NO	10.14	11.97	na	na	na	na
chr3	64581501	64582750	NA	NA	NA	exon	0.003	NO	10.92	12.59	na	na	na	na
chr3	64433501	64434750	ENSG00000244564	RP11-14D22.1		exon	0.007	NO	8.08	9.29	na	na	na	na
chr20	53475001	53476375	ENSG00000252089	RNU4ATA	RNA, U4atac smal	exon	0.004	NO	10.07	11.15	na	na	na	na
chr20	48895126	48896500	ENSG00000224397	RP11-290F20.3		exon	0.000	NO	3.76	4.13	na	na	na	na
chr17	58125626	58126875	NA	NA	NA	exon	0.017	NO	8.29	9.08	na	na	na	na
chr1	107689626	107690875	NA	NA	NA	exon	0.000	NO	7.09	7.64	na	na	na	na
chr3	64641001	64642500	NA	NA	NA	exon	0.014	NO	10.78	11.56	na	na	na	na
chr3	64003501	64005250	NA	NA	NA	exon	0.001	NO	14.39	15.07	na	na	na	na
chr1	107360251	107361625	ENSG00000237460	RP11-233E12.1		exon	0.004	NO	8.86	9.08	na	na	na	na
chr3	64587251	64589250	NA	NA	NA	exon	0.013	NO	15.53	15.90	na	na	na	na
chr20	45918126	45919375	NA	NA	NA	exon	0.040	NO	10.92	11.15	na	na	na	na
chr3	63736001	63737250	ENSG00000224479	AC136289.1		exon	0.002	NO	11.13	10.94	na	na	na	na
chr1	107348126	107349625	ENSG00000232551	RP11-233E12.2		exon	0.000	NO	6.31	6.19	na	na	na	na
chr3	63739501	63741500	ENSG00000224479	AC136289.1		exon	0.000	NO	21.91	21.26	na	na	na	na

chr3	63738251	63740250	ENSG00000224479	AC136289.1	exon	0.000	NO	22.76	21.47	na	na	na	na
chr3	64588751	64590000	NA	NA NA	exon	0.007	NO	12.19	11.15	na	na	na	na
chr17	58543751	58545000	NA	NA NA	exon	0.016	NO	8.93	7.02	na	na	na	na
chr20	46255126	46256750	NA	NA NA	exon	0.001	NO	14.53	8.05	na	na	na	na
chr1	147735251	147736500	ENSG00000199879	U1 U1 spliceosomal	Exon	0.032	NO	5.03	2.27	na	na	na	na
chr1	61249001	61250250	ENSG00000231252	RP11-436K8.1	intron	0.044	NO	0.28	2.48	na	na	na	na
chr12	119669626	119670875	ENSG00000256311	RP11-64B16.5	intron	0.035	NO	0.57	4.75	na	na	na	na
chr4	29127001	29128250	ENSG00000248176	RP11-472K22.1	intron	0.023	NO	0.21	1.45	na	na	na	na
chr4	152589001	152590250	ENSG00000251603	RP11-164P12.4	intron	0.001	NO	0.64	3.51	na	na	na	na
chr1	63646501	63647750	ENSG00000271593	RP11-335E6.4	intron	0.024	NO	0.50	2.68	na	na	na	na
chr3	25201251	25202500	ENSG00000237838	AC133680.1	intron	0.018	NO	0.78	3.30	na	na	na	na
chr16	5722501	5723750	ENSG00000260411	RP11-420N3.2	intron	0.040	NO	0.85	3.10	na	na	na	na
chr15	99557501	99558750	ENSG00000259475	RP11-654A16.3	intron	0.038	NO	0.78	2.68	na	na	na	na
chr3	177940251	177941500	ENSG00000223930	RP11-33A14.1	intron	0.013	NO	0.57	1.86	na	na	na	na
chr18	42824626	42825875	NA	NA NA	intron	0.043	NO	0.57	1.65	na	na	na	na
chr4	127571751	127573000	NA	NA NA	intron	0.018	NO	0.85	2.48	na	na	na	na
chr1	177399001	177400250	ENSG00000227579	RP1-35C21.2	intron	0.032	NO	0.78	2.27	na	na	na	na
chr20	11230751	11232250	ENSG00000230990	RP4-734C18.1	intron	0.007	NO	0.99	2.68	na	na	na	na
chr3	34582251	34583500	ENSG00000227498	AC018359.3	intron	0.044	NO	0.92	2.48	na	na	na	na
chr1	188912251	188913500	ENSG00000226486	RP11-373J16.1	intron	0.014	NO	0.85	2.27	na	na	na	na
chr1	83385501	83386750	ENSG00000230817	RP4-601K24.1	intron	0.045	NO	0.71	1.86	na	na	na	na
chr20	18338001	18339750	ENSG00000230010	RP4-568F9.6	intron	0.000	NO	1.28	3.30	na	na	na	na
chr3	164926751	164928000	ENSG00000244128	RP11-85M11.2	intron	0.046	NO	0.99	2.48	na	na	na	na
chr3	3596501	3597750	ENSG00000223727	AC026188.1	intron	0.021	NO	1.13	2.68	na	na	na	na
chr1	206603751	206605000	NA	NA NA	intron	0.037	NO	1.06	2.27	na	na	na	na
chr1	177455376	177456625	ENSG00000227579	RP1-35C21.2	intron	0.045	NO	1.49	3.10	na	na	na	na
chr12	68468751	68470125	ENSG00000255733	IFNG-AS1 IFNG antisense R	intron	0.022	NO	1.63	2.89	na	na	na	na
chr20	39739751	39741250	ENSG00000226648	RP1-1J6.2	intron	0.003	NO	3.47	5.99	na	na	na	na
chr20	9975876	9977375	ENSG00000243961	RP5-839B4.8	intron	0.007	NO	1.21	2.06	na	na	na	na
chr1	199263251	199264500	ENSG00000231718	RP11-382E9.1	intron	0.024	NO	1.35	2.27	na	na	na	na
chr3	63734001	63735250	ENSG00000224479	AC136289.1	intron	0.000	NO	6.95	11.56	na	na	na	na

chr20	40631251	40632625	ENSG00000225458	RP5-1121H13.4	intron	0.002	NO	1.56	2.48	na	na	na	na
chr13	34116126	34117375	ENSG00000230490	RP11-141M1.3	intron	0.008	NO	3.26	5.16	na	na	na	na
chr20	57317626	57318875	ENSG00000237121	PIEZO1P2 piezo-type mecha	intron	0.010	NO	2.91	4.54	na	na	na	na
chr20	40620876	40622625	ENSG00000225458	RP5-1121H13.4	intron	0.001	NO	3.05	4.75	na	na	na	na
chr3	63795501	63797000	ENSG00000224479	AC136289.1	intron	0.036	NO	3.40	5.16	na	na	na	na
chr20	40655876	40657125	ENSG00000225458	RP5-1121H13.4	intron	0.024	NO	1.91	2.68	na	na	na	na
chr20	40630876	40632125	ENSG00000225458	RP5-1121H13.4	intron	0.036	NO	1.49	2.06	na	na	na	na
chr3	64555251	64556500	ENSG00000241158	ADAMTS9 ADAMTS9 antiser	intron	0.003	NO	5.67	7.84	na	na	na	na
chr3	63734751	63736500	ENSG00000224479	AC136289.1	intron	0.011	NO	8.79	11.97	na	na	na	na
chr3	63787251	63788500	ENSG00000224479	AC136289.1	intron	0.007	NO	5.81	7.84	na	na	na	na
chr20	39733126	39734500	ENSG00000226648	RP1-1J6.2	intron	0.000	NO	2.62	3.51	na	na	na	na
chr3	63787751	63789000	ENSG00000224479	AC136289.1	intron	0.017	NO	5.88	7.84	na	na	na	na
chr3	63754001	63755250	ENSG00000224479	AC136289.1	intron	0.000	NO	7.09	9.29	na	na	na	na
chr3	14319751	14321000	ENSG00000255021	RP11-536I6.2	intron	0.002	NO	2.55	3.30	na	na	na	na
chr20	39732126	39733500	ENSG00000226648	RP1-1J6.2	intron	0.045	NO	2.69	3.10	na	na	na	na
chr3	64552501	64553750	ENSG00000241158	ADAMTS9 ADAMTS9 antiser	intron	0.000	NO	9.15	10.32	na	na	na	na
chr3	63753251	63754500	ENSG00000224479	AC136289.1	intron	0.017	NO	5.67	5.99	na	na	na	na
chr1	107376501	107377750	ENSG00000237460	RP11-233E12.1	intron	0.011	NO	5.32	5.57	na	na	na	na
chr20	52235751	52237000	ENSG00000235415	AC005808.3	intron	0.025	NO	7.59	7.84	na	na	na	na
chr3	64561751	64563000	ENSG00000241158	ADAMTS9 ADAMTS9 antiser	intron	0.011	NO	11.06	11.35	na	na	na	na
chr20	52227876	52229125	ENSG00000235415	AC005808.3	intron	0.047	NO	14.32	14.66	na	na	na	na
chr20	46174626	46175875	NA	NA NA	intron	0.026	NO	8.51	8.67	na	na	na	na
chr1	107376001	107377250	ENSG00000237460	RP11-233E12.1	intron	0.005	NO	7.02	7.02	na	na	na	na
chr20	57339376	57340875	ENSG00000237121	PIEZO1P2 piezo-type mecha	intron	0.010	NO	2.91	2.89	na	na	na	na
chr3	63731501	63732750	ENSG00000224479	AC136289.1	intron	0.019	NO	11.70	11.56	na	na	na	na
chr20	46194126	46195375	NA	NA NA	intron	0.049	NO	5.88	5.78	na	na	na	na
chr3	63741001	63742500	ENSG00000224479	AC136289.1	intron	0.032	NO	9.78	9.50	na	na	na	na
chr3	63732001	63733250	ENSG00000224479	AC136289.1	intron	0.006	NO	9.85	9.50	na	na	na	na
chr20	52241126	52242625	ENSG00000235415	AC005808.3	intron	0.000	NO	7.94	7.64	na	na	na	na
chr3	64058251	64060250	ENSG00000241111	RP11-129B22.1	intron	0.001	NO	18.36	16.72	na	na	na	na
chr3	63731001	63732250	ENSG00000224479	AC136289.1	intron	0.005	NO	8.86	8.05	na	na	na	na

chr20	46243751	46245000	NA	NA	NA	intron	0.044	NO	8.51	6.81	na	na	na	na
chr5	178394876	178396125	ENSG00000254035	RP11-281O15.4		promot	0.017	NO	0.92	2.89	na	na	na	na
chr13	30894251	30895500	ENSG00000236463	LINC00421	long intergenic nc	promot	0.022	NO	1.28	3.30	na	na	na	na
chr1	117679251	117680625	ENSG00000228453	RP11-229A19.3		promot	0.027	NO	2.27	3.10	na	na	na	na
chr1	107359251	107360625	ENSG00000237460	RP11-233E12.1		promot	0.007	NO	6.10	6.19	na	na	na	na
chr4	66020251	66021500	ENSG00000248998	EFTUD1P2	elongation factor	upstre	0.026	NO	0.14	1.65	na	na	na	na
chr3	39385376	39386750	ENSG00000238267	RP11-241K18.2		upstre	0.044	NO	0.43	2.06	na	na	na	na
chr9	140023626	140024875	ENSG00000238824	snoU13	Small nucleolar R	upstre	0.000	NO	1.28	3.92	na	na	na	na
chr20	12301126	12302500	ENSG00000230437	RP11-102J14.1		upstre	0.019	NO	0.78	2.27	na	na	na	na
chr2	120974876	120976250	ENSG00000224789	AC012363.4		upstre	0.009	NO	1.28	3.72	na	na	na	na
chr20	6719251	6721000	ENSG00000228482	RP5-859D4.3		upstre	0.012	NO	0.85	2.27	na	na	na	na
chr20	4416626	4418000	ENSG00000236387	RP11-307O10.1		upstre	0.010	NO	0.64	1.65	na	na	na	na
chr6	43820501	43821750	ENSG00000223469	RP11-344J7.2		upstre	0.029	NO	1.21	3.10	na	na	na	na
chr16	75550501	75551875	ENSG00000262583	RP11-77K12.5		upstre	0.000	NO	1.98	4.34	na	na	na	na
chr20	24301126	24302375	ENSG00000232200	RP4-564O4.1		upstre	0.021	NO	0.78	1.65	na	na	na	na
chr3	24721376	24722625	ENSG00000237838	AC133680.1		upstre	0.028	NO	1.21	2.48	na	na	na	na
chr10	10094501	10095750	ENSG00000224788	RP5-933E2.1		upstre	0.033	NO	1.28	2.27	na	na	na	na
chr20	53480501	53481750	ENSG00000252089	RNU4ATA1	RNA, U4atac smal	upstre	0.045	NO	5.46	9.08	na	na	na	na
chr20	47093626	47094875	NA	NA	NA	upstre	0.048	NO	4.54	6.40	na	na	na	na
chr20	46113501	46114875	ENSG00000202186	U6	U6 spliceosomal F	upstre	0.022	NO	5.32	7.23	na	na	na	na
chr1	107356501	107358250	ENSG00000237460	RP11-233E12.1		upstre	0.000	NO	7.09	8.88	na	na	na	na
chr1	116402626	116403875	ENSG00000214204	RP11-485H8.2		upstre	0.044	NO	2.34	2.89	na	na	na	na
chr20	53477626	53478875	ENSG00000252089	RNU4ATA1	RNA, U4atac smal	upstre	0.016	NO	11.27	13.83	na	na	na	na
chr20	53477251	53478500	ENSG00000252089	RNU4ATA1	RNA, U4atac smal	upstre	0.025	NO	9.29	11.15	na	na	na	na
chr20	46109626	46111000	ENSG00000234075	RPL35AP	ribosomal protein	upstre	0.025	NO	7.30	8.05	na	na	na	na
chr20	53485001	53486375	ENSG00000252089	RNU4ATA1	RNA, U4atac smal	upstre	0.004	NO	8.86	9.70	na	na	na	na
chr1	107355751	107357000	ENSG00000237460	RP11-233E12.1		upstre	0.007	NO	5.32	5.37	na	na	na	na
chr20	52547251	52548500	ENSG00000236352	AC005220.3		upstre	0.003	NO	15.60	15.28	na	na	na	na
chr20	52292876	52294125	ENSG00000238468	RNU7-14P	RNA, U7 small nu	upstre	0.010	NO	8.86	7.64	na	na	na	na
chr20	52548001	52549875	ENSG00000236352	AC005220.3		upstre	0.003	NO	14.11	11.56	na	na	na	na
chr20	52549876	52551125	ENSG00000236352	AC005220.3		upstre	0.048	NO	17.23	14.04	na	na	na	na

chr5	137805251	137806500	ENSG00000241458	RP11-461O14.1	upstream	0.032	NO	13.26	4.34	na	na	na	na
chr3	152879251	152880750	ENSG00000181467	RAP2B	RAP2B, member c 5UTR	0.000	YES	2.69	8.46	down	up	up	yes
chr10	74033001	74034375	ENSG00000168209	DDIT4	DNA-damage-indi 5UTR	0.000	YES	2.20	4.75	down	up	up	yes
chr10	112256876	112258250	ENSG00000138166	DUSP5	dual specificity p 5UTR	0.004	NO	1.13	3.92	down	up	up	yes
chr5	68787876	68789250	ENSG00000197822	OCLN	occludin [Source: 5UTR	0.000	YES	3.19	5.37	down	up	up	no
chr6	31794876	31796250	ENSG00000204388	HSPA1B	heat shock 70kDa 5UTR	0.001	YES	1.42	3.10	down	up	up	no
chr20	50314626	50316000	ENSG00000054793	ATP9A	ATPase, class II, ty intron	0.017	NO	1.91	4.13	down	up	down	no
chr20	50383376	50384625	ENSG00000054793	ATP9A	ATPase, class II, ty intron	0.041	NO	3.97	7.23	down	up	down	no
chr3	189439001	189440375	ENSG00000073282	TP63	tumor protein p6. intron	0.001	YES	2.34	3.30	down	up	-	yes
chr8	29207501	29208875	ENSG00000120875	DUSP4	dual specificity p 5UTR	0.000	YES	1.13	4.75	down	up	-	yes
chr19	35738751	35740000	ENSG00000105699	LSR	lipolysis stimulate 5UTR	0.000	YES	3.05	7.64	down	up	-	yes
chr19	35739251	35740625	ENSG00000105699	LSR	lipolysis stimulate 5UTR	0.000	YES	3.26	6.40	down	up	-	yes
chr2	43453126	43454375	ENSG00000152518	ZFP36L2	ZFP36 ring finger 5UTR	0.002	NO	1.84	4.54	down	up	-	yes
chr5	150460126	150461500	ENSG00000145901	TNIP1	TNFAIP3 interacti exon	0.007	NO	1.70	4.54	down	up	-	yes
chr6	36647251	36648500	ENSG00000124762	CDKN1A	cyclin-dependent exon	0.011	NO	1.42	3.92	down	up	-	yes
chr1	161052876	161054125	ENSG00000143217	PVRL4	poliovirus receptc intron	0.033	NO	0.71	2.48	down	up	-	yes
chr10	71992501	71993875	ENSG00000180817	PPA1	pyrophosphatase 5UTR	0.000	YES	2.62	3.92	down	up	-	no
chr1	107773501	107775375	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.000	YES	7.66	14.24	down	up	-	no
chr1	107843376	107844750	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.000	YES	6.38	8.46	down	up	-	no
chr1	107843876	107845375	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.001	YES	6.95	10.12	down	up	-	no
chr20	19983001	19984250	ENSG00000132669	RIN2	Ras and Rab inter 3UTR	0.017	NO	1.28	2.89	down	up	-	no
chr20	19982501	19983875	ENSG00000132669	RIN2	Ras and Rab inter 3UTR	0.005	NO	1.70	2.89	down	up	-	no
chr11	64084876	64086250	ENSG00000126432	PRDX5	peroxiredoxin 5 [5UTR	0.007	NO	2.84	4.75	down	up	-	no
chr11	65554001	65555375	ENSG00000172818	OVOL1	ovo-like 1(Drosop 5UTR	0.000	NO	1.42	4.13	down	up	-	no
chr6	89789751	89791125	ENSG00000146278	PNRC1	proline-rich nucle 5UTR	0.016	NO	2.62	2.89	down	up	-	no
chr3	196750751	196752000	ENSG00000163975	MFI2	antigen p97 (mel: exon	0.012	NO	1.06	3.92	down	up	-	no
chr1	107775126	107776875	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.001	NO	5.74	10.32	down	up	-	no
chr1	107832751	107834000	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.002	NO	3.69	6.40	down	up	-	no
chr1	107793126	107794750	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.007	NO	6.45	10.32	down	up	-	no
chr1	107790376	107791875	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.009	NO	4.54	7.23	down	up	-	no
chr1	107784501	107785875	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.002	NO	4.75	7.23	down	up	-	no

chr1	107793876	107795125	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.031	NO	5.88	8.67	dow up	-	no
chr1	107772876	107774125	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.034	NO	6.03	8.88	dow up	-	no
chr1	107832251	107833625	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.008	NO	5.03	7.23	dow up	-	no
chr1	107826001	107827375	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.002	NO	5.03	7.02	dow up	-	no
chr1	107821376	107822750	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.002	NO	4.54	6.19	dow up	-	no
chr1	107695626	107697125	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.000	NO	6.52	8.88	dow up	-	no
chr1	107863126	107864875	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.002	NO	8.72	11.56	dow up	-	no
chr1	107829251	107830500	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.007	NO	5.32	7.02	dow up	-	no
chr1	107745626	107747000	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.004	NO	4.04	5.16	dow up	-	no
chr1	107829751	107831125	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.006	NO	4.89	6.19	dow up	-	no
chr1	107710001	107711500	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.012	NO	5.25	6.61	dow up	-	no
chr1	107877001	107878375	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.008	NO	5.46	6.81	dow up	-	no
chr1	107698501	107699750	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.000	NO	4.82	5.99	dow up	-	no
chr1	107785376	107786625	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.034	NO	4.68	5.78	dow up	-	no
chr1	107715251	107716625	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.008	NO	5.81	7.02	dow up	-	no
chr1	107807376	107808625	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.006	NO	6.17	7.43	dow up	-	no
chr1	107801376	107802875	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.009	NO	7.30	8.67	dow up	-	no
chr1	107736876	107738250	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.000	NO	6.24	7.23	dow up	-	no
chr1	107770001	107771625	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.001	NO	7.37	8.46	dow up	-	no
chr1	107804876	107806250	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.002	NO	6.88	7.84	dow up	-	no
chr1	107908876	107910125	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.010	NO	5.03	5.57	dow up	-	no
chr1	107901376	107902625	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.004	NO	7.30	8.05	dow up	-	no
chr1	107819626	107820875	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.000	NO	5.10	5.57	dow up	-	no
chr1	107685626	107686875	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.018	NO	5.88	6.40	dow up	-	no
chr1	107742376	107744500	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.001	NO	11.70	12.59	dow up	-	no
chr1	107686751	107688000	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.002	NO	7.66	8.05	dow up	-	no
chr1	107688501	107689875	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.003	NO	5.95	6.19	dow up	-	no
chr1	107718001	107719375	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.000	NO	6.81	7.02	dow up	-	no
chr1	107749876	107751125	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.029	NO	6.24	6.19	dow up	-	no
chr1	107870126	107871500	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.001	NO	6.31	6.19	dow up	-	no
chr1	107735626	107736875	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.028	NO	7.37	7.02	dow up	-	no

chr1	107925626	107927000	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.010	NO	7.16	6.81	dow up	-	no
chr1	107796001	107797250	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.026	NO	7.02	6.61	dow up	-	no
chr1	107687126	107688375	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.024	NO	9.36	8.46	dow up	-	no
chr1	107714376	107715625	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.034	NO	6.59	5.78	dow up	-	no
chr1	107814376	107815625	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.034	NO	7.09	6.19	dow up	-	no
chr1	107842126	107843375	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.017	NO	7.09	5.99	dow up	-	no
chr1	107840376	107841625	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.040	NO	6.31	5.16	dow up	-	no
chr1	107741751	107743000	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.042	NO	7.30	5.37	dow up	-	no
chr1	107705126	107706375	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.021	NO	6.24	4.54	dow up	-	no
chr1	107874626	107876000	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.003	NO	7.44	5.16	dow up	-	no
chr1	107887126	107888375	ENSG00000162631	NTNG1	netrin G1 [Source intron	0.024	NO	7.59	4.54	dow up	-	no
chr1	147241126	147242375	ENSG00000143140	GJA5	gap junction prot intron	0.045	NO	1.21	2.27	dow up	-	no
chr10	47139751	47141000	ENSG00000150165	ANXA8L1	annexin A8-like 1 intron	0.031	NO	1.06	2.06	dow up	-	no
chr20	46373251	46374500	ENSG00000196562	SULF2	sulfatase 2 [Sourc intron	0.029	NO	8.58	12.18	dow up	-	no
chr20	46340001	46341250	ENSG00000196562	SULF2	sulfatase 2 [Sourc intron	0.000	NO	14.04	16.72	dow up	-	no
chr4	11419626	11420875	ENSG00000002587	HS3ST1	heparan sulfate (ξ intron	0.043	NO	0.78	2.27	dow up	-	no
chr1	107675751	107677000	ENSG00000162631	NTNG1	netrin G1 [Source upstreā	0.002	NO	6.17	6.19	dow up	-	no
chr1	107673876	107675250	ENSG00000162631	NTNG1	netrin G1 [Source upstreā	0.038	NO	6.66	5.57	dow up	-	no
chr1	107678501	107679875	ENSG00000162631	NTNG1	netrin G1 [Source upstreā	0.014	NO	6.38	4.75	dow up	-	no
chr6	7389376	7390625	ENSG00000124784	RIOK1	RIO kinase 1 [Sou 5UTR	0.013	NO	2.69	2.89	dow dow up	-	no
chr4	22469376	22470625	ENSG00000152990	GPR125	G protein-couplec intron	0.006	YES	0.50	2.06	dow dow down	-	no
chr7	43622001	43623375	ENSG00000164543	STK17A	serine/threonine 5UTR	0.000	YES	4.47	5.57	dow dow	-	no
chrX	40506126	40507625	ENSG00000185753	CXorf38	chromosome X or 5UTR	0.000	YES	4.47	10.94	dow dow	-	no
chr14	75517501	75518875	ENSG00000119684	MLH3	mutL homolog 3 (exon	0.000	YES	3.54	4.95	dow dow	-	no
chr1	60279626	60281000	ENSG00000134709	HOOK1	hook homolog 1 (5UTR	0.001	YES	1.42	3.10	dow dow	-	no
chr1	118475751	118477000	ENSG00000065183	WDR3	WD repeat domai 3UTR	0.036	NO	0.64	2.48	dow dow	-	no
chr6	26271126	26272375	ENSG00000256018	HIST1H3G	histone cluster 1, 3UTR	0.044	NO	3.26	2.06	dow dow	-	no
chr10	104473751	104475000	ENSG00000156398	SFXN2	sideroflexin 2 [So 5UTR	0.013	NO	1.28	3.51	dow dow	-	no
chr12	65217751	65219000	ENSG00000111490	TBC1D30	TBC1 domain fam 5UTR	0.011	NO	2.13	3.10	dow dow	-	no
chr15	67546376	67547625	ENSG00000103599	IQCH	IQ motif containir 5UTR	0.004	NO	2.84	3.92	dow dow	-	no
chr16	10479251	10480500	ENSG00000166669	ATF7IP2	activating transcri 5UTR	0.004	NO	1.84	3.10	dow dow	-	no

chr19	30096501	30097750	ENSG00000105171	POP4	processing of pre-t5UTR	0.022	NO	2.69	2.06	down	down	-	no
chr1	174968126	174969500	ENSG00000116161	CACYBP	calcyclin binding p5UTR	0.003	NO	4.61	5.16	down	down	-	no
chr21	45660126	45661500	ENSG00000160223	ICOSLG	inducible T-cell cc5UTR	0.012	NO	2.34	5.78	down	down	-	no
chr6	89855251	89856625	ENSG00000146281	PM20D2	peptidase M20 dc5UTR	0.001	NO	1.35	3.72	down	down	-	no
chr7	82791626	82792875	ENSG00000186472	PCLO	piccolo presynapt5UTR	0.030	NO	1.35	2.27	down	down	-	no
chr9	115141626	115142875	ENSG00000119471	HSDL2	hydroxysteroid de5UTR	0.021	NO	2.27	3.72	down	down	-	no
chrX	14047001	14048250	ENSG00000046647	GEMIN8	gem (nuclear org) exon	0.002	NO	2.27	3.51	down	down	-	no
chr1	114409376	114410625	ENSG00000134242	PTPN22	protein tyrosine p intron	0.006	NO	2.48	4.75	down	down	-	no
chr16	81635251	81636500	ENSG00000153815	CMIP	c-Maf inducing pr intron	0.042	NO	1.06	2.89	down	down	-	no
chr20	13322126	13323375	ENSG00000089123	TASP1	taspase, threonin intron	0.023	NO	1.13	3.92	down	down	-	no
chr20	13322501	13323750	ENSG00000089123	TASP1	taspase, threonin intron	0.035	NO	0.99	3.30	down	down	-	no
chr3	24330626	24331875	ENSG00000151090	THRB	thyroid hormone intron	0.028	NO	0.99	3.10	down	down	-	no
chr3	132316626	132317875	ENSG00000240303	ACAD11	acyl-CoA dehydro intron	0.033	NO	0.78	1.86	down	down	-	na
chr1	33429751	33431250	ENSG00000116514	RNF19B	ring finger proteir exon	0.000	YES	1.42	5.78	down	-	up	yes
chr8	95652501	95654000	ENSG00000104413	ESRP1	epithelial splicing 5UTR	0.000	YES	9.64	12.80	down	-	up	no
chr17	62971001	62972375	ENSG00000214174	AMZ2P1	archaelysin family exon	0.006	YES	3.33	6.61	down	-	up	no
chr20	52833626	52835250	ENSG00000101132	PFDN4	prefoldin subunit intron	0.000	YES	13.40	17.75	down	-	up	no
chr2	232378501	232380000	ENSG00000181798	LINC00471	long intergenic nc exon	0.000	YES	2.84	5.57	down	-	up	no
chr5	72251001	72252375	ENSG00000157107	FCHO2	FCH domain only 5UTR	0.002	NO	1.84	5.16	down	-	up	no
chr2	38303251	38304500	ENSG00000138061	CYP1B1	cytochrome P450 exon	0.041	NO	2.69	6.19	down	-	up	no
chr20	52841751	52843250	ENSG00000101132	PFDN4	prefoldin subunit intron	0.012	NO	8.15	10.94	down	-	up	no
chr6	53412376	53413625	ENSG00000001084	GCLC	glutamate-cysteir intron	0.025	NO	1.35	3.30	down	-	up	no
chr1	203273876	203275250	ENSG00000159388	BTG2	BTG family, meml5UTR	0.001	YES	2.27	5.99	down	-	down	no
chr12	56473376	56474750	ENSG00000065361	ERBB3	v-erb-b2 erythro5UTR	0.028	NO	1.98	3.92	down	-	down	no
chr3	142314501	142315750	ENSG00000120756	PLS1	plastin 1 [Source:5UTR	0.008	NO	2.06	4.13	down	-	down	no
chr3	113674751	113676000	ENSG00000184307	ZDHHC23	zinc finger, DHHC-exon	0.024	NO	0.78	2.48	down	-	down	no
chr1	109782376	109783625	ENSG00000143126	CELSR2	cadherin, EGF LA) upstre	0.024	NO	2.69	4.95	down	-	down	no
chr8	128747751	128749250	ENSG00000136997	MYC	v-myc myelocytor5UTR	0.000	YES	5.60	11.56	down	-	-	yes
chr20	43976376	43977750	ENSG00000124145	SDC4	syndecan 4 [Sour5UTR	0.003	YES	2.91	4.13	down	-	-	yes
chr1	154377126	154378375	ENSG00000160712	IL6R	interleukin 6 rece5UTR	0.049	NO	2.13	4.34	down	-	-	yes
chr1	154377876	154379125	ENSG00000160712	IL6R	interleukin 6 rece5UTR	0.008	NO	2.34	4.13	down	-	-	yes

chr19	39896751	39898250	ENSG00000128016	ZFP36	ZFP36 ring finger 5UTR	0.000	NO	1.56	4.34	dow-	-	yes
chr3	32515251	32516500	ENSG00000153551	CMTM7	CKLF-like MARVEL intron	0.006	YES	0.92	3.10	dow-	-	no
chr3	186500751	186502000	ENSG00000156976	EIF4A2	eukaryotic transl 5UTR	0.000	YES	4.89	6.61	dow-	-	no
chr3	193853251	193854750	ENSG00000114315	HES1	hairy and enhanc 5UTR	0.000	YES	10.70	12.80	dow-	-	no
chr3	193856501	193858000	ENSG00000114315	HES1	hairy and enhanc 3UTR	0.000	YES	9.22	10.53	dow-	-	no
chr4	81008751	81010000	ENSG00000163297	ANTXR2	anthrax toxin rece intron	0.042	YES	0.57	2.68	dow-	-	no
chr5	57755126	57756750	ENSG00000145632	PLK2	polo-like kinase 2 5UTR	0.000	YES	4.75	11.15	dow-	-	no
chrX	7065501	7067000	ENSG00000130021	HDHD1	haloacid dehaloge 5UTR	0.000	YES	1.56	6.19	dow-	-	no
chr9	139685001	139686750	ENSG00000244187	TMEM141	transmembrane p 5UTR	0.000	YES	4.54	12.59	dow-	-	no
chr13	27998001	27999375	ENSG00000122034	GTF3A	general transcript 5UTR	0.000	YES	7.94	11.77	dow-	-	no
chr14	24036126	24037500	ENSG00000213983	AP1G2	adaptor-related p 5UTR	0.000	YES	1.84	4.34	dow-	-	no
chr14	50359001	50360500	ENSG00000165527	ARF6	ADP-ribosylation 5UTR	0.000	YES	3.12	5.78	dow-	-	no
chr14	61822376	61823625	ENSG00000027075	PRKCH	protein kinase C, i intron	0.009	YES	0.64	2.27	dow-	-	no
chr14	102770876	102772250	ENSG00000080823	MOK	MOK protein kina 5UTR	0.000	YES	3.47	7.02	dow-	-	no
chr16	68770501	68772000	ENSG00000039068	CDH1	cadherin 1, type 1 5UTR	0.000	YES	2.76	5.78	dow-	-	no
chr17	80277626	80279000	ENSG00000141574	SECTM1	secreted and tran 3UTR	0.002	YES	1.56	3.10	dow-	-	no
chr18	12883501	12884875	ENSG00000175354	PTPN2	protein tyrosine p 5UTR	0.000	YES	2.06	5.57	dow-	-	no
chr1	150601501	150602875	ENSG00000143420	ENSA	endosulfine alpha 5UTR	0.000	YES	4.75	6.40	dow-	-	no
chr19	34894501	34896000	ENSG00000126249	PDCD2L	programmed cell 5UTR	0.000	YES	1.28	4.13	dow-	-	no
chr11	67079751	67081000	ENSG00000172830	SSH3	slingshot protein 3UTR	0.004	NO	1.49	3.10	dow-	-	no
chr11	72532501	72534000	ENSG00000168010	ATG16L2	autophagy relate 3UTR	0.000	NO	2.34	5.78	dow-	-	no
chr20	49372751	49374125	ENSG00000124171	PARD6B	par-6 partitioning 3UTR	0.020	NO	8.86	7.23	dow-	-	no
chr20	49368001	49369625	ENSG00000124171	PARD6B	par-6 partitioning 3UTR	0.018	NO	11.63	8.46	dow-	-	no
chr4	46369376	46370625	ENSG00000151834	GABRA2	gamma-aminobut 3UTR	0.005	NO	0.21	2.48	dow-	-	no
chr6	106557626	106558875	ENSG00000057657	PRDM1	PR domain contai 3UTR	0.002	NO	1.28	2.48	dow-	-	no
chr1	145437751	145439125	ENSG00000117289	TXNIP	thioredoxin inter 5UTR	0.000	NO	3.69	5.37	dow-	-	no
chr1	207225876	207227250	ENSG00000123836	PFKFB2	6-phosphofructo- 5UTR	0.014	NO	1.49	3.51	dow-	-	no
chr11	66511876	66513125	ENSG00000173715	C11orf80	chromosome 11 c 5UTR	0.013	NO	1.56	3.72	dow-	-	no
chr11	6632501	6633750	ENSG00000166337	TAF10	TAF10 RNA polym 5UTR	0.047	NO	0.50	2.89	dow-	-	no
chr13	28194251	28195500	ENSG00000186184	POLR1D	polymerase (RNA 5UTR	0.014	NO	2.98	6.19	dow-	-	no
chr14	20936876	20938250	ENSG00000198805	PNP	purine nucleoside 5UTR	0.002	NO	1.84	3.10	dow-	-	no

chr14	70077126	70078375	ENSG00000100647	KIAA0247	KIAA0247 [Source	5UTR	0.023	NO	1.70	2.68	dow	-	no
chr14	24740126	24741500	ENSG00000100949	RABGGTA	Rab geranylgeran	5UTR	0.000	NO	3.33	3.72	dow	-	no
chr15	69112751	69114000	ENSG00000140350	ANP32A	acidic (leucine-ric	5UTR	0.002	NO	1.13	3.10	dow	-	no
chr15	77223251	77224500	ENSG00000117906	RCN2	reticulocalbin 2, E	5UTR	0.020	NO	1.21	3.51	dow	-	no
chr19	33071501	33072750	ENSG00000105185	PDCD5	programmed cell	5UTR	0.000	NO	1.84	3.51	dow	-	no
chr20	18487876	18489250	ENSG00000101310	SEC23B	Sec23 homolog B	5UTR	0.001	NO	3.26	4.54	dow	-	no
chr20	18487501	18488750	ENSG00000101310	SEC23B	Sec23 homolog B	5UTR	0.025	NO	3.12	4.34	dow	-	no
chr4	141294001	141295375	ENSG00000153130	SCOC	short coiled-coil p	5UTR	0.000	NO	2.27	3.10	dow	-	no
chr5	10249626	10251000	ENSG00000150753	CCT5	chaperonin conta	5UTR	0.001	NO	5.67	6.40	dow	-	no
chr1	10856126	10857375	ENSG00000130940	CASZ1	castor zinc finger	exon	0.039	NO	1.06	2.89	dow	-	no
chr1	209957251	209958500	ENSG00000162757	C1orf74	chromosome 1 or	exon	0.018	NO	1.42	3.10	dow	-	no
chr11	72504126	72505500	ENSG00000214530	STARD10	StAR-related lipid	exon	0.000	NO	2.48	4.75	dow	-	no
chr14	73924626	73926125	ENSG00000133961	NUMB	numb homolog (L	exon	0.000	NO	3.26	4.54	dow	-	no
chr20	16354126	16355375	ENSG00000089177	KIF16B	kinesin family me	exon	0.017	NO	0.78	3.30	dow	-	no
chr20	16354626	16355875	ENSG00000089177	KIF16B	kinesin family me	exon	0.016	NO	0.92	3.51	dow	-	no
chr20	52773876	52775500	ENSG00000019186	CYP24A1	cytochrome P450	exon	0.001	NO	18.64	20.44	dow	-	no
chr22	31686126	31687625	ENSG00000100100	PIK3IP1	phosphoinositide	exon	0.000	NO	1.49	4.13	dow	-	no
chr3	193854251	193856000	ENSG00000114315	HES1	hairy and enhanc	exon	0.006	NO	11.34	11.77	dow	-	no
chr3	128902001	128903500	ENSG00000169714	CNBP	CCHC-type zinc fir	exon	0.001	NO	2.20	5.78	dow	-	no
chr1	181006501	181007750	ENSG00000153029	MR1	major histocomp	intron	0.023	NO	1.42	3.10	dow	-	no
chr13	42657501	42658750	ENSG00000102780	DGKH	diacylglycerol kin	intron	0.047	NO	1.63	3.51	dow	-	no
chr15	49930001	49931250	ENSG00000104047	DTWD1	DTW domain con	intron	0.016	NO	1.84	2.68	dow	-	no
chr20	49349876	49351250	ENSG00000124171	PARD6B	par-6 partitioning	intron	0.025	NO	9.07	8.05	dow	-	no
chr20	49351376	49352625	ENSG00000124171	PARD6B	par-6 partitioning	intron	0.048	NO	9.57	7.43	dow	-	no
chr20	49359501	49360750	ENSG00000124171	PARD6B	par-6 partitioning	intron	0.005	NO	10.92	8.46	dow	-	no
chr20	52771751	52773125	ENSG00000019186	CYP24A1	cytochrome P450	intron	0.019	NO	9.71	9.08	dow	-	no
chr6	136670876	136672125	ENSG00000135525	MAP7	microtubule-asso	intron	0.011	NO	0.07	2.27	dow	-	no
chr8	102505376	102506750	ENSG00000083307	GRHL2	grainyhead-like 2	intron	0.000	NO	4.11	6.81	dow	-	no
chr20	52797876	52799250	ENSG00000019186	CYP24A1	cytochrome P450	upstre	0.001	NO	13.47	16.93	dow	-	no
chr20	52792626	52793875	ENSG00000019186	CYP24A1	cytochrome P450	upstre	0.048	NO	9.50	10.94	dow	-	no
chr3	193852251	193853500	ENSG00000114315	HES1	hairy and enhanc	upstre	0.014	NO	4.32	5.37	dow	-	no

chr22	50963376	50964750	ENSG00000025708	TYMP	thymidine phosph 3UTR	0.000	NO	2.20	3.51	down	-	-	na
chr2	70141376	70142875	ENSG00000059728	MXD1	MAX dimerization 5UTR	0.000	YES	2.76	7.23	-	up	up	yes
chr20	48807001	48808250	ENSG00000172216	CEBPB	CCAAT/enhancer 5UTR	0.011	NO	1.77	5.99	-	up	up	yes
chr17	62159126	62160375	ENSG00000178607	ERN1	endoplasmic retic intron	0.047	NO	1.98	3.30	-	up	up	yes
chr19	44172501	44173750	ENSG00000011422	PLAUR	plasminogen activ intron	0.009	NO	0.85	2.48	-	up	up	yes
chr1	68150251	68151625	ENSG00000116717	GADD45A	growth arrest anc 5UTR	0.000	YES	1.77	4.75	-	up	up	no
chr3	156877501	156878750	ENSG00000163660	CCNL1	cyclin L1 [Source: 5UTR	0.000	YES	4.61	7.43	-	up	up	no
chr17	58368626	58369875	ENSG00000170832	USP32	ubiquitin specific intron	0.007	YES	9.07	12.18	-	up	up	no
chr2	86667251	86668625	ENSG00000115548	KDM3A	lysine (K)-specific 5UTR	0.000	YES	4.18	7.43	-	up	up	no
chr2	86667751	86669125	ENSG00000115548	KDM3A	lysine (K)-specific 5UTR	0.008	YES	3.97	7.64	-	up	up	no
chr17	58497626	58499000	ENSG00000170832	USP32	ubiquitin specific 3UTR	0.005	NO	7.23	9.70	-	up	up	no
chr22	38338876	38340125	ENSG00000128346	C22orf23	chromosome 22 c 3UTR	0.040	NO	1.06	2.48	-	up	up	no
chr1	85741751	85743000	ENSG00000142867	BCL10	B-cell CLL/lymphc 5UTR	0.011	NO	2.41	4.95	-	up	up	no
chr8	53626501	53627750	ENSG00000023287	RB1CC1	RB1-inducible coil 5UTR	0.001	NO	1.63	3.10	-	up	up	no
chr17	58312251	58313625	ENSG00000170832	USP32	ubiquitin specific exon	0.003	NO	10.49	13.01	-	up	up	no
chr17	58339376	58340625	ENSG00000170832	USP32	ubiquitin specific intron	0.038	NO	6.52	7.84	-	up	up	no
chr17	58357376	58358625	ENSG00000170832	USP32	ubiquitin specific intron	0.032	NO	6.81	6.81	-	up	up	no
chr17	58398126	58399375	ENSG00000170832	USP32	ubiquitin specific intron	0.034	NO	9.64	9.50	-	up	up	no
chr17	58464251	58465500	ENSG00000170832	USP32	ubiquitin specific intron	0.014	NO	8.44	7.64	-	up	up	no
chr17	58464876	58466125	ENSG00000170832	USP32	ubiquitin specific intron	0.042	NO	9.15	8.05	-	up	up	no
chr17	58462751	58464000	ENSG00000170832	USP32	ubiquitin specific intron	0.041	NO	6.95	5.57	-	up	up	no
chr1	180125501	180126750	ENSG00000116260	QSOX1	quiescin Q6 sulfhy intron	0.021	NO	1.49	3.51	-	up	down	yes
chr3	175053751	175055000	ENSG00000177694	NAALADL2	N-acetylated alph intron	0.001	YES	1.35	4.54	-	up	down	no
chr6	44094501	44095875	ENSG00000137216	TMEM63E	transmembrane p 5UTR	0.000	YES	1.84	6.61	-	up	down	no
chr16	88728876	88730375	ENSG00000167508	MVD	mevalonate (diph 5UTR	0.000	YES	3.47	5.16	-	up	down	no
chr1	228290376	228291750	ENSG00000143793	C1orf35	chromosome 1 o 5UTR	0.000	YES	1.63	3.92	-	up	down	no
chr19	59065751	59067125	ENSG00000130725	UBE2M	ubiquitin-conjugat 3UTR	0.000	YES	3.05	3.51	-	up	down	no
chr20	34129126	34130375	ENSG00000125991	ERGIC3	ERGIC and golgi 3 5UTR	0.023	NO	1.91	3.30	-	up	down	no
chr9	131939751	131941250	ENSG00000188483	IER5L	immediate early r 5UTR	0.000	YES	3.47	6.81	-	up	-	yes
chr15	89461626	89463000	ENSG00000140545	MFG8	milk fat globule-E upstre	0.000	YES	1.35	7.84	-	up	-	yes
chr20	35579376	35580875	ENSG00000101347	SAMHD1	SAM domain and 5UTR	0.000	YES	4.32	9.70	-	up	-	yes

chr1	181057001	181058625	ENSG00000162783	IER5	immediate early r 5UTR	0.000	YES	7.66	12.80	-	up	-	yes
chr1	234745251	234746625	ENSG00000168264	IRF2BP2	interferon regulat 5UTR	0.000	YES	2.06	3.92	-	up	-	yes
chr2	192542126	192543625	ENSG00000173559	NABP1	nucleic acid bindi 5UTR	0.000	YES	1.49	5.16	-	up	-	yes
chr12	52563751	52565000	ENSG00000167767	KRT80	keratin 80 [Source: 3UTR	0.001	NO	1.21	5.99	-	up	-	yes
chr1	28585251	28586625	ENSG00000130766	SESN2	sestrin 2 [Source: 5UTR	0.016	NO	1.63	3.51	-	up	-	yes
chr10	3827001	3828375	ENSG00000067082	KLF6	Kruppel-like facto 5UTR	0.000	NO	5.74	6.40	-	up	-	yes
chr14	69259126	69260375	ENSG00000185650	ZFP36L1	ZFP36 ring finger 5UTR	0.001	NO	2.91	4.34	-	up	-	yes
chr19	50706126	50707500	ENSG00000105357	MYH14	myosin, heavy ch: 5UTR	0.001	NO	1.98	4.13	-	up	-	yes
chr6	21593251	21594625	ENSG00000124766	SOX4	SRY (sex determin 5UTR	0.001	NO	1.42	4.34	-	up	-	yes
chr8	126441876	126443250	ENSG00000173334	TRIB1	tribbles homolog 5UTR	0.000	NO	5.03	8.46	-	up	-	yes
chr6	30711751	30713000	ENSG00000137331	IER3	immediate early r 5UTR	0.002	NO	3.26	3.30	-	up	-	yes
chr1	204171001	204172250	ENSG00000174567	GOLT1A	golgi transport 1A exon	0.040	NO	0.85	2.48	-	up	-	yes
chr19	13928376	13929625	ENSG00000132003	ZSWIM4	zinc finger, SWIM exon	0.044	NO	0.28	1.45	-	up	-	yes
chr16	84644251	84645500	ENSG00000103187	COTL1	coactosin-like 1 (intron	0.038	NO	1.91	4.13	-	up	-	yes
chr3	9437751	9439250	ENSG00000206573	SETD5-AS1	SETD5 antisense 1 exon	0.008	YES	6.73	13.01	-	up	-	no
chr3	42530251	42531500	ENSG00000114812	VIPR1	vasoactive intesti 5UTR	0.003	YES	0.71	3.72	-	up	-	no
chr3	50927001	50928375	ENSG00000088538	DOCK3	dedicator of cytol exon	0.029	YES	0.28	1.45	-	up	-	no
chr1	16301876	16303375	ENSG00000116809	ZBTB17	zinc finger and BT exon	0.000	YES	4.11	7.23	-	up	-	no
chr4	6674876	6676375	ENSG00000170846	AC093323.3	exon	0.000	YES	2.48	4.95	-	up	-	no
chr5	1799251	1800750	ENSG00000171421	MRPL36	mitochondrial rib exon	0.000	YES	2.48	5.99	-	up	-	no
chr5	179285126	179286625	ENSG00000161010	C5orf45	chromosome 5 or 5UTR	0.000	YES	2.62	6.40	-	up	-	no
chr6	112089126	112090500	ENSG00000010810	FYN	FYN oncogene rel intron	0.000	YES	1.70	3.30	-	up	-	no
chr7	106808751	106810125	ENSG00000105856	HBP1	HMG-box transcri 5UTR	0.001	YES	2.98	7.64	-	up	-	no
chr7	150075501	150077000	ENSG00000196456	ZNF775	zinc finger proteir 5UTR	0.000	YES	2.62	7.23	-	up	-	no
chrX	152864126	152865500	ENSG00000147382	FAM58A	family with seque 5UTR	0.000	YES	2.34	4.95	-	up	-	no
chr9	110044751	110046125	ENSG00000119318	RAD23B	RAD23 homolog E 5UTR	0.000	YES	3.69	4.75	-	up	-	no
chr9	139980626	139982000	ENSG00000177239	MAN1B1	mannosidase, alp 5UTR	0.000	YES	2.91	6.61	-	up	-	no
chr10	5487751	5489250	ENSG00000173848	NET1	neuroepithelial ce 5UTR	0.000	YES	2.98	5.78	-	up	-	no
chr10	126847001	126848375	ENSG00000175029	CTBP2	C-terminal bindin exon	0.016	YES	1.35	4.34	-	up	-	no
chr11	560126	561500	ENSG00000099849	RASSF7	Ras association (R 5UTR	0.000	YES	1.35	2.89	-	up	-	no
chr11	1330126	1331750	ENSG00000078902	TOLLIP	toll interacting pr 5UTR	0.000	YES	2.98	8.05	-	up	-	no

chr11	65265751	65267375	ENSG00000251562	MALAT1	metastasis associ	exon	0.000	YES	6.24	10.94	-	up	-	no
chr12	113658501	113660000	ENSG00000186815	TPCN1	two pore segmen	5UTR	0.000	YES	3.90	5.16	-	up	-	no
chr14	65878626	65880125	ENSG00000033170	FUT8	fucosyltransferas	5UTR	0.000	YES	5.10	9.70	-	up	-	no
chr15	62352001	62353375	ENSG00000129003	VPS13C	vacuolar protein s	5UTR	0.000	YES	1.42	2.89	-	up	-	no
chr15	79602751	79604125	ENSG00000166557	TMED3	transmembrane e	5UTR	0.000	YES	2.27	6.40	-	up	-	no
chr16	2954751	2956625	ENSG00000059122	FLYWCH1	FLYWCH-type zinc	upstre	0.000	YES	3.83	9.08	-	up	-	no
chr16	4742876	4744250	ENSG00000168101	NUDT16L1	nudix (nucleoside	5UTR	0.000	YES	2.98	5.57	-	up	-	no
chr16	30545751	30547125	ENSG00000169955	ZNF747	zinc finger proteir	5UTR	0.000	YES	1.56	3.92	-	up	-	no
chr16	70285126	70286625	ENSG00000223496	EXOSC6	exosome compon	5UTR	0.000	YES	3.83	5.57	-	up	-	no
chr16	71928751	71930125	ENSG00000182149	IST1	increased sodium	5UTR	0.000	YES	3.90	7.43	-	up	-	no
chr16	84025626	84027000	ENSG00000103154	NECAB2	N-terminal EF-har	intron	0.002	YES	1.28	4.34	-	up	-	no
chr16	87984126	87985625	ENSG00000172530	BANP	BTG3 associated r	5UTR	0.000	YES	5.74	7.64	-	up	-	no
chr1	109755876	109757250	ENSG00000031698	SARS	seryl-tRNA synthe	5UTR	0.000	YES	4.18	9.29	-	up	-	no
chr1	109756376	109757625	ENSG00000031698	SARS	seryl-tRNA synthe	5UTR	0.012	YES	3.83	8.46	-	up	-	no
chr1	149857626	149859125	ENSG00000184678	HIST2H2B	histone cluster 2,	5UTR	0.000	YES	12.26	8.67	-	up	-	no
chr1	149858376	149860250	ENSG00000178096	BOLA1	bolA homolog 1 (l	5UTR	0.000	YES	13.61	13.62	-	up	-	no
chr20	25175501	25177000	ENSG00000197586	ENTPD6	ectonucleoside tr	5UTR	0.000	YES	9.64	17.96	-	up	-	no
chr1	160067876	160069375	ENSG00000162729	IGSF8	immunoglobulin s	5UTR	0.000	YES	2.48	4.95	-	up	-	no
chr1	197169876	197171375	ENSG00000134376	CRB1	crumbs homolog	5UTR	0.000	YES	2.55	6.61	-	up	-	no
chr1	226069376	226070750	ENSG00000196187	TMEM63A	transmembrane p	exon	0.000	YES	2.20	4.34	-	up	-	no
chr1	46597626	46599000	ENSG00000117461	PIK3R3	phosphoinositide	5UTR	0.000	YES	2.62	6.19	-	up	-	no
chr2	101924501	101925875	ENSG00000163162	RNF149	ring finger proteir	5UTR	0.000	YES	3.47	8.05	-	up	-	no
chr19	1039376	1040750	ENSG00000064687	ABCA7	ATP-binding casse	5UTR	0.000	YES	2.20	3.30	-	up	-	no
chr19	2050626	2052000	ENSG00000099875	MKNK2	MAP kinase inter	5UTR	0.000	YES	1.42	3.92	-	up	-	no
chr19	7459376	7460750	ENSG00000104880	ARHGEF18	Rho/Rac guanine	5UTR	0.000	YES	0.85	3.92	-	up	-	no
chr19	33667126	33668625	ENSG00000130881	LRP3	low density lipopr	5UTR	0.000	YES	3.83	6.40	-	up	-	no
chr19	42721126	42722750	ENSG00000160570	DEDD2	death effector do	5UTR	0.000	YES	3.40	7.02	-	up	-	no
chr19	42771876	42773125	ENSG00000079432	CIC	capicua transcript	5UTR	0.001	YES	3.97	7.23	-	up	-	no
chr19	42772376	42774000	ENSG00000079432	CIC	capicua transcript	5UTR	0.000	YES	5.46	10.12	-	up	-	no
chr19	50979001	50980500	ENSG00000142530	FAM71E1	family with seque	5UTR	0.000	YES	2.34	5.57	-	up	-	no
chr19	56135126	56136500	ENSG00000179922	ZNF784	zinc finger proteir	5UTR	0.000	YES	1.42	3.51	-	up	-	no

chr19	50372376	50373625	ENSG00000204673	AKT1S1	AKT1 substrate 1 3UTR	0.005	NO	1.70	2.68	-	up	-	no
chr20	52183126	52184375	ENSG00000171940	ZNF217	zinc finger proteir 3UTR	0.017	NO	6.10	6.19	-	up	-	no
chr1	26559876	26561125	ENSG00000130695	CEP85	centrosomal prot 5UTR	0.039	NO	1.98	3.10	-	up	-	no
chr1	201797626	201798875	ENSG00000198700	IPO9	importin 9 [Sourc 5UTR	0.008	NO	0.85	2.48	-	up	-	no
chr1	115167876	115169125	ENSG00000175984	DENND2C	DENN/MADD don 5UTR	0.011	NO	5.25	5.78	-	up	-	no
chr11	45939001	45940250	ENSG00000121680	PEX16	peroxisomal biogr 5UTR	0.001	NO	2.62	3.72	-	up	-	no
chr11	61734501	61736000	ENSG00000167996	FTH1	ferritin, heavy pol 5UTR	0.031	NO	2.48	4.13	-	up	-	no
chr11	67236126	67237500	ENSG00000172663	TMEM134	transmembrane Ꞥ 5UTR	0.000	NO	1.28	4.95	-	up	-	no
chr11	67235626	67237000	ENSG00000172663	TMEM134	transmembrane Ꞥ 5UTR	0.003	NO	1.77	5.99	-	up	-	no
chr13	111566751	111568000	ENSG00000088448	ANKRD10	ankyrin repeat do 5UTR	0.019	NO	0.64	2.27	-	up	-	no
chr14	65878001	65879250	ENSG00000033170	FUT8	fucosyltransferas 5UTR	0.005	NO	2.91	4.95	-	up	-	no
chr14	105780126	105781375	ENSG00000179364	PACS2	phosphofurin acic 5UTR	0.018	NO	1.06	2.89	-	up	-	no
chr15	85923126	85924500	ENSG00000170776	AKAP13	A kinase (PRKA) a 5UTR	0.008	NO	0.92	2.68	-	up	-	no
chr16	770376	771750	ENSG00000103254	FAM173A	family with seque 5UTR	0.000	NO	3.40	7.84	-	up	-	no
chr16	2961126	2962500	ENSG00000059122	FLYWCH1	FLYWCH-type zinc 5UTR	0.003	NO	2.20	3.92	-	up	-	no
chr16	4783626	4785000	ENSG00000166246	C16orf71	chromosome 16 c 5UTR	0.002	NO	2.76	3.30	-	up	-	no
chr16	30075751	30077125	ENSG00000149925	ALDOA	aldolase A, fructo 5UTR	0.011	NO	3.26	4.95	-	up	-	no
chr16	30076376	30077625	ENSG00000149925	ALDOA	aldolase A, fructo 5UTR	0.018	NO	3.62	4.75	-	up	-	no
chr16	67693626	67694875	ENSG00000102981	PARD6A	par-6 partitioning 5UTR	0.031	NO	3.40	4.13	-	up	-	no
chr18	3448751	3450000	ENSG00000177426	TGIF1	TGFB-induced fac 5UTR	0.018	NO	1.56	6.40	-	up	-	no
chr18	3449751	3451125	ENSG00000177426	TGIF1	TGFB-induced fac 5UTR	0.000	NO	1.98	7.02	-	up	-	no
chr19	46195251	46196500	ENSG00000011478	QPCTL	glutaminy-peptid 5UTR	0.046	NO	3.05	4.75	-	up	-	no
chr19	29703501	29704750	ENSG00000169021	UQCDFS1	ubiquinol-cytochr 5UTR	0.008	NO	1.49	2.89	-	up	-	no
chr19	33792751	33794125	ENSG00000245848	CEBPA	CCAAT/enhancer 5UTR	0.001	NO	1.56	2.27	-	up	-	no
chr19	46271876	46273250	ENSG00000177045	SIX5	SIX homeobox 5 [5UTR	0.000	NO	3.62	5.78	-	up	-	no
chr19	47551376	47552625	ENSG00000130748	TMEM16C	transmembrane Ꞥ 5UTR	0.001	NO	2.13	2.48	-	up	-	no
chr19	55628501	55629750	ENSG00000125503	PPP1R12C	protein phosphat 5UTR	0.045	NO	0.64	2.27	-	up	-	no
chr2	85132126	85133500	ENSG00000034510	TMSB10	thymosin beta 10 5UTR	0.021	NO	1.21	4.13	-	up	-	no
chr2	20250751	20252125	ENSG00000068697	LAPTM4A	lysosomal protein 5UTR	0.000	NO	3.90	3.51	-	up	-	no
chr21	46293001	46294250	ENSG00000183255	PTTG1IP	pituitary tumor-tr 5UTR	0.015	NO	2.69	3.51	-	up	-	no
chr3	51422001	51423250	ENSG00000145050	MANF	mesencephalic as 5UTR	0.003	NO	1.77	2.68	-	up	-	no

chr7	855501	856875	ENSG00000164828	SUN1	Sad1 and UNC84 5UTR	0.008	NO	2.06	2.89	-	up	-	no
chr7	106809501	106810875	ENSG00000105856	HBP1	HMG-box transcri 5UTR	0.000	NO	2.20	5.57	-	up	-	no
chr7	150076376	150077625	ENSG00000196456	ZNF775	zinc finger proteir 5UTR	0.010	NO	1.98	6.19	-	up	-	no
chr9	117349251	117350500	ENSG00000136888	ATP6V1G1	ATPase, H+ transp 5UTR	0.007	NO	3.83	5.16	-	up	-	no
chr9	140445751	140447125	ENSG00000182154	MRPL41	mitochondrial rib 5UTR	0.005	NO	2.20	4.75	-	up	-	no
chr9	140063376	140064750	ENSG00000184709	LRRC26	leucine rich repea 5UTR	0.005	NO	1.70	5.16	-	up	-	no
chr1	120460001	120461250	ENSG00000134250	NOTCH2	notch 2 [Source:Hexon	0.023	NO	2.13	4.34	-	up	-	no
chr1	115197126	115198375	ENSG00000175984	DENND2C	DENN/MADD don exon	0.016	NO	2.69	4.54	-	up	-	no
chr15	52970876	52972250	ENSG00000047346	FAM214A	family with seque exon	0.000	NO	2.98	6.19	-	up	-	no
chr16	57569376	57570625	ENSG00000135736	CCDC102A	coiled-coil domai exon	0.042	NO	1.49	2.48	-	up	-	no
chr19	55972376	55973875	ENSG00000063241	ISOC2	isochorismatase c exon	0.001	NO	2.06	4.95	-	up	-	no
chr19	58891626	58892875	ENSG00000152475	ZNF837	zinc finger proteir exon	0.006	NO	1.77	4.75	-	up	-	no
chr19	58892001	58893250	ENSG00000152475	ZNF837	zinc finger proteir exon	0.023	NO	1.56	3.92	-	up	-	no
chr20	43357126	43358500	ENSG00000064205	WISP2	WNT1 inducible s exon	0.006	NO	2.34	4.13	-	up	-	no
chr20	3677251	3678750	ENSG00000088827	SIGLEC1	sialic acid binding exon	0.012	NO	0.43	2.48	-	up	-	no
chr20	35771001	35772500	ENSG00000101353	MROH8	maestro heat-like exon	0.023	NO	0.64	1.86	-	up	-	no
chr20	52210126	52211750	ENSG00000171940	ZNF217	zinc finger proteir exon	0.003	NO	4.82	14.04	-	up	-	no
chr20	52193376	52194750	ENSG00000171940	ZNF217	zinc finger proteir exon	0.003	NO	17.37	15.07	-	up	-	no
chr20	52607751	52609250	ENSG00000064787	BCAS1	breast carcinoma exon	0.001	NO	21.91	22.91	-	up	-	no
chr20	52601626	52603000	ENSG00000064787	BCAS1	breast carcinoma exon	0.000	NO	18.43	17.55	-	up	-	no
chr20	52573751	52575000	ENSG00000064787	BCAS1	breast carcinoma exon	0.019	NO	21.05	18.58	-	up	-	no
chr20	52610626	52612000	ENSG00000064787	BCAS1	breast carcinoma exon	0.019	NO	18.43	14.86	-	up	-	no
chr20	60902126	60903375	ENSG00000130702	LAMA5	laminin, alpha 5 [1 exon	0.041	NO	1.56	4.13	-	up	-	no
chr6	112194001	112195375	ENSG00000010810	FYN	FYN oncogene rel exon	0.013	NO	1.28	3.30	-	up	-	no
chr7	75156876	75158125	ENSG00000127957	PMS2P3	postmeiotic segre exon	0.022	NO	0.43	2.27	-	up	-	no
chr8	101321626	101323125	ENSG00000034677	RNF19A	ring finger proteir exon	0.006	NO	2.84	7.02	-	up	-	no
chr9	139843876	139845250	ENSG00000184925	LCN12	lipocalin 12 [Sour exon	0.003	NO	2.48	3.51	-	up	-	no
chrX	153193126	153194375	ENSG00000089820	ARHGAP4	Rho GTPase activ: exon	0.006	NO	1.70	3.10	-	up	-	no
chrX	153718376	153719750	ENSG00000126903	SLC10A3	solute carrier fam exon	0.000	NO	2.27	2.89	-	up	-	no
chr1	115170751	115172125	ENSG00000175984	DENND2C	DENN/MADD don intron	0.003	NO	4.18	4.95	-	up	-	no
chr1	117691626	117692875	ENSG00000134258	VTCN1	V-set domain con intron	0.045	NO	2.13	4.54	-	up	-	no

chr1	176921876	176923250	ENSG00000152092	ASTN1	astrotactin 1 [Sou intron	0.006	NO	0.92	2.06	-	up	-	no
chr11	61334251	61335500	ENSG00000011347	SYT7	synaptotagmin VI intron	0.001	NO	1.56	2.89	-	up	-	no
chr17	77290501	77291750	ENSG00000167281	RBFOX3	RNA binding prot intron	0.047	NO	0.28	2.48	-	up	-	no
chr19	46220001	46221375	ENSG00000177051	FBXO46	F-box protein 46 intron	0.000	NO	3.26	2.89	-	up	-	no
chr20	30068626	30070000	ENSG00000088320	REM1	RAS (RAD and GEI intron	0.001	NO	0.71	2.48	-	up	-	no
chr20	32430501	32431750	ENSG00000101421	CHMP4B	charged multivesi intron	0.016	NO	0.28	2.27	-	up	-	no
chr20	32430876	32432250	ENSG00000101421	CHMP4B	charged multivesi intron	0.004	NO	0.57	2.48	-	up	-	no
chr20	29893001	29894500	ENSG00000215545	DEFB116	defensin, beta 11 intron	0.015	NO	0.78	2.48	-	up	-	no
chr20	52208001	52209250	ENSG00000171940	ZNF217	zinc finger proteir intron	0.024	NO	2.76	5.78	-	up	-	no
chr20	52208751	52210000	ENSG00000171940	ZNF217	zinc finger proteir intron	0.045	NO	4.75	8.67	-	up	-	no
chr20	52616376	52617750	ENSG00000064787	BCAS1	breast carcinoma intron	0.003	NO	7.44	12.59	-	up	-	no
chr20	52652626	52653875	ENSG00000064787	BCAS1	breast carcinoma intron	0.018	NO	4.68	6.81	-	up	-	no
chr20	52615876	52617125	ENSG00000064787	BCAS1	breast carcinoma intron	0.026	NO	10.07	14.04	-	up	-	no
chr20	52598626	52599875	ENSG00000064787	BCAS1	breast carcinoma intron	0.018	NO	12.97	17.96	-	up	-	no
chr20	52599126	52600375	ENSG00000064787	BCAS1	breast carcinoma intron	0.047	NO	12.97	17.34	-	up	-	no
chr20	52600001	52601375	ENSG00000064787	BCAS1	breast carcinoma intron	0.006	NO	17.51	22.29	-	up	-	no
chr20	52588376	52589625	ENSG00000064787	BCAS1	breast carcinoma intron	0.026	NO	9.71	11.35	-	up	-	no
chr20	52670251	52671500	ENSG00000064787	BCAS1	breast carcinoma intron	0.049	NO	8.58	9.70	-	up	-	no
chr20	52628751	52630375	ENSG00000064787	BCAS1	breast carcinoma intron	0.003	NO	16.87	18.79	-	up	-	no
chr20	52681001	52682250	ENSG00000064787	BCAS1	breast carcinoma intron	0.044	NO	12.48	13.83	-	up	-	no
chr20	52671001	52672250	ENSG00000064787	BCAS1	breast carcinoma intron	0.007	NO	6.52	7.23	-	up	-	no
chr20	52676876	52678125	ENSG00000064787	BCAS1	breast carcinoma intron	0.004	NO	10.85	11.97	-	up	-	no
chr20	52629626	52631000	ENSG00000064787	BCAS1	breast carcinoma intron	0.007	NO	16.73	18.37	-	up	-	no
chr20	52592751	52594000	ENSG00000064787	BCAS1	breast carcinoma intron	0.044	NO	13.75	15.07	-	up	-	no
chr20	52665126	52666375	ENSG00000064787	BCAS1	breast carcinoma intron	0.025	NO	8.86	9.50	-	up	-	no
chr20	52594376	52595750	ENSG00000064787	BCAS1	breast carcinoma intron	0.004	NO	15.60	16.51	-	up	-	no
chr20	52621001	52622250	ENSG00000064787	BCAS1	breast carcinoma intron	0.003	NO	10.35	10.94	-	up	-	no
chr20	52656876	52658125	ENSG00000064787	BCAS1	breast carcinoma intron	0.001	NO	8.01	8.26	-	up	-	no
chr20	52578376	52579625	ENSG00000064787	BCAS1	breast carcinoma intron	0.018	NO	14.25	14.66	-	up	-	no
chr20	52640126	52641375	ENSG00000064787	BCAS1	breast carcinoma intron	0.048	NO	12.76	12.80	-	up	-	no
chr20	52613376	52614625	ENSG00000064787	BCAS1	breast carcinoma intron	0.025	NO	21.27	21.26	-	up	-	no

chr20	52585251	52586500	ENSG00000064787	BCAS1	breast carcinoma intron	0.019	NO	18.93	18.79	-	up	-	no
chr20	52636376	52637625	ENSG00000064787	BCAS1	breast carcinoma intron	0.003	NO	9.64	9.50	-	up	-	no
chr20	52618626	52619875	ENSG00000064787	BCAS1	breast carcinoma intron	0.049	NO	14.39	13.83	-	up	-	no
chr20	52571751	52573125	ENSG00000064787	BCAS1	breast carcinoma intron	0.001	NO	13.97	13.42	-	up	-	no
chr20	52655876	52657250	ENSG00000064787	BCAS1	breast carcinoma intron	0.006	NO	11.84	11.35	-	up	-	no
chr20	52562376	52564000	ENSG00000064787	BCAS1	breast carcinoma intron	0.000	NO	17.44	16.51	-	up	-	no
chr20	52581501	52583125	ENSG00000064787	BCAS1	breast carcinoma intron	0.000	NO	12.55	10.94	-	up	-	no
chr20	52669251	52670875	ENSG00000064787	BCAS1	breast carcinoma intron	0.000	NO	10.92	9.50	-	up	-	no
chr20	52593876	52595125	ENSG00000064787	BCAS1	breast carcinoma intron	0.042	NO	12.97	10.94	-	up	-	no
chr20	52632501	52633750	ENSG00000064787	BCAS1	breast carcinoma intron	0.030	NO	11.56	8.67	-	up	-	no
chr22	20008876	20010125	ENSG00000183597	TANGO2	transport and golj intron	0.018	NO	0.78	1.86	-	up	-	no
chr3	173300126	173301375	ENSG00000169760	NLGN1	neuroligin 1 [Sour intron	0.034	NO	0.92	2.89	-	up	-	no
chr3	195430751	195432000	ENSG00000242086	AC069513.3	intron	0.027	NO	2.34	4.34	-	up	-	no
chr1	152025501	152026875	ENSG00000163191	S100A11	S100 calcium binc upstre	0.002	NO	1.63	4.54	-	up	-	no
chr13	32413126	32414375	ENSG00000229715	EEF1DP3	eukaryotic transla upstre	0.002	YES	1.35	2.27	-	up	-	na
chr1	145105126	145106375	ENSG00000223380	SEC22B	SEC22 vesicle traf intron	0.001	YES	3.40	4.75	-	up	-	na
chr19	36235751	36237125	ENSG00000267120	AD000671	Uncharacterized f 5UTR	0.000	NO	1.91	3.51	-	up	-	na
chr2	74684751	74686125	ENSG00000239779	WBP1	WW domain bind 5UTR	0.005	NO	3.62	5.78	-	up	-	na
chr1	145100876	145102125	ENSG00000223380	SEC22B	SEC22 vesicle traf exon	0.000	NO	4.47	4.75	-	up	-	na
chr1	145116001	145117375	ENSG00000223380	SEC22B	SEC22 vesicle traf exon	0.002	NO	6.81	6.19	-	up	-	na
chr1	145109001	145110250	ENSG00000223380	SEC22B	SEC22 vesicle traf exon	0.026	NO	4.18	3.30	-	up	-	na
chr1	145098501	145099750	ENSG00000223380	SEC22B	SEC22 vesicle traf intron	0.021	NO	4.04	4.75	-	up	-	na
chr1	145087501	145088750	ENSG00000223380	SEC22B	SEC22 vesicle traf upstre	0.040	NO	4.89	4.95	-	up	-	na
chr5	176433126	176434500	ENSG00000087206	UIMC1	ubiquitin interact exon	0.000	YES	2.91	4.95	-	dowr	up	no
chr12	120553876	120555500	ENSG00000111737	RAB35	RAB35, member f 5UTR	0.000	YES	10.00	27.87	-	dowr	up	no
chr21	43429501	43430875	ENSG00000173276	ZBTB21	zinc finger and BT exon	0.000	YES	5.10	8.05	-	dowr	up	no
chr11	13298376	13299750	ENSG00000133794	ARNTL	aryl hydrocarbon 5UTR	0.000	NO	3.97	4.75	-	dowr	up	no
chr12	82751501	82752750	ENSG00000133773	CCDC59	coiled-coil domain 5UTR	0.045	NO	2.41	3.72	-	dowr	up	no
chr13	31191001	31192375	ENSG00000132952	USPL1	ubiquitin specific 5UTR	0.011	NO	4.96	6.19	-	dowr	up	no
chr22	38200626	38201875	ENSG00000189060	H1F0	H1 histone family 5UTR	0.012	NO	1.84	2.89	-	dowr	up	no
chr3	10183001	10184250	ENSG00000134086	VHL	von Hippel-Lindau 5UTR	0.001	NO	1.56	4.13	-	dowr	up	no

chr17	57048376	57049625	ENSG00000175175	PPM1E	protein phosphat exon	0.045	NO	9.29	11.97	-	dowr	up	no
chr2	71453626	71454875	ENSG00000124374	PAIP2B	poly(A) binding prexon	0.011	NO	2.84	3.51	-	dowr	up	no
chr20	32108751	32110125	ENSG00000078699	CBFA2T2	core-binding factr intron	0.003	NO	0.43	2.06	-	dowr	up	no
chr20	32109501	32110750	ENSG00000078699	CBFA2T2	core-binding factr intron	0.039	NO	0.43	1.86	-	dowr	up	no
chr20	32086376	32087875	ENSG00000078699	CBFA2T2	core-binding factr intron	0.000	NO	0.43	1.65	-	dowr	up	no
chr17	56830001	56831250	ENSG00000175175	PPM1E	protein phosphat upstre	0.049	NO	4.40	6.81	-	dowr	up	no
chr1	91965751	91967125	ENSG00000097046	CDC7	cell division cycle 5UTR	0.000	YES	2.84	4.54	-	dowr	down	no
chr3	79577376	79578625	ENSG00000169855	ROBO1	roundabout, axor intron	0.031	YES	0.21	2.27	-	dowr	down	no
chr3	155352376	155353750	ENSG00000114805	PLCH1	phospholipase C, intron	0.003	YES	1.56	3.51	-	dowr	down	no
chr9	91925001	91926750	ENSG00000123975	CKS2	CDC28 protein kir 5UTR	0.000	YES	7.16	7.43	-	dowr	down	no
chr9	127702626	127704125	ENSG00000136935	GOLGA1	golgin A1 [Source exon	0.000	YES	3.12	6.61	-	dowr	down	no
chr9	140134751	140136375	ENSG00000188229	TUBB4B	tubulin, beta 4B c 5UTR	0.000	YES	5.81	7.23	-	dowr	down	no
chr11	65028501	65030125	ENSG0000014138	POLA2	polymerase (DNA 5UTR	0.000	YES	5.39	15.28	-	dowr	down	no
chr13	107187376	107188625	ENSG00000125266	EFNB2	ephrin-B2 [Source 5UTR	0.007	YES	1.28	2.48	-	dowr	down	no
chr17	59822751	59824250	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.000	YES	10.42	10.73	-	dowr	down	no
chr17	59835126	59836375	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.021	YES	8.15	11.15	-	dowr	down	no
chr17	59861626	59863250	ENSG00000136492	BRIP1	BRCA1 interacting exon	0.026	YES	19.21	16.51	-	dowr	down	no
chr17	59940376	59941625	ENSG00000136492	BRIP1	BRCA1 interacting exon	0.045	YES	29.14	36.95	-	dowr	down	no
chr21	33650751	33652375	ENSG00000159055	MIS18A	MIS18 kinetochor 5UTR	0.000	YES	5.95	13.01	-	dowr	down	no
chr2	234762626	234764000	ENSG00000123485	HJURP	Holliday junction 5UTR	0.003	YES	1.70	3.30	-	dowr	down	no
chr20	25405126	25406500	ENSG00000101003	GIN51	GIN5 complex su	0.035	NO	0.92	1.03	-	dowr	down	no
chr20	31394501	31395750	ENSG00000088305	DNMT3B	DNA (cytosine-5-) 3UTR	0.047	NO	1.06	2.06	-	dowr	down	no
chr1	117602001	117603625	ENSG00000116830	TTF2	transcription tern 5UTR	0.001	NO	6.45	7.43	-	dowr	down	no
chr1	212208376	212209750	ENSG00000143476	DTL	denticleless E3 ut 5UTR	0.012	NO	3.26	4.13	-	dowr	down	no
chr11	66035376	66036750	ENSG00000174903	RAB1B	RAB1B, member f 5UTR	0.000	NO	1.70	5.37	-	dowr	down	no
chr12	102513376	102514625	ENSG00000185480	PARPBP	PARP1 binding pr 5UTR	0.005	NO	1.91	4.95	-	dowr	down	no
chr12	109535251	109536625	ENSG00000076248	UNG	uracil-DNA glycos 5UTR	0.000	NO	4.96	6.40	-	dowr	down	no
chr14	24610251	24611500	ENSG00000100908	EMC9	ER membrane prc 5UTR	0.003	NO	2.06	3.72	-	dowr	down	no
chr15	90118001	90119250	ENSG00000140534	TICRR	TOPBP1-interactii 5UTR	0.003	NO	2.13	2.89	-	dowr	down	no
chr16	103001	104375	ENSG00000161981	SNRNP25	small nuclear ribo 5UTR	0.000	NO	4.18	4.34	-	dowr	down	no
chr16	29801251	29802625	ENSG00000079616	KIF22	kinesin family me 5UTR	0.003	NO	1.84	4.54	-	dowr	down	no

chr16	46722751	46724125	ENSG00000091651	ORC6	origin recognition 5UTR	0.000	NO	1.91	5.99	-	dowr	down	no
chr16	81039876	81041125	ENSG00000166451	CENPN	centromere prote 5UTR	0.003	NO	4.61	5.16	-	dowr	down	no
chr16	18812251	18813750	ENSG00000170540	ARL6IP1	ADP-ribosylation 5UTR	0.001	NO	3.83	5.16	-	dowr	down	no
chr16	89882501	89884000	ENSG00000187741	FANCA	Fanconi anemia, c 5UTR	0.000	NO	2.76	4.95	-	dowr	down	no
chr17	59937876	59939125	ENSG00000136492	BRIP1	BRCA1 interacting 5UTR	0.005	NO	8.72	12.18	-	dowr	down	no
chr19	796751	798000	ENSG00000011304	PTBP1	polypyrimidine tr 5UTR	0.008	NO	2.41	3.92	-	dowr	down	no
chr2	10262126	10263375	ENSG00000171848	RRM2	ribonucleotide re 5UTR	0.037	NO	3.33	3.92	-	dowr	down	no
chr2	27008126	27009375	ENSG00000115163	CENPA	centromere prote 5UTR	0.001	NO	2.62	3.51	-	dowr	down	no
chr2	111435001	111436375	ENSG00000169679	BUB1	BUB1 mitotic chei 5UTR	0.016	NO	1.56	2.68	-	dowr	down	no
chr20	30326251	30327625	ENSG00000088325	TPX2	TPX2, microtubul 5UTR	0.000	NO	3.19	3.92	-	dowr	down	no
chr21	47743251	47744625	ENSG00000160299	PCNT	pericentrin [Sourc 5UTR	0.000	NO	3.69	7.02	-	dowr	down	no
chr4	104119126	104120375	ENSG00000138778	CENPE	centromere prote 5UTR	0.033	NO	1.13	3.10	-	dowr	down	no
chr4	185654626	185656000	ENSG00000151725	MLF1IP	MLF1 interacting 5UTR	0.001	NO	1.63	3.10	-	dowr	down	no
chr5	43602751	43604000	ENSG00000112992	NNT	nicotinamide nucl 5UTR	0.020	NO	0.92	3.10	-	dowr	down	no
chr5	67511001	67512250	ENSG00000145675	PIK3R1	phosphoinositide 5UTR	0.013	NO	0.57	3.92	-	dowr	down	no
chr7	77427126	77428625	ENSG00000006576	PHTF2	putative homeod 5UTR	0.000	NO	3.33	4.54	-	dowr	down	no
chr8	124408001	124409750	ENSG00000156802	ATAD2	ATPase family, AA 5UTR	0.000	NO	8.08	8.05	-	dowr	down	no
chr9	86594501	86595875	ENSG00000178966	RMI1	RMI1, RecQ medi 5UTR	0.000	NO	5.81	7.43	-	dowr	down	no
chr6	30688626	30690000	ENSG00000196230	TUBB	tubulin, beta clas 5UTR	0.003	NO	1.84	2.27	-	dowr	down	no
chr1	47779376	47780625	ENSG00000123473	STIL	SCL/TAL1 interrup exon	0.048	NO	2.48	2.48	-	dowr	down	no
chr1	202310501	202311875	ENSG00000077152	UBE2T	ubiquitin-conjuga exon	0.001	NO	3.40	3.92	-	dowr	down	no
chr17	59821876	59823125	ENSG00000136492	BRIP1	BRCA1 interacting exon	0.042	NO	10.49	12.39	-	dowr	down	no
chr17	59936751	59938000	ENSG00000136492	BRIP1	BRCA1 interacting exon	0.018	NO	11.77	11.77	-	dowr	down	no
chr19	3171751	3173000	ENSG00000125910	S1PR4	sphingosine-1-ph exon	0.028	NO	0.14	2.27	-	dowr	down	no
chr20	31394126	31395375	ENSG00000088305	DNMT3B	DNA (cytosine-5-) exon	0.008	NO	1.06	2.27	-	dowr	down	no
chr20	35401626	35403000	ENSG00000149636	DSN1	DSN1, MIND kinei exon	0.005	NO	1.77	3.30	-	dowr	down	no
chr6	136570876	136572125	ENSG00000146410	MTFR2	mitochondrial fiss exon	0.006	NO	2.27	3.10	-	dowr	down	no
chr13	34395626	34396875	ENSG00000133119	RFC3	replication factor intron	0.020	NO	1.70	4.13	-	dowr	down	no
chr13	39273751	39275000	ENSG00000150893	FREM2	FRAS1 related ext intron	0.039	NO	2.06	3.10	-	dowr	down	no
chr17	59873626	59875125	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.034	NO	12.83	17.13	-	dowr	down	no
chr17	59866376	59867875	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.004	NO	7.44	9.70	-	dowr	down	no

chr17	59829501	59830750	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.025	NO	9.92	12.80	-	dowr	down	no
chr17	59856001	59857250	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.043	NO	8.44	10.73	-	dowr	down	no
chr17	59916626	59917875	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.007	NO	10.00	12.59	-	dowr	down	no
chr17	59787126	59788375	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.004	NO	13.26	16.31	-	dowr	down	no
chr17	59847376	59848625	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.006	NO	10.70	11.97	-	dowr	down	no
chr17	59813126	59814500	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.002	NO	9.50	10.32	-	dowr	down	no
chr17	59932376	59933875	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.021	NO	13.04	14.04	-	dowr	down	no
chr17	59830251	59831500	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.020	NO	9.78	10.53	-	dowr	down	no
chr17	59909126	59910375	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.048	NO	11.56	12.39	-	dowr	down	no
chr17	59881876	59883125	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.022	NO	9.85	10.53	-	dowr	down	no
chr17	59893376	59894625	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.049	NO	19.42	20.23	-	dowr	down	no
chr17	59842626	59844250	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.000	NO	12.62	13.01	-	dowr	down	no
chr17	59914626	59915875	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.048	NO	9.92	9.91	-	dowr	down	no
chr17	59916001	59917250	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.009	NO	11.63	11.56	-	dowr	down	no
chr17	59907626	59908875	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.025	NO	5.88	5.78	-	dowr	down	no
chr17	59801376	59802625	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.033	NO	14.75	14.24	-	dowr	down	no
chr17	59840376	59841875	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.039	NO	18.72	15.90	-	dowr	down	no
chr17	59782876	59784125	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.010	NO	10.70	8.67	-	dowr	down	no
chr17	59805001	59806250	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.023	NO	12.26	9.91	-	dowr	down	no
chr17	59882626	59883875	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.009	NO	16.52	13.21	-	dowr	down	no
chr17	59833751	59835000	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.025	NO	16.09	12.80	-	dowr	down	no
chr17	59810626	59811875	ENSG00000136492	BRIP1	BRCA1 interacting intron	0.012	NO	15.24	11.15	-	dowr	down	no
chr2	155656751	155658000	ENSG00000162989	KCNJ3	potassium inward intron	0.005	NO	1.84	3.30	-	dowr	down	no
chr3	184968126	184969500	ENSG00000113790	EHHADH	enoyl-CoA, hydrat intron	0.034	NO	0.57	1.65	-	dowr	down	no
chr3	192333376	192334750	ENSG00000114279	FGF12	fibroblast growth intron	0.011	NO	0.99	2.68	-	dowr	down	no
chr3	192067751	192069000	ENSG00000114279	FGF12	fibroblast growth intron	0.043	NO	1.06	2.68	-	dowr	down	no
chr7	94287251	94288500	ENSG00000242265	PEG10	paternally expres intron	0.030	NO	0.78	2.89	-	dowr	down	no
chr7	152372501	152374000	ENSG00000196584	XRCC2	X-ray repair comp 5UTR	0.000	YES	6.17	11.97	-	dowr	down	na
chr1	65799376	65800625	ENSG00000116675	DNAJC6	DnaJ (Hsp40) hom intron	0.044	YES	0.85	2.06	-	dowr	-	no
chr1	65869501	65870750	ENSG00000116675	DNAJC6	DnaJ (Hsp40) hom intron	0.044	YES	0.71	1.65	-	dowr	-	no
chr1	90460001	90461250	ENSG00000162664	ZNF326	zinc finger proteir 5UTR	0.024	YES	0.78	2.27	-	dowr	-	no

chr3	122134251	122135750	ENSG00000196981	WDR5B	WD repeat domai	5UTR	0.000	YES	3.05	5.99	-	dowr	-	no
chr5	14664001	14665375	ENSG00000154124	FAM105B	family with seque	5UTR	0.000	YES	3.26	5.78	-	dowr	-	no
chr5	96518751	96520125	ENSG00000058729	RIOK2	RIO kinase 2 [Sou	5UTR	0.000	YES	2.20	4.75	-	dowr	-	no
chr5	145582376	145583750	ENSG00000091009	RBM27	RNA binding moti	5UTR	0.001	YES	1.63	3.51	-	dowr	-	no
chr6	27774501	27775750	ENSG00000185130	HIST1H2B	histone cluster 1,	5UTR	0.044	YES	1.13	1.65	-	dowr	-	no
chr6	39082251	39083750	ENSG00000112167	SAYSD1	SAYSVFN motif dc	5UTR	0.000	YES	5.25	10.73	-	dowr	-	no
chr6	41039626	41041375	ENSG00000001167	NFYA	nuclear transcript	5UTR	0.000	YES	5.18	9.29	-	dowr	-	no
chr6	43543126	43544625	ENSG00000124571	XPO5	exportin 5 [Sourc	5UTR	0.000	YES	4.89	10.32	-	dowr	-	no
chr6	52535251	52536500	ENSG00000096092	TMEM14A	transmembrane p	5UTR	0.000	YES	1.06	2.89	-	dowr	-	no
chr6	88411251	88412750	ENSG00000135334	AKIRIN2	akirin 2 [Source:H	5UTR	0.000	YES	3.40	5.57	-	dowr	-	no
chr7	154794376	154795875	ENSG00000157212	PAXIP1	PAX interacting (v	5UTR	0.000	YES	2.41	5.78	-	dowr	-	no
chrX	17754626	17756000	ENSG00000047634	SCML1	sex comb on midl	5UTR	0.000	YES	1.98	3.51	-	dowr	-	no
chr8	42248626	42250000	ENSG00000078668	VDAC3	voltage-depender	5UTR	0.000	YES	1.06	5.37	-	dowr	-	no
chr9	131266376	131267750	ENSG00000119392	GLE1	GLE1 RNA export	5UTR	0.000	YES	2.06	4.34	-	dowr	-	no
chr9	131842626	131844250	ENSG00000167130	DOLPP1	dolichyl pyrophos	5UTR	0.000	YES	7.51	7.84	-	dowr	-	no
chr9	133568376	133569875	ENSG00000130713	EXOSC2	exosome compon	5UTR	0.000	YES	1.70	4.75	-	dowr	-	no
chr10	12084626	12086000	ENSG00000151461	UPF2	UPF2 regulator of exon	5UTR	0.000	YES	2.98	5.78	-	dowr	-	no
chr10	14879376	14880750	ENSG00000187522	HSPA14	heat shock 70kDa	5UTR	0.000	YES	2.91	5.57	-	dowr	-	no
chr10	15138376	15140125	ENSG00000152464	RPP38	ribonuclease P/M	5UTR	0.000	YES	4.89	15.90	-	dowr	-	no
chr10	27388626	27390250	ENSG00000107890	ANKRD26	ankyrin repeat do	5UTR	0.000	YES	16.45	36.33	-	dowr	-	no
chr10	47084876	47086250	ENSG00000204174	NPY4R	neuropeptide Y re	5UTR	0.000	YES	1.63	4.95	-	dowr	-	no
chr11	9481501	9483250	ENSG00000166478	ZNF143	zinc finger proteir	5UTR	0.000	YES	12.12	17.75	-	dowr	-	no
chr11	66383251	66384875	ENSG00000239306	RBM14	RNA binding moti	5UTR	0.000	YES	5.81	10.73	-	dowr	-	no
chr11	76091626	76093000	ENSG00000179240	RP11-1111	Protein LOC1005	5UTR	0.000	YES	2.27	3.72	-	dowr	-	no
chr11	125756876	125758250	ENSG00000198331	HYLS1	hydrolethalus syn	5UTR	0.000	YES	2.27	6.61	-	dowr	-	no
chr11	125757501	125758750	ENSG00000198331	HYLS1	hydrolethalus syn	5UTR	0.015	YES	2.06	6.19	-	dowr	-	no
chr11	134093501	134095250	ENSG00000151503	NCAPD3	non-SMC conden:	5UTR	0.000	YES	6.66	16.51	-	dowr	-	no
chr12	27090251	27091625	ENSG00000111790	FGFR1OP2	FGFR1 oncogene	5UTR	0.000	YES	2.48	6.40	-	dowr	-	no
chr12	53772626	53774500	ENSG00000185591	SP1	Sp1 transcription	5UTR	0.000	YES	6.81	11.77	-	dowr	-	no
chr12	69752626	69754250	ENSG00000127337	YEATS4	YEATS domain coi	5UTR	0.000	YES	7.94	14.45	-	dowr	-	no
chr12	106751126	106752500	ENSG00000013503	POLR3B	polymerase (RNA	5UTR	0.000	YES	3.76	6.40	-	dowr	-	no

chr13	31039501	31040875	ENSG00000189403	HMGB1	high mobility gro	exon	0.000	YES	2.98	4.13	-	dowr	-	no
chr13	48668626	48670000	ENSG00000136146	MED4	mediator comple	5UTR	0.000	YES	1.56	3.92	-	dowr	-	no
chr13	49106126	49107625	ENSG00000136161	RCBTB2	regulator of chr	exon	0.000	YES	3.54	6.81	-	dowr	-	no
chr13	77565501	77566875	ENSG00000102805	CLN5	ceroid-lipofuscinc	5UTR	0.002	YES	2.27	3.10	-	dowr	-	no
chr15	83679626	83681125	ENSG00000169609	C15orf40	chromosome 15 c	5UTR	0.000	YES	4.40	8.46	-	dowr	-	no
chr16	29826626	29828250	ENSG00000185928	PAGR1	PAXIP1 associatec	5UTR	0.000	YES	6.95	17.96	-	dowr	-	no
chr16	90038251	90039750	ENSG00000177946	CENPBD1	CENPB DNA-bind	5UTR	0.000	YES	11.34	21.68	-	dowr	-	no
chr17	45972876	45974250	ENSG00000167182	SP2	Sp2 transcription	5UTR	0.009	YES	10.35	10.12	-	dowr	-	no
chr17	57232001	57233375	ENSG00000182628	SKA2	spindle and kinet	5UTR	0.000	YES	11.20	12.18	-	dowr	-	no
chr17	57968876	57970125	ENSG00000108423	TUBD1	tubulin, delta 1	[S 5UTR	0.048	YES	18.57	37.78	-	dowr	-	no
chr1	150335376	150336875	ENSG00000163125	RPRD2	regulation of nucl	exon	0.000	YES	4.11	7.43	-	dowr	-	no
chr20	23341751	23343375	ENSG00000125812	GZF1	GDNF-inducible zi	5UTR	0.000	YES	3.40	7.02	-	dowr	-	no
chr1	161128501	161130000	ENSG00000143258	USP21	ubiquitin specific	5UTR	0.000	YES	3.05	8.46	-	dowr	-	no
chr1	38396876	38398250	ENSG00000204084	INPP5B	inositol polyphos	5UTR	0.000	YES	2.13	3.51	-	dowr	-	no
chr1	182807751	182809125	ENSG00000135829	DHX9	DEAH (Asp-Glu-Al	5UTR	0.000	YES	6.31	7.43	-	dowr	-	no
chr20	44440376	44441750	ENSG00000175063	UBE2C	ubiquitin-conjuga	5UTR	0.000	YES	5.18	5.99	-	dowr	-	no
chr1	211848626	211850000	ENSG00000117650	NEK2	NIMA-related kin	5UTR	0.000	YES	1.63	3.72	-	dowr	-	no
chr20	50807251	50808750	ENSG0000020256	ZFP64	ZFP64 zinc finger	5UTR	0.000	YES	6.24	7.23	-	dowr	-	no
chr1	217921876	217923250	ENSG00000162814	SPATA17	spermatogenesis	intron	0.011	YES	0.50	3.72	-	dowr	-	no
chr1	227262251	227263625	ENSG00000143776	CDC42BP	CDC42 binding pr	intron	0.007	YES	0.50	3.10	-	dowr	-	no
chr2	29092501	29093875	ENSG00000171103	TRMT61B	tRNA methyltrans	5UTR	0.000	YES	2.76	7.02	-	dowr	-	no
chr2	113012001	113013375	ENSG00000144161	ZC3H8	zinc finger CCCH-t	5UTR	0.000	YES	4.47	5.78	-	dowr	-	no
chr19	3762251	3763875	ENSG00000183617	MRPL54	mitochondrial rib	5UTR	0.000	YES	4.68	6.61	-	dowr	-	no
chr19	5622251	5623875	ENSG00000160633	SAFB	scaffold attachme	5UTR	0.000	YES	1.98	6.61	-	dowr	-	no
chr19	40324126	40325625	ENSG00000105202	FBL	fibrillarin [Source:	3UTR	0.000	YES	2.34	5.99	-	dowr	-	no
chr19	49587876	49589375	ENSG00000104852	SNRNP70	small nuclear ribo	5UTR	0.000	YES	4.54	9.50	-	dowr	-	no
chr19	50528001	50529375	ENSG00000142528	ZNF473	zinc finger proteir	5UTR	0.000	YES	2.20	6.40	-	dowr	-	no
chr19	50528501	50529750	ENSG00000142528	ZNF473	zinc finger proteir	5UTR	0.014	YES	1.84	5.99	-	dowr	-	no
chr2	197503751	197505125	ENSG00000144395	CCDC150	coiled-coil domai	5UTR	0.000	YES	1.98	4.13	-	dowr	-	no
chr19	59055001	59056500	ENSG00000130726	TRIM28	tripartite motif cc	5UTR	0.000	YES	3.19	5.99	-	dowr	-	no
chr2	242625626	242627125	ENSG00000168393	DTYMK	deoxythymidylate	5UTR	0.000	YES	2.84	7.02	-	dowr	-	no

chr1	115314501	115315750	ENSG00000052723	SIKE1	suppressor of IKB 3UTR	0.034	NO	5.46	4.13	-	dowr	-	no
chr17	38247751	38249000	ENSG00000126351	THRA	thyroid hormone 3UTR	0.028	NO	0.71	1.86	-	dowr	-	no
chr20	61575376	61576750	ENSG00000101193	GID8	GID complex sub1 3UTR	0.010	NO	0.85	2.89	-	dowr	-	no
chr1	28831876	28833125	ENSG00000180198	RCC1	regulator of chror 5UTR	0.015	NO	1.49	2.68	-	dowr	-	no
chr1	33116001	33117375	ENSG00000162521	RBBP4	retinoblastoma bi 5UTR	0.010	NO	1.98	2.89	-	dowr	-	no
chr1	33937376	33938750	ENSG00000121903	ZSCAN20	zinc finger and SC 5UTR	0.001	NO	1.13	3.72	-	dowr	-	no
chr1	153939626	153941000	ENSG00000143578	CREB3L4	cAMP responsive 5UTR	0.001	NO	3.40	4.54	-	dowr	-	no
chr1	154946376	154947750	ENSG00000173207	CKS1B	CDC28 protein kir 5UTR	0.000	NO	3.83	7.02	-	dowr	-	no
chr10	35415501	35416750	ENSG00000095794	CREM	cAMP responsive 5UTR	0.002	NO	1.13	4.34	-	dowr	-	no
chr10	105155751	105157000	ENSG00000148843	PDCD11	programmed cell 5UTR	0.001	NO	0.71	2.68	-	dowr	-	no
chr10	127407501	127408750	ENSG00000107938	C10orf137	chromosome 10 c 5UTR	0.002	NO	1.49	4.13	-	dowr	-	no
chr11	14912626	14913875	ENSG00000186104	CYP2R1	cytochrome P450 5UTR	0.012	NO	2.20	5.16	-	dowr	-	no
chr11	14913001	14914375	ENSG00000186104	CYP2R1	cytochrome P450 5UTR	0.000	NO	1.98	4.54	-	dowr	-	no
chr12	6960626	6961875	ENSG00000111667	USP5	ubiquitin specific 5UTR	0.008	NO	2.20	3.92	-	dowr	-	no
chr12	69080001	69081375	ENSG00000111581	NUP107	nucleoporin 107k 5UTR	0.000	NO	2.98	5.78	-	dowr	-	no
chr12	111180126	111181375	ENSG00000186298	PPP1CC	protein phosphat 5UTR	0.024	NO	2.20	3.72	-	dowr	-	no
chr13	50655751	50657000	ENSG00000176124	DLEU1	deleted in lymphc 5UTR	0.010	NO	1.63	2.89	-	dowr	-	no
chr14	50086626	50088000	ENSG00000168282	MGAT2	mannosyl (alpha- 5UTR	0.000	NO	2.13	4.34	-	dowr	-	no
chr15	72409876	72411250	ENSG00000166192	SENP8	SUMO/sentrin spi 5UTR	0.003	NO	2.84	4.95	-	dowr	-	no
chr15	98503251	98504500	ENSG00000140450	ARRDC4	arrestin domain c 5UTR	0.048	NO	4.11	3.30	-	dowr	-	no
chr16	67595751	67597000	ENSG00000102974	CTCF	CCCTC-binding fa 5UTR	0.007	NO	1.70	4.13	-	dowr	-	no
chr16	4896626	4898000	ENSG00000140632	GLYR1	glyoxylate reduct: 5UTR	0.020	NO	2.55	5.57	-	dowr	-	no
chr16	69759751	69761125	ENSG00000181019	NQO1	NAD(P)H dehydro 5UTR	0.001	NO	2.55	3.92	-	dowr	-	no
chr17	47865751	47867000	ENSG00000136504	KAT7	K(lysine) acetyltra 5UTR	0.015	NO	3.33	6.19	-	dowr	-	no
chr17	40021126	40022375	ENSG00000178502	KLHL11	kelch-like family r 5UTR	0.023	NO	0.64	2.68	-	dowr	-	no
chr18	12947751	12949000	ENSG00000085415	SEH1L	SEH1-like (S. cere 5UTR	0.004	NO	1.63	3.92	-	dowr	-	no
chr18	33077001	33078250	ENSG00000153391	INO80C	INO80 complex st 5UTR	0.005	NO	1.84	3.72	-	dowr	-	no
chr19	8509376	8510625	ENSG00000099783	HNRNPM	heterogeneous ni 5UTR	0.015	NO	1.21	3.72	-	dowr	-	no
chr19	18433501	18434875	ENSG00000130520	LSM4	LSM4 homolog, U 5UTR	0.000	NO	0.78	2.89	-	dowr	-	no
chr19	33462501	33463750	ENSG00000121289	CEP89	centrosomal prot 5UTR	0.049	NO	2.13	2.89	-	dowr	-	no
chr2	47629626	47630875	ENSG00000095002	MSH2	mutS homolog 2, 5UTR	0.045	NO	2.34	3.51	-	dowr	-	no

chr2	11605626	11607000	ENSG00000169016	E2F6	E2F transcription 5UTR	0.000	NO	2.27	4.54	-	dowr	-	no
chr2	38977751	38979250	ENSG00000115875	SRSF7	serine/arginine-ri 5UTR	0.000	NO	7.09	6.61	-	dowr	-	no
chr20	61568751	61570125	ENSG00000101193	GID8	GID complex sub1 5UTR	0.005	NO	1.91	3.92	-	dowr	-	no
chr20	61492501	61494125	ENSG00000101190	TCFL5	transcription facti 5UTR	0.003	NO	0.92	2.06	-	dowr	-	no
chr21	34915001	34916250	ENSG00000159140	SON	SON DNA binding 5UTR	0.011	NO	1.63	3.72	-	dowr	-	no
chr21	46493376	46494625	ENSG00000197381	ADARB1	adenosine deamii 5UTR	0.020	NO	4.11	4.34	-	dowr	-	no
chr22	41346626	41348000	ENSG00000100387	RBX1	ring-box 1, E3 ubi 5UTR	0.000	NO	2.84	3.30	-	dowr	-	no
chr22	45559126	45560375	ENSG00000093000	NUP50	nucleoporin 50kD 5UTR	0.025	NO	1.56	2.27	-	dowr	-	no
chr22	42486251	42487625	ENSG00000184983	NDUFA6	NADH dehydroge 5UTR	0.000	NO	2.13	3.51	-	dowr	-	no
chr3	63805001	63806500	ENSG00000163632	C3orf49	chromosome 3 or 5UTR	0.012	NO	7.30	8.67	-	dowr	-	no
chr3	120067751	120069000	ENSG00000163428	LRRC58	leucine rich repea 5UTR	0.002	NO	1.84	4.54	-	dowr	-	no
chr3	120067251	120068500	ENSG00000163428	LRRC58	leucine rich repea 5UTR	0.033	NO	2.27	4.54	-	dowr	-	no
chr4	57301876	57303125	ENSG00000128050	PAICS	phosphoribosylan 5UTR	0.005	NO	2.34	2.68	-	dowr	-	no
chr4	73934876	73936250	ENSG00000163626	COX18	cytochrome c oxia 5UTR	0.001	NO	2.20	2.89	-	dowr	-	no
chr4	100871001	100872250	ENSG00000164032	H2AFZ	H2A histone famil 5UTR	0.001	NO	1.56	2.68	-	dowr	-	no
chr5	64858376	64859750	ENSG00000113593	PPWD1	peptidylprolyl iso 5UTR	0.001	NO	1.21	4.54	-	dowr	-	no
chr5	108084001	108085250	ENSG00000151422	FER	fer (fps/fes relate 5UTR	0.026	NO	1.21	4.54	-	dowr	-	no
chr5	170813876	170815375	ENSG00000181163	NPM1	nucleophosmin (r 5UTR	0.001	NO	4.11	4.75	-	dowr	-	no
chr6	26155876	26157250	ENSG00000168298	HIST1H1E	histone cluster 1, 5UTR	0.000	NO	3.40	6.40	-	dowr	-	no
chr6	26156501	26157750	ENSG00000168298	HIST1H1E	histone cluster 1, 5UTR	0.022	NO	5.25	7.64	-	dowr	-	no
chr6	30614126	30615500	ENSG00000204564	C6orf136	chromosome 6 or 5UTR	0.000	NO	3.69	5.57	-	dowr	-	no
chr6	36561501	36562750	ENSG00000112081	SRSF3	serine/arginine-ri 5UTR	0.000	NO	2.48	3.10	-	dowr	-	no
chr6	13814001	13815250	ENSG00000050393	MCUR1	mitochondrial cal 5UTR	0.002	NO	1.21	2.89	-	dowr	-	no
chr6	27860251	27861625	ENSG00000233224	HIST1H2A	histone cluster 1, 5UTR	0.039	NO	2.34	2.48	-	dowr	-	no
chr6	160210751	160212125	ENSG00000120438	TCP1	t-complex 1 [Sour 5UTR	0.012	NO	1.49	3.51	-	dowr	-	no
chr7	77325001	77326250	ENSG00000187257	RSBN1L	round spermatid 5UTR	0.024	NO	1.49	2.89	-	dowr	-	no
chr7	7680001	7681250	ENSG00000106399	RPA3	replication protei 5UTR	0.029	NO	2.27	2.68	-	dowr	-	no
chr7	72936001	72937250	ENSG00000009954	BAZ1B	bromodomain ad 5UTR	0.036	NO	1.84	2.48	-	dowr	-	no
chr7	75367876	75369125	ENSG00000127946	HIP1	huntingtin interac 5UTR	0.050	NO	1.28	2.89	-	dowr	-	no
chr8	74887751	74889000	ENSG00000175606	TMEM70	transmembrane r 5UTR	0.008	NO	1.56	3.51	-	dowr	-	no
chr8	92081876	92083250	ENSG00000155100	OTUD6B	OTU domain cont 5UTR	0.009	NO	1.84	4.95	-	dowr	-	no

chr9	137000126	137001375	ENSG00000196363	WDR5	WD repeat domain	5UTR	0.003	NO	1.70	5.99	-	dowr	-	no
chr9	100684126	100685500	ENSG00000136932	C9orf156	chromosome 9 orf	5UTR	0.000	NO	4.18	5.99	-	dowr	-	no
chr9	127905251	127906500	ENSG00000173611	SCAI	suppressor of cancer	5UTR	0.026	NO	1.91	2.89	-	dowr	-	no
chrX	46695626	46696875	ENSG00000102218	RP2	retinitis pigmentosa	5UTR	0.048	NO	1.42	2.89	-	dowr	-	no
chr6	30293751	30295250	ENSG00000204599	TRIM39	tripartite motif containing	5UTR	0.002	NO	2.06	4.95	-	dowr	-	no
chr1	179561626	179562875	ENSG00000162782	TDRD5	tudor domain containing	exon	0.007	NO	1.84	2.68	-	dowr	-	no
chr10	120101126	120102500	ENSG00000165669	FAM204A	family with sequence	exon	0.001	NO	2.62	3.92	-	dowr	-	no
chr15	75743626	75744875	ENSG00000169375	SIN3A	SIN3 transcription factor	exon	0.000	NO	3.83	5.57	-	dowr	-	no
chr16	74700126	74701500	ENSG00000168411	RFWD3	ring finger and WD	exon	0.000	NO	4.11	4.95	-	dowr	-	no
chr2	24269876	24271125	ENSG00000163026	C2orf44	chromosome 2 orf	exon	0.028	NO	1.49	2.89	-	dowr	-	no
chr20	10414251	10415625	ENSG00000125863	MKKS	McKusick-Kaufmann	exon	0.020	NO	2.34	4.54	-	dowr	-	no
chr20	31573376	31574625	ENSG00000167098	SUN5	Sad1 and UNC84	exon	0.008	NO	0.85	1.86	-	dowr	-	no
chr3	63807751	63809250	ENSG00000163632	C3orf49	chromosome 3 orf	exon	0.013	NO	4.96	5.78	-	dowr	-	no
chr4	26858626	26860000	ENSG00000109689	STIM2	stromal interaction	exon	0.000	NO	1.56	3.72	-	dowr	-	no
chr6	151711251	151712625	ENSG00000181472	ZBTB2	zinc finger and BTB	exon	0.000	NO	2.27	5.16	-	dowr	-	no
chr1	174135126	174136375	ENSG00000152061	RABGAP1L	RAB GTPase activator	intron	0.020	NO	1.06	2.48	-	dowr	-	no
chr1	217811751	217813000	ENSG00000162814	SPATA17	spermatogenesis	intron	0.048	NO	0.99	3.10	-	dowr	-	no
chr11	126213751	126215000	ENSG00000110063	DCPS	decapping enzyme	intron	0.015	NO	0.71	2.48	-	dowr	-	no
chr17	56795501	56796875	ENSG00000108384	RAD51C	RAD51 homolog C	intron	0.004	NO	3.76	5.37	-	dowr	-	no
chr17	57952751	57954000	ENSG00000108423	TUBD1	tubulin, delta 1	intron	0.004	NO	3.62	4.75	-	dowr	-	no
chr20	10409251	10410500	ENSG00000125863	MKKS	McKusick-Kaufmann	intron	0.046	NO	1.21	3.10	-	dowr	-	no
chr20	10409626	10410875	ENSG00000125863	MKKS	McKusick-Kaufmann	intron	0.025	NO	1.63	3.30	-	dowr	-	no
chr20	47264376	47265625	ENSG00000124126	PREX1	phosphatidylinositol	intron	0.049	NO	3.83	5.78	-	dowr	-	no
chr20	47386626	47387875	ENSG00000124126	PREX1	phosphatidylinositol	intron	0.048	NO	6.17	7.64	-	dowr	-	no
chr3	99749376	99750625	ENSG00000184220	CMSS1	cms1 ribosomal	intron	0.011	NO	0.50	1.86	-	dowr	-	no
chr4	184216001	184217250	ENSG00000151718	WWC2	WW and C2 domain	intron	0.032	NO	1.06	1.65	-	dowr	-	no
chr8	107446626	107447875	ENSG00000164830	OXR1	oxidation resistant	intron	0.011	NO	2.13	4.13	-	dowr	-	no
chrX	132983001	132984250	ENSG00000147257	GPC3	glypican 3	intron	0.017	NO	0.99	2.27	-	dowr	-	no
chr12	46122126	46123375	ENSG00000189079	ARID2	AT rich interactive	promoter	0.013	NO	1.21	5.57	-	dowr	-	no
chr12	46120751	46122000	ENSG00000189079	ARID2	AT rich interactive	upstream	0.006	NO	2.20	4.54	-	dowr	-	no
chr20	30004001	30005375	ENSG00000204548	DEFB121	defensin, beta 12	upstream	0.014	NO	0.43	1.45	-	dowr	-	no

chr5	6712501	6714000	ENSG00000112941	PAPD7	PAP associated dc upstre	0.000	NO	2.13	6.19	-	dowr	-	no
chr6	57490876	57492125	ENSG00000146143	PRIM2	primase, DNA, po intron	0.019	YES	1.84	3.30	-	dowr	-	na
chr5	137673376	137674750	ENSG00000158402	CDC25C	cell division cycle 5UTR	0.001	NO	3.05	3.51	-	dowr	-	na
chr20	3139876	3141250	ENSG00000215251	FASTKD5	FAST kinase domæ exon	0.006	NO	0.43	2.06	-	dowr	-	na
chr1	57169376	57170625	ENSG00000162409	PRKAA2	protein kinase, Al exon	0.019	NO	0.28	2.27	-	-	up	yes
chr3	23451001	23452250	ENSG00000182247	UBE2E2	ubiquitin-conjuga intron	0.007	YES	1.21	2.48	-	-	up	no
chr5	130500251	130501750	ENSG00000169567	HINT1	histidine triad nur 5UTR	0.000	YES	3.69	9.08	-	-	up	no
chrX	154443876	154445250	ENSG00000155959	VBP1	von Hippel-Lindai 5UTR	0.000	YES	2.20	3.30	-	-	up	no
chr10	133794876	133796250	ENSG00000176171	BNIP3	BCL2/adenovirus 5UTR	0.000	YES	2.27	6.19	-	-	up	no
chr11	59435876	59437250	ENSG00000166889	PATL1	protein associater 5UTR	0.000	YES	2.34	3.72	-	-	up	no
chr11	62622626	62624125	ENSG00000168003	SLC3A2	solute carrier fam 5UTR	0.000	YES	4.75	5.16	-	-	up	no
chr14	45552626	45554000	ENSG00000185246	PRPF39	PRP39 pre-mRNA 5UTR	0.000	YES	2.34	3.72	-	-	up	no
chr14	64108001	64109375	ENSG00000140006	WDR89	WD repeat domai exon	0.000	YES	2.69	6.40	-	-	up	no
chr14	103799626	103801250	ENSG00000100664	EIF5	eukaryotic transla 5UTR	0.000	YES	5.46	8.88	-	-	up	no
chr15	50646376	50648375	ENSG00000104064	GABPB1	GA binding protei 5UTR	0.000	YES	11.20	17.96	-	-	up	no
chr15	72765876	72767250	ENSG00000166233	ARIH1	ariadne homolog, 5UTR	0.001	YES	2.13	5.16	-	-	up	no
chr16	31884501	31885750	ENSG00000185947	ZNF267	zinc finger proteir 5UTR	0.028	YES	1.70	2.68	-	-	up	no
chr1	157091876	157093125	ENSG00000117036	ETV3	ets variant 3 [Sou 3UTR	0.021	NO	1.06	2.89	-	-	up	no
chr10	101189751	101191125	ENSG00000120053	GOT1	glutamic-oxaloacæ 5UTR	0.001	NO	2.20	4.13	-	-	up	no
chr12	108955751	108957125	ENSG00000136003	ISCU	iron-sulfur cluster 5UTR	0.000	NO	2.84	3.72	-	-	up	no
chr19	14628626	14629875	ENSG00000132002	DNAJB1	DnaJ (Hsp40) hon 5UTR	0.008	NO	0.57	2.06	-	-	up	no
chr2	99797001	99798250	ENSG00000158411	MITD1	MIT, microtubule 5UTR	0.001	NO	1.49	2.68	-	-	up	no
chr3	160282751	160284000	ENSG00000186432	KPNA4	karyopherin alphæ 5UTR	0.008	NO	3.33	3.92	-	-	up	no
chr15	50645751	50647000	ENSG00000104064	GABPB1	GA binding protei exon	0.012	NO	4.61	5.99	-	-	up	no
chr15	51520126	51521375	ENSG00000137869	CYP19A1	cytochrome P450 exon	0.045	NO	1.84	4.95	-	-	up	no
chr20	42838751	42840000	ENSG00000132823	C20orf111	chromosome 20 c exon	0.030	NO	3.83	5.16	-	-	up	no
chr5	55290251	55291625	ENSG00000134352	IL6ST	interleukin 6 sign: exon	0.002	NO	1.42	3.30	-	-	up	no
chr19	33865876	33867125	ENSG00000153879	CEBPG	CCAAT/enhancer intron	0.035	NO	0.14	2.06	-	-	up	no
chr10	124638376	124640000	ENSG00000213185	FAM24B	family with seque exon	0.000	YES	4.68	15.07	-	-	up	na
chr17	73150001	73151375	ENSG00000189159	HN1	hematological anæ 5UTR	0.004	YES	2.76	5.16	-	-	down	yes
chr3	14166501	14167750	ENSG00000170876	TMEM43	transmembrane ç 5UTR	0.032	YES	5.25	9.70	-	-	down	no

chr3	62036501	62038250	ENSG00000144724	PTPRG	protein tyrosine ζ intron	0.000	YES	23.89	36.54	-	-	down	no
chr5	177630876	177632250	ENSG00000197451	HNRNPAB	heterogeneous nt 5UTR	0.000	YES	6.03	5.37	-	-	down	no
chr16	31190751	31192125	ENSG00000089280	FUS	fused in sarcoma 5UTR	0.000	YES	4.32	7.64	-	-	down	no
chr16	31191251	31192500	ENSG00000089280	FUS	fused in sarcoma 5UTR	0.016	YES	3.47	6.61	-	-	down	no
chr2	33823501	33825125	ENSG00000119812	FAM98A	family with seque 5UTR	0.000	YES	7.66	13.83	-	-	down	no
chr19	1604751	1606250	ENSG00000127540	UQCR11	ubiquinol-cytochr 5UTR	0.000	YES	0.92	4.54	-	-	down	no
chr19	11070626	11072125	ENSG00000127616	SMARCA4	SWI/SNF related, 5UTR	0.000	YES	8.51	16.31	-	-	down	no
chr19	16582126	16583625	ENSG00000127527	EPS15L1	epidermal growth 5UTR	0.000	YES	1.42	5.37	-	-	down	no
chr2	170218376	170219875	ENSG00000081479	LRP2	low density lipopr 5UTR	0.002	YES	2.76	5.78	-	-	down	no
chr19	39137501	39139000	ENSG00000130402	ACTN4	actinin, alpha 4 [S 5UTR	0.000	YES	3.90	9.29	-	-	down	no
chr19	39138126	39139375	ENSG00000130402	ACTN4	actinin, alpha 4 [S 5UTR	0.005	YES	3.83	9.08	-	-	down	no
chr19	54605376	54606875	ENSG00000170906	NDUFA3	NADH dehydroge 5UTR	0.000	YES	2.48	6.61	-	-	down	no
chr21	48054626	48056500	ENSG00000160310	PRMT2	protein arginine r 5UTR	0.000	YES	10.00	22.50	-	-	down	no
chr3	64636251	64638000	ENSG00000163638	ADAMTS9	ADAM metallopej 3UTR	0.000	NO	11.98	17.96	-	-	down	no
chr3	64634751	64636000	ENSG00000163638	ADAMTS9	ADAM metallopej 3UTR	0.000	NO	12.34	12.59	-	-	down	no
chr1	10092251	10093500	ENSG00000130939	UBE4B	ubiquitination fac 5UTR	0.006	NO	0.71	2.06	-	-	down	no
chr12	122063751	122065000	ENSG00000182500	ORAI1	ORAI calcium rele 5UTR	0.035	NO	1.06	3.10	-	-	down	no
chr19	36630251	36631500	ENSG00000126247	CAPNS1	calpain, small sub 5UTR	0.031	NO	1.77	3.30	-	-	down	no
chr19	45348876	45350125	ENSG00000130202	PVRL2	poliovirus receptc 5UTR	0.010	NO	1.21	2.68	-	-	down	no
chr2	47403001	47404375	ENSG00000143933	CALM2	calmodulin 2 (phc 5UTR	0.000	NO	3.40	5.37	-	-	down	no
chr20	62151376	62152875	ENSG00000125534	PPDPF	pancreatic proger 5UTR	0.000	NO	3.33	4.34	-	-	down	no
chr20	7999126	8000375	ENSG00000125827	TMX4	thioredoxin-relatc 5UTR	0.016	NO	1.28	3.51	-	-	down	no
chr20	24972751	24974250	ENSG00000101474	APMAP	adipocyte plasma 5UTR	0.000	NO	3.40	4.54	-	-	down	no
chr22	21996001	21997250	ENSG00000128228	SDF2L1	stromal cell-deriv 5UTR	0.010	NO	1.84	4.13	-	-	down	no
chr3	15642501	15643750	ENSG00000169814	BTD	biotinidase [Sourc 5UTR	0.001	NO	3.33	4.34	-	-	down	no
chr7	44645876	44647125	ENSG00000105953	OGDH	oxoglutarate (alpl 5UTR	0.047	NO	2.55	3.10	-	-	down	no
chr7	73097126	73098500	ENSG00000071462	WBSCR22	Williams Beuren s 5UTR	0.001	NO	1.56	4.13	-	-	down	no
chr7	134330751	134332125	ENSG00000172331	BPGM	2,3-bisphosphogh 5UTR	0.004	NO	2.62	3.30	-	-	down	no
chr7	148725001	148726375	ENSG00000155660	PDIA4	protein disulfide i 5UTR	0.000	NO	2.41	4.95	-	-	down	no
chr2	11692001	11693250	ENSG00000196208	GREB1	growth regulator intron	0.014	NO	0.99	2.48	-	-	down	no
chr3	61946251	61947500	ENSG00000144724	PTPRG	protein tyrosine ζ intron	0.038	NO	3.90	7.84	-	-	down	no

chr3	61946751	61948000	ENSG00000144724	PTPRG	protein tyrosine ζ intron	0.005	NO	4.75	9.08	-	-	down no
chr3	62150751	62152000	ENSG00000144724	PTPRG	protein tyrosine ζ intron	0.019	NO	3.90	7.02	-	-	down no
chr3	61625751	61627000	ENSG00000144724	PTPRG	protein tyrosine ζ intron	0.001	NO	5.18	8.05	-	-	down no
chr3	61993251	61994500	ENSG00000144724	PTPRG	protein tyrosine ζ intron	0.006	NO	4.54	6.81	-	-	down no
chr3	61895501	61896750	ENSG00000144724	PTPRG	protein tyrosine ζ intron	0.007	NO	4.32	6.19	-	-	down no
chr3	62050251	62051500	ENSG00000144724	PTPRG	protein tyrosine ζ intron	0.007	NO	5.18	6.40	-	-	down no
chr3	61992751	61994000	ENSG00000144724	PTPRG	protein tyrosine ζ intron	0.020	NO	6.10	6.61	-	-	down no
chr3	61732751	61734000	ENSG00000144724	PTPRG	protein tyrosine ζ intron	0.009	NO	5.10	5.16	-	-	down no
chr3	64661001	64662500	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.002	NO	7.59	11.97	-	-	down no
chr3	64637251	64639000	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.000	NO	11.70	16.51	-	-	down no
chr3	64503501	64505000	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.001	NO	5.67	7.84	-	-	down no
chr3	64630751	64632000	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.041	NO	8.72	11.15	-	-	down no
chr3	64573751	64575000	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.000	NO	8.44	10.73	-	-	down no
chr3	64653501	64654750	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.039	NO	11.13	13.83	-	-	down no
chr3	64631251	64633000	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.002	NO	12.26	15.07	-	-	down no
chr3	64629251	64630500	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.001	NO	7.09	8.67	-	-	down no
chr3	64661751	64663000	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.015	NO	8.51	10.32	-	-	down no
chr3	64576751	64578000	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.027	NO	7.80	9.29	-	-	down no
chr3	64612251	64614250	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.004	NO	14.67	17.34	-	-	down no
chr3	64577501	64578750	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.000	NO	8.93	10.32	-	-	down no
chr3	64630001	64631250	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.000	NO	8.22	9.50	-	-	down no
chr3	64654001	64655750	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.001	NO	15.24	17.34	-	-	down no
chr3	64604001	64605500	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.049	NO	9.29	10.12	-	-	down no
chr3	64653001	64654250	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.002	NO	10.99	11.35	-	-	down no
chr3	64668501	64670250	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.011	NO	12.55	12.80	-	-	down no
chr3	64580751	64582250	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.002	NO	12.26	12.39	-	-	down no
chr3	64574751	64576750	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.012	NO	14.82	14.86	-	-	down no
chr3	64561001	64562500	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.001	NO	13.33	13.21	-	-	down no
chr3	64622501	64624000	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.001	NO	10.92	10.73	-	-	down no
chr3	64578001	64579500	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.035	NO	11.56	11.35	-	-	down no
chr3	64603251	64604500	ENSG00000163638	ADAMTS9	ADAM metallopej intron	0.016	NO	9.07	7.43	-	-	down no

chr5	177578251	177579500	ENSG00000145912	NHP2	NHP2 ribonucleoprotein intron	0.005	NO	3.69	4.75	-	-	down	no
chr17	35626376	35627625	ENSG00000132142	ACACA	acetyl-CoA carboxylase intron	0.004	NO	0.50	2.06	-	-	down	na
chr4	17578376	17579750	ENSG00000002549	LAP3	leucine aminopeptidase 5UTR	0.000	YES	1.42	4.34	-	-	-	yes
chr6	87794501	87795750	ENSG00000135346	CGA	glycoprotein hormone 3UTR	0.033	YES	0.85	1.86	-	-	-	yes
chrX	53110876	53112250	ENSG00000184205	TSPYL2	TSPY-like 2 [Source: 5UTR	0.000	YES	1.56	3.10	-	-	-	yes
chr16	11349376	11350750	ENSG00000185338	SOCS1	suppressor of cytokine signaling 5UTR	0.000	YES	2.34	4.54	-	-	-	yes
chr17	57914251	57916000	ENSG00000062716	VMP1	vacuole membrane protein exon	0.000	YES	25.66	34.89	-	-	-	yes
chr1	59249126	59250375	ENSG00000177606	JUN	jun proto-oncogene 5UTR	0.002	YES	3.12	3.51	-	-	-	yes
chr1	150551376	150552625	ENSG00000143384	MCL1	myeloid cell leukemia 1 5UTR	0.003	NO	3.33	3.72	-	-	-	yes
chr19	13263126	13264500	ENSG00000160888	IER2	immediate early response 2 5UTR	0.009	NO	3.26	2.68	-	-	-	yes
chr7	100808376	100809625	ENSG00000128564	VGF	VGF nerve growth factor exon	0.037	NO	1.56	2.89	-	-	-	yes
chr3	9438501	9439750	ENSG00000168137	SETD5	SET domain containing 5UTR	0.000	YES	6.59	11.15	-	-	-	no
chr3	11313251	11314750	ENSG00000197548	ATG7	autophagy related 7 5UTR	0.000	YES	3.33	7.43	-	-	-	no
chr3	12525251	12526500	ENSG00000154743	TSEN2	tRNA splicing endonuclease 2 5UTR	0.000	YES	3.33	6.81	-	-	-	no
chr3	14165751	14167250	ENSG00000163528	CHCHD4	coiled-coil-helix-coil domain 4 5UTR	0.000	YES	5.25	10.53	-	-	-	no
chr3	15247001	15248250	ENSG00000131375	CAPN7	calpain 7 [Source: 5UTR	0.000	YES	4.47	6.40	-	-	-	no
chr3	17783501	17785000	ENSG00000131374	TBC1D5	TBC1 domain family member 5 exon	0.001	YES	4.18	6.61	-	-	-	no
chr1	77839001	77840250	ENSG00000154027	AK5	adenylate kinase 5 intron	0.045	YES	0.21	1.65	-	-	-	no
chr3	33478751	33480000	ENSG00000153560	UBP1	upstream binding protein intron	0.001	YES	2.98	3.72	-	-	-	no
chr3	33839501	33840750	ENSG00000170248	PDCD6IP	programmed cell death 6 interacting protein 5UTR	0.000	YES	3.54	4.75	-	-	-	no
chr3	43731751	43733000	ENSG00000011198	ABHD5	abhydrolase domain 5UTR	0.000	YES	3.47	5.99	-	-	-	no
chr3	46229751	46231000	ENSG00000183625	CCR3	chemokine (C-C motif) receptor 3 intron	0.002	YES	3.47	2.89	-	-	-	no
chr3	47017251	47018750	ENSG00000160799	CCDC12	coiled-coil domain containing 12 5UTR	0.000	YES	6.45	15.28	-	-	-	no
chr3	50376751	50378000	ENSG00000068028	RASSF1	Ras association (Raf) domain containing 1 exon	0.025	YES	0.85	2.06	-	-	-	no
chr3	63416251	63417500	ENSG00000163630	SYNPR	synaptophysin [Source: 5UTR	0.000	YES	2.84	5.16	-	-	-	no
chr3	76566501	76567750	ENSG00000185008	ROBO2	roundabout, axon guidance protein 2 intron	0.044	YES	0.43	2.48	-	-	-	no
chr3	85768751	85770000	ENSG00000175161	CADM2	cell adhesion molecule 2 intron	0.045	YES	0.85	2.06	-	-	-	no
chr3	112574376	112575750	ENSG00000206531	CD200R1L	CD200 receptor 1 upstream region	0.011	YES	0.78	2.89	-	-	-	no
chr3	117347501	117348750	ENSG00000185565	LSAMP	limbic system-associated protein intron	0.001	YES	1.84	3.30	-	-	-	no
chr1	16161626	16163250	ENSG00000179743	RP11-169K16.9	exon	0.000	YES	7.23	11.56	-	-	-	no
chr3	124869001	124870250	ENSG00000221955	SLC12A8	solute carrier family 12 member 8 exon	0.001	YES	0.85	3.10	-	-	-	no

chr3	127309251	127310500	ENSG00000163870	TPRA1	transmembrane p exon	0.028	YES	2.06	5.99	-	-	-	no
chr3	135914251	135916250	ENSG00000174579	MSL2	male-specific leth 5UTR	0.000	YES	6.52	17.55	-	-	-	no
chr3	150320501	150321750	ENSG00000198843	SELT	Selenoprotein T [5UTR	0.000	YES	3.54	6.19	-	-	-	no
chr3	182833251	182834750	ENSG00000078070	MCCC1	methylcrotonoyl- exon	0.000	YES	1.84	5.57	-	-	-	no
chr3	183903001	183904500	ENSG00000161204	ABCF3	ATP-binding casse 5UTR	0.000	YES	5.53	13.42	-	-	-	no
chr3	184031751	184033000	ENSG00000114867	EIF4G1	eukaryotic transla 5UTR	0.000	YES	1.42	4.75	-	-	-	no
chr3	184278751	184280250	ENSG00000182580	EPHB3	EPH receptor B3 [5UTR	0.002	YES	2.69	5.16	-	-	-	no
chr4	330876	332250	ENSG00000131127	ZNF141	zinc finger proteir 5UTR	0.000	YES	0.85	3.51	-	-	-	no
chr4	40212876	40214375	ENSG00000168421	RHOH	ras homolog fami exon	0.000	YES	1.28	3.72	-	-	-	no
chr4	46109751	46111000	ENSG00000163285	GABRG1	gamma-aminobut intron	0.039	YES	0.35	2.48	-	-	-	no
chr4	47117626	47119000	ENSG00000163288	GABRB1	gamma-aminobut intron	0.040	YES	0.35	2.68	-	-	-	no
chr4	54243126	54244500	ENSG00000145216	FIP1L1	FIP1 like 1 (S. cere 5UTR	0.000	YES	3.54	4.34	-	-	-	no
chr4	92393501	92394750	ENSG00000184305	CCSER1	coiled-coil serine- intron	0.006	YES	0.50	2.68	-	-	-	no
chr4	109751126	109752500	ENSG00000188517	COL25A1	collagen, type XX\ intron	0.009	YES	0.43	2.48	-	-	-	no
chr5	52404876	52406375	ENSG00000164172	MOCS2	molybdenum cof: 5UTR	0.000	YES	2.34	6.81	-	-	-	no
chr5	74632376	74633750	ENSG00000113161	HMGCR	3-hydroxy-3-metf 5UTR	0.000	YES	2.98	6.40	-	-	-	no
chr5	77589876	77591250	ENSG00000132842	AP3B1	adaptor-related p 5UTR	0.000	YES	3.69	7.84	-	-	-	no
chr5	90678501	90679875	ENSG00000113369	ARRDC3	arrestin domain c 5UTR	0.000	YES	6.10	7.02	-	-	-	no
chr5	98108626	98110000	ENSG00000174136	RGMB	RGM domain fam 5UTR	0.000	YES	1.35	4.54	-	-	-	no
chr5	121779126	121780500	ENSG00000064692	SNCAIP	synuclein, alpha ii 3UTR	0.031	YES	0.64	3.30	-	-	-	no
chr5	148930376	148931875	ENSG00000113712	CSNK1A1	casein kinase 1, a\ 5UTR	0.000	YES	1.84	8.46	-	-	-	no
chr5	151150501	151152250	ENSG00000145907	G3BP1	GTPase activating 5UTR	0.000	YES	4.47	9.29	-	-	-	no
chr5	173422501	173423750	ENSG00000185056	C5orf47	chromosome 5 of intron	0.041	YES	0.71	2.68	-	-	-	no
chr5	179049751	179051500	ENSG00000169045	HNRNPH1	heterogeneous n\ 5UTR	0.000	YES	12.26	26.84	-	-	-	no
chr5	179104876	179106375	ENSG00000127022	CANX	calnexin [Source:l 5UTR	0.000	YES	5.81	13.83	-	-	-	no
chr5	179340376	179341750	ENSG00000197226	TBC1D9B	TBC1 domain fam upstre	0.000	YES	1.77	4.95	-	-	-	no
chr6	13328001	13329375	ENSG00000145979	TBC1D7	TBC1 domain fam exon	0.000	YES	1.91	3.72	-	-	-	no
chr6	24402376	24403875	ENSG00000124532	MRS2	MRS2 magnesium 5UTR	0.000	YES	1.70	5.78	-	-	-	no
chr6	24666376	24667875	ENSG00000111802	TDP2	tyrosyl-DNA phos 5UTR	0.000	YES	2.76	5.16	-	-	-	no
chr6	26216501	26217875	ENSG00000187990	HIST1H2B	histone cluster 1, 5UTR	0.000	YES	2.76	4.54	-	-	-	no
chr6	32939251	32940750	ENSG00000204256	BRD2	bromodomain coi 5UTR	0.000	YES	5.46	6.61	-	-	-	no

chr6	35226626	35228250	ENSG00000065029	ZNF76	zinc finger proteir 5UTR	0.000	YES	17.79	28.07	-	-	-	no
chr6	122720001	122721375	ENSG00000025156	HSF2	heat shock transc 5UTR	0.000	YES	1.35	3.92	-	-	-	no
chr6	133135001	133136375	ENSG00000112306	RPS12	ribosomal proteir 5UTR	0.000	YES	2.62	4.13	-	-	-	no
chr7	4680751	4682250	ENSG00000164916	FOXK1	forkhead box K1 [upstre	0.000	YES	4.61	7.23	-	-	-	no
chr7	5229126	5230625	ENSG00000157954	WIPI2	WD repeat domai 5UTR	0.000	YES	2.41	10.32	-	-	-	no
chr7	6387876	6389375	ENSG00000178397	FAM220A	family with seque exon	0.000	YES	5.03	11.56	-	-	-	no
chr7	6486876	6488375	ENSG00000164535	DAGLB	diacylglycerol lipa 5UTR	0.000	YES	3.62	7.84	-	-	-	no
chr7	6745876	6747250	ENSG00000164631	ZNF12	zinc finger proteir exon	0.000	YES	3.12	4.95	-	-	-	no
chr7	11012751	11014125	ENSG00000106443	PHF14	PHD finger protei 5UTR	0.000	YES	2.06	3.72	-	-	-	no
chr7	12250126	12251500	ENSG00000106460	TMEM106	transmembrane p 5UTR	0.000	YES	1.56	5.16	-	-	-	no
chr7	44887251	44888625	ENSG00000105968	H2AFV	H2A histone famil 5UTR	0.000	YES	2.34	3.92	-	-	-	no
chr7	56131251	56132625	ENSG00000129103	SUMF2	sulfatase modifyir 5UTR	0.000	YES	2.34	5.57	-	-	-	no
chr1	17231001	17232375	ENSG00000058453	CROCC	ciliary rootlet coil intron	0.003	YES	3.90	3.10	-	-	-	no
chr7	99745751	99747125	ENSG00000188186	LAMTOR4	late endosomal/l 5UTR	0.003	YES	1.21	4.13	-	-	-	no
chr7	100895001	100896375	ENSG00000214253	FIS1	fission 1 (mitocho 5UTR	0.007	YES	0.92	2.48	-	-	-	no
chr7	116501876	116503250	ENSG00000198898	CAPZA2	capping protein (5UTR	0.000	YES	1.21	4.75	-	-	-	no
chr7	133398251	133399625	ENSG00000131558	EXOC4	exocyst complex c intron	0.014	YES	0.57	2.48	-	-	-	no
chr7	142984626	142986250	ENSG00000106144	CASP2	caspase 2, apoptc 5UTR	0.000	YES	3.90	12.59	-	-	-	no
chr7	156432501	156434125	ENSG00000105982	RNF32	ring finger proteir 5UTR	0.000	YES	4.25	10.94	-	-	-	no
chr7	158648501	158650000	ENSG00000126870	WDR60	WD repeat domai 5UTR	0.000	YES	3.19	7.23	-	-	-	no
chrX	23361001	23362250	ENSG00000165186	PTCHD1	patched domain c intron	0.032	YES	1.42	2.48	-	-	-	no
chrX	24209751	24211000	ENSG00000005889	ZFX	zinc finger proteir intron	0.049	YES	0.50	2.06	-	-	-	no
chrX	47077501	47078875	ENSG00000102225	CDK16	cyclin-dependent 5UTR	0.000	YES	1.42	4.34	-	-	-	no
chrX	48455751	48457250	ENSG00000101940	WDR13	WD repeat domai 5UTR	0.000	YES	3.12	7.23	-	-	-	no
chrX	48534126	48535500	ENSG00000015285	WAS	Wiskott-Aldrich sy 5UTR	0.000	YES	1.42	3.92	-	-	-	no
chrX	49643126	49644500	ENSG00000234390	AF238380.5	exon	0.000	YES	1.84	4.54	-	-	-	no
chrX	63425626	63427000	ENSG00000184675	AMER1	APC membrane r 5UTR	0.000	YES	1.42	2.89	-	-	-	no
chrX	70287501	70289125	ENSG00000147164	SNX12	sorting nexin 12 [5UTR	0.000	YES	17.37	31.58	-	-	-	no
chrX	123695001	123696250	ENSG00000009694	TENM1	teneurin transme exon	0.002	YES	0.71	2.48	-	-	-	no
chrX	153626001	153627500	ENSG00000147403	RPL10	ribosomal proteir 5UTR	0.000	YES	4.82	6.40	-	-	-	no
chr8	23103251	23104750	ENSG00000147457	CHMP7	charged multivesi 5UTR	0.000	YES	2.62	6.61	-	-	-	no

chr8	109449876	109451125	ENSG00000104408	EIF3E	eukaryotic transla	upstre	0.046	YES	1.21	2.48	-	-	-	no
chr8	142010751	142012250	ENSG00000169398	PTK2	protein tyrosine k	exon	0.000	YES	3.12	8.67	-	-	-	no
chr8	145136751	145138125	ENSG00000197858	GPAA1	glycosylphosphati	5UTR	0.000	YES	1.91	4.75	-	-	-	no
chr8	146017126	146018500	ENSG00000161016	RPL8	ribosomal protein	5UTR	0.000	YES	3.69	6.61	-	-	-	no
chr9	36400501	36402000	ENSG00000137075	RNF38	ring finger protein	exon	0.000	YES	3.97	7.43	-	-	-	no
chr9	71394251	71395625	ENSG00000187866	FAM122A	family with seque	5UTR	0.001	YES	2.84	5.37	-	-	-	no
chr9	79791751	79793125	ENSG00000197969	VPS13A	vacuolar protein	5UTR	0.000	YES	3.19	8.67	-	-	-	no
chr9	116138501	116139875	ENSG00000119431	HDHD3	haloacid dehaloge	exon	0.000	YES	1.63	3.92	-	-	-	no
chr9	124921376	124922750	ENSG00000185681	MORN5	MORN repeat cor	5UTR	0.000	YES	2.48	6.61	-	-	-	no
chr9	130829126	130830375	ENSG00000171169	NAIF1	nuclear apoptosis	5UTR	0.000	YES	4.61	5.99	-	-	-	no
chr9	131485751	131487250	ENSG00000160446	ZDHHC12	zinc finger, DHHC	5UTR	0.000	YES	3.12	7.43	-	-	-	no
chr9	140082376	140083875	ENSG00000176101	SSNA1	Sjogren syndrome	5UTR	0.000	YES	3.33	5.16	-	-	-	no
chr9	140512626	140514000	ENSG00000181090	EHMT1	euchromatic histc	5UTR	0.000	YES	4.82	7.43	-	-	-	no
chr10	6130126	6131625	ENSG00000134453	RBM17	RNA binding moti	5UTR	0.000	YES	3.47	9.50	-	-	-	no
chr10	22907001	22908250	ENSG00000150867	PIP4K2A	phosphatidylinosi	intron	0.007	YES	1.49	2.68	-	-	-	no
chr10	89621501	89623000	ENSG00000171862	PTEN	phosphatase and	5UTR	0.000	YES	2.13	6.19	-	-	-	no
chr10	103577501	103578875	ENSG00000198408	MGEA5	meningioma expr	5UTR	0.000	YES	3.26	5.78	-	-	-	no
chr10	124713251	124714625	ENSG00000119965	C10orf88	chromosome 10 c	5UTR	0.000	YES	4.68	9.29	-	-	-	no
chr11	47663501	47665000	ENSG00000109919	MTCH2	mitochondrial car	5UTR	0.000	YES	3.19	9.08	-	-	-	no
chr11	62420126	62421500	ENSG00000185085	INTS5	integrator comple	5UTR	0.000	YES	2.48	5.37	-	-	-	no
chr11	63952501	63954250	ENSG00000168439	STIP1	stress-induced-ph	5UTR	0.000	YES	9.43	8.26	-	-	-	no
chr11	64072251	64073625	ENSG00000173153	ESRRA	estrogen-related	5UTR	0.000	YES	0.85	4.75	-	-	-	no
chr11	64645376	64646750	ENSG00000110047	EHD1	EH-domain conta	5UTR	0.000	YES	1.98	5.37	-	-	-	no
chr11	65100626	65102125	ENSG00000133884	DPF2	D4, zinc and doub	5UTR	0.000	YES	2.91	5.16	-	-	-	no
chr11	66055876	66057375	ENSG00000174851	YIF1A	Yip1 interacting f	5UTR	0.000	YES	4.04	5.57	-	-	-	no
chr11	66188501	66190000	ENSG00000174576	NPAS4	neuronal PAS don	5UTR	0.000	YES	6.24	6.19	-	-	-	no
chr11	67980626	67982250	ENSG00000110066	SUV420H1	suppressor of var	exon	0.000	YES	4.40	11.77	-	-	-	no
chr11	70048501	70050125	ENSG00000168040	FADD	Fas (TNFRSF6)-as	5UTR	0.000	YES	4.11	9.91	-	-	-	no
chr11	118306001	118307875	ENSG00000118058	MLL	myeloid/lymphoir	5UTR	0.000	YES	39.49	91.24	-	-	-	no
chr12	41901876	41903125	ENSG00000165966	PDZRN4	PDZ domain cont	intron	0.021	YES	0.78	2.27	-	-	-	no
chr12	49075376	49076750	ENSG00000139620	KANSL2	KAT8 regulatory	5UTR	0.000	YES	2.55	4.54	-	-	-	no

chr12	49961001	49962375	ENSG00000110844	PRPF40B	PRP40 pre-mRNA 5UTR	0.000	YES	7.02	9.70	-	-	-	no
chr12	56367001	56368500	ENSG00000111540	RAB5B	RAB5B, member F 5UTR	0.000	YES	5.95	8.46	-	-	-	no
chr12	57039376	57040750	ENSG00000110955	ATP5B	ATP synthase, H+ 5UTR	0.000	YES	3.83	4.95	-	-	-	no
chr12	62489376	62490625	ENSG00000198673	FAM19A2	family with seque intron	0.006	YES	1.06	2.48	-	-	-	no
chr12	64845251	64846625	ENSG00000183735	TBK1	TANK-binding kin: 5UTR	0.000	YES	4.11	7.64	-	-	-	no
chr12	69861376	69862750	ENSG00000166225	FRS2	fibroblast growth upstre	0.000	YES	2.06	4.13	-	-	-	no
chr12	82096876	82098125	ENSG00000139220	PPFIA2	protein tyrosine ζ intron	0.017	YES	0.92	3.10	-	-	-	no
chr12	109250876	109252250	ENSG00000084112	SSH1	slingshot protein 5UTR	0.001	YES	0.57	3.30	-	-	-	no
chr12	120638126	120639625	ENSG00000089157	RPLP0	ribosomal protein 5UTR	0.000	YES	4.32	5.37	-	-	-	no
chr12	125398501	125400000	ENSG00000150991	UBC	ubiquitin C [Sourc 5UTR	0.000	YES	5.46	7.84	-	-	-	no
chr12	132568126	132569625	ENSG00000185684	EP400NL	EP400 N-terminal 5UTR	0.000	YES	4.61	9.70	-	-	-	no
chr13	20595126	20596500	ENSG00000121741	ZMYM2	zinc finger, MYM- intron	0.015	YES	0.92	2.48	-	-	-	no
chr13	21347126	21348875	ENSG00000150456	N6AMT2	N-6 adenine-spec exon	0.000	YES	7.09	16.93	-	-	-	no
chr1	21765876	21767250	ENSG00000142794	NBPF3	neuroblastoma br 5UTR	0.000	YES	0.71	2.48	-	-	-	no
chr13	43987626	43988875	ENSG00000120658	ENOX1	ecto-NOX disulfid intron	0.023	YES	1.13	3.30	-	-	-	no
chr13	111364626	111366125	ENSG00000153487	ING1	inhibitor of growt 5UTR	0.000	YES	3.76	6.61	-	-	-	no
chr14	39643626	39645000	ENSG00000100941	PNN	pinin, desmosom: 5UTR	0.000	YES	3.33	4.54	-	-	-	no
chr14	51706251	51707750	ENSG00000139921	TMX1	thioredoxin-relate 5UTR	0.000	YES	3.19	6.81	-	-	-	no
chr14	67826376	67827750	ENSG00000100554	ATP6V1D	ATPase, H+ trans ζ 5UTR	0.000	YES	3.62	8.05	-	-	-	no
chr14	73392501	73393875	ENSG00000119599	DCAF4	DDB1 and CUL4 a 5UTR	0.000	YES	3.12	6.81	-	-	-	no
chr14	81686626	81688000	ENSG00000165417	GTF2A1	general transcript 5UTR	0.000	YES	2.91	6.40	-	-	-	no
chr14	81999501	82000875	ENSG00000071537	SEL1L	sel-1 suppressor ζ 5UTR	0.001	YES	2.06	4.34	-	-	-	no
chr14	89028626	89030000	ENSG00000100722	ZC3H14	zinc finger CCCH-t 5UTR	0.000	YES	2.20	4.13	-	-	-	no
chr14	90862626	90864125	ENSG00000198668	CALM1	calmodulin 1 (phc 5UTR	0.000	YES	3.97	8.26	-	-	-	no
chr14	96968001	96969375	ENSG00000090060	PAPOLA	poly(A) polymera: 5UTR	0.000	YES	3.54	6.40	-	-	-	no
chr15	41951876	41953250	ENSG00000174197	MGA	MGA, MAX dimer 5UTR	0.000	YES	1.63	5.37	-	-	-	no
chr15	51286126	51287375	ENSG00000081014	AP4E1	adaptor-related p intron	0.001	YES	1.98	3.92	-	-	-	no
chr15	53864376	53865625	ENSG00000166415	WDR72	WD repeat domai intron	0.007	YES	0.64	3.72	-	-	-	no
chr15	54331126	54332375	ENSG00000137766	UNC13C	unc-13 homolog ζ intron	0.048	YES	2.62	2.68	-	-	-	no
chr15	54555751	54557125	ENSG00000137766	UNC13C	unc-13 homolog ζ exon	0.013	YES	1.13	3.30	-	-	-	no
chr15	54821626	54822875	ENSG00000137766	UNC13C	unc-13 homolog ζ intron	0.037	YES	0.78	2.27	-	-	-	no

chr15	56210626	56211875	ENSG00000069869	NEDD4	neural precursor intron	0.017	YES	0.92	2.48	-	-	-	no
chr15	68936001	68937375	ENSG00000103647	CORO2B	coronin, actin bin intron	0.001	YES	0.92	3.10	-	-	-	no
chr15	72564376	72565875	ENSG00000137817	PARP6	poly (ADP-ribose) exon	0.000	YES	2.27	7.84	-	-	-	no
chr15	86867376	86868625	ENSG00000166748	AGBL1	ATP/GTP binding intron	0.032	YES	0.64	3.30	-	-	-	no
chr15	87325501	87326750	ENSG00000166748	AGBL1	ATP/GTP binding intron	0.008	YES	1.06	2.89	-	-	-	no
chr15	100077126	100078375	ENSG00000068305	MEF2A	myocyte enhance intron	0.001	YES	0.64	2.68	-	-	-	no
chr16	188001	189500	ENSG00000103148	NPRL3	nitrogen permeas 5UTR	0.000	YES	3.83	8.67	-	-	-	no
chr16	1727501	1728875	ENSG00000206053	HN1L	hematological an 5UTR	0.000	YES	3.76	5.78	-	-	-	no
chr16	2204626	2206000	ENSG00000131653	TRAF7	TNF receptor-assc 5UTR	0.000	YES	4.11	7.02	-	-	-	no
chr16	2254876	2256500	ENSG00000167965	MLST8	MTOR associated 5UTR	0.000	YES	11.27	22.71	-	-	-	no
chr16	2581376	2582750	ENSG00000205923	CEMP1	cementum protei 5UTR	0.000	YES	2.34	4.54	-	-	-	no
chr16	3073001	3075125	ENSG00000103145	HCFC1R1	host cell factor C15UTR	0.000	YES	5.95	14.86	-	-	-	no
chr16	3660501	3661750	ENSG00000213918	DNASE1	deoxyribonucleas 5UTR	0.015	YES	3.62	8.26	-	-	-	no
chr16	3660876	3662375	ENSG00000213918	DNASE1	deoxyribonucleas 5UTR	0.000	YES	4.47	9.50	-	-	-	no
chr16	4474751	4476625	ENSG00000103423	DNAJA3	DnaJ (Hsp40) hon 5UTR	0.000	YES	13.54	30.55	-	-	-	no
chr16	8714876	8716250	ENSG00000067365	METTL22	methyltransferas 5UTR	0.000	YES	2.76	6.19	-	-	-	no
chr16	9184626	9186250	ENSG00000182831	C16orf72	chromosome 16 c 5UTR	0.000	YES	2.55	8.67	-	-	-	no
chr16	11944751	11946125	ENSG00000171490	RSL1D1	ribosomal L1 dom 5UTR	0.000	YES	3.19	6.19	-	-	-	no
chr16	14164251	14165625	ENSG00000186260	MKL2	MKL/myocardin-li 5UTR	0.000	YES	1.35	5.57	-	-	-	no
chr16	15981751	15983125	ENSG00000133393	FOPNL	FGFR1OP N-termi 5UTR	0.000	YES	3.26	4.34	-	-	-	no
chr16	27214376	27216000	ENSG00000155666	KDM8	lysine (K)-specific 5UTR	0.000	YES	6.17	13.42	-	-	-	no
chr16	27560626	27562000	ENSG00000047578	KIAA0556	KIAA0556 [Source 5UTR	0.000	YES	2.41	5.37	-	-	-	no
chr16	28564876	28566250	ENSG00000176476	CCDC101	coiled-coil domai 5UTR	0.000	YES	1.91	4.95	-	-	-	no
chr16	28833501	28835000	ENSG00000168488	ATXN2L	ataxin 2-like [Sou 5UTR	0.001	YES	4.11	6.40	-	-	-	no
chr16	29936876	29938250	ENSG00000174943	KCTD13	potassium chann 5UTR	0.000	YES	4.40	7.23	-	-	-	no
chr16	30621001	30622375	ENSG00000156853	ZNF689	zinc finger proteir 5UTR	0.000	YES	2.27	4.95	-	-	-	no
chr16	31470626	31472000	ENSG00000140691	ARMC5	armadillo repeat 5UTR	0.000	YES	2.41	4.95	-	-	-	no
chr16	67062126	67063500	ENSG00000067955	CBFB	core-binding fact 5UTR	0.001	YES	1.42	4.54	-	-	-	no
chr16	67850001	67851375	ENSG00000102904	TSNAXIP1	translin-associate intron	0.000	YES	3.19	5.78	-	-	-	no
chr16	69788251	69789625	ENSG00000141101	NOB1	NIN1/RPN12 bind 5UTR	0.000	YES	2.69	5.37	-	-	-	no
chr16	75680876	75682375	ENSG00000166848	TERF2IP	telomeric repeat 5UTR	0.000	YES	3.33	8.46	-	-	-	no

chr1	24968876	24970375	ENSG00000133226	SRRM1	serine/arginine re5UTR	0.000	YES	3.76	7.64	-	-	-	no
chr16	86588126	86589625	ENSG00000103248	MTHFSD	methenyltetrahydc5UTR	0.000	YES	5.81	10.73	-	-	-	no
chr16	89574126	89575500	ENSG00000197912	SPG7	spastic paraplegia5UTR	0.000	YES	2.98	8.46	-	-	-	no
chr17	3571251	3572750	ENSG00000127774	EMC6	ER membrane prc5UTR	0.000	YES	3.76	8.26	-	-	-	no
chr17	7517626	7519250	ENSG00000129245	FXR2	fragile X mental r5UTR	0.002	YES	1.35	6.40	-	-	-	no
chr17	8102876	8104250	ENSG00000196544	C17orf59	chromosome 17 cupstre	0.000	YES	2.13	3.30	-	-	-	no
chr17	8338251	8339750	ENSG00000166579	NDEL1	nudE nuclear disti5UTR	0.000	YES	2.76	6.81	-	-	-	no
chr17	17739001	17740375	ENSG00000072310	SREBF1	sterol regulatory r5UTR	0.001	YES	1.49	4.95	-	-	-	no
chr17	18086376	18087750	ENSG00000091542	ALKBH5	alkB, alkylation re5UTR	0.003	YES	2.20	5.16	-	-	-	no
chr17	26367626	26369375	ENSG00000087095	NLK	nemo-like kinase 5UTR	0.000	YES	3.05	5.78	-	-	-	no
chr17	27169126	27170625	ENSG00000173065	FAM222B	family with seque exon	0.000	YES	4.61	12.59	-	-	-	no
chr17	27277751	27279500	ENSG00000109118	PHF12	PHD finger protei5UTR	0.000	YES	17.86	40.46	-	-	-	no
chr17	34135876	34137125	ENSG00000172660	TAF15	TAF15 RNA polym5UTR	0.002	YES	0.92	3.72	-	-	-	no
chr17	46178251	46179500	ENSG00000108468	CBX1	chromobox homc exon	0.003	YES	1.77	4.95	-	-	-	no
chr1	1259376	1260750	ENSG00000224051	GLTPD1	glycolipid transfer5UTR	0.008	YES	1.13	2.89	-	-	-	no
chr17	56084001	56085250	ENSG00000136450	SRSF1	serine/arginine-ri5UTR	0.002	YES	6.38	8.46	-	-	-	no
chr17	56594751	56596125	ENSG00000108389	MTMR4	myotubularin rel exon	0.013	YES	5.10	9.70	-	-	-	no
chr17	57155376	57156625	ENSG00000108395	TRIM37	tripartite motif cc intron	0.039	YES	9.15	8.46	-	-	-	no
chr17	57183626	57185000	ENSG00000108395	TRIM37	tripartite motif cc5UTR	0.000	YES	33.74	58.21	-	-	-	no
chr17	57696626	57697875	ENSG00000141367	CLTC	clathrin, heavy ch5UTR	0.001	YES	8.29	12.59	-	-	-	no
chr17	57758626	57759875	ENSG00000141367	CLTC	clathrin, heavy ch exon	0.000	YES	1.13	4.54	-	-	-	no
chr17	57969251	57971375	ENSG00000108443	RPS6KB1	ribosomal proteir5UTR	0.000	YES	59.90	####	-	-	-	no
chr17	58554126	58555375	ENSG00000062725	APPBP2	amyloid beta prec exon	0.027	YES	6.45	7.64	-	-	-	no
chr17	58676876	58678250	ENSG00000170836	PPM1D	protein phosphat5UTR	0.000	YES	26.87	46.03	-	-	-	no
chr1	25573251	25574750	ENSG00000117616	C1orf63	chromosome 1 of5UTR	0.000	YES	5.10	9.08	-	-	-	no
chr17	59949626	59951000	ENSG00000108506	INTS2	integrator comple exon	0.003	YES	15.74	17.55	-	-	-	no
chr17	60004751	60006000	ENSG00000108506	INTS2	integrator comple5UTR	0.006	YES	5.81	8.05	-	-	-	no
chr17	60080626	60082000	ENSG00000108510	MED13	mediator comple intron	0.001	YES	12.83	12.59	-	-	-	no
chr17	66243376	66244875	ENSG00000196704	AMZ2	archaelysin family5UTR	0.000	YES	5.60	11.56	-	-	-	no
chr17	73775126	73776375	ENSG00000132475	H3F3B	H3 histone, famil5UTR	0.002	YES	4.54	5.57	-	-	-	no
chr17	75276751	75278125	ENSG00000184640	SEPT9	septin 9 [Source:5UTR	0.000	YES	4.61	6.81	-	-	-	no

chr17	79030251	79031625	ENSG00000175866	BAIAP2	BAI1-associated p5UTR	0.005	YES	2.76	3.30	-	-	-	no
chr17	79828626	79830000	ENSG00000141522	ARHGDI1	Rho GDP dissociation	0.002	YES	2.20	4.95	-	-	-	no
chr17	79848876	79850125	ENSG00000141552	ANAPC11	anaphase promoting 5UTR	0.043	YES	1.63	4.13	-	-	-	no
chr18	10525126	10526625	ENSG00000134265	NAPG	N-ethylmaleimide 5UTR	0.000	YES	3.54	5.78	-	-	-	no
chr20	3184251	3185875	ENSG00000198171	DDRKG1	DDRKG domain c 5UTR	0.000	YES	3.97	7.84	-	-	-	no
chr20	3826751	3828125	ENSG00000088888	MAVS	mitochondrial anti 5UTR	0.000	YES	1.35	5.16	-	-	-	no
chr1	28099001	28100375	ENSG00000117758	STX12	syntaxin 12 [Source 5UTR	0.001	YES	1.70	3.92	-	-	-	no
chr1	28969001	28970250	ENSG00000120656	TAF12	TAF12 RNA polymerase exon	0.001	YES	1.42	3.92	-	-	-	no
chr1	114968001	114969375	ENSG00000197323	TRIM33	tripartite motif c exon	0.000	YES	6.03	9.08	-	-	-	no
chr1	32478376	32480375	ENSG00000121774	KHDRBS1	KH domain containing 5UTR	0.000	YES	8.44	22.71	-	-	-	no
chr20	13055626	13057125	ENSG00000172296	SPTLC3	serine palmitoyltransferase intron	0.001	YES	1.06	2.48	-	-	-	no
chr20	14050626	14052125	ENSG00000172264	MACROD2	MACRO domain containing intron	0.001	YES	1.06	2.48	-	-	-	no
chr1	151253876	151255375	ENSG00000143373	ZNF687	zinc finger protein 687 5UTR	0.000	YES	9.36	14.24	-	-	-	no
chr1	35733501	35735000	ENSG00000146463	ZMYM4	zinc finger, MYM- 5UTR	0.000	YES	3.69	8.26	-	-	-	no
chr1	155657876	155659250	ENSG00000132676	DAP3	death associated protein 3 5UTR	0.000	YES	1.42	3.92	-	-	-	no
chr20	25603876	25605375	ENSG00000170191	NANP	N-acetylneuraminidase 5UTR	0.000	YES	3.05	7.23	-	-	-	no
chr20	30539126	30540625	ENSG00000088356	PDRG1	p53 and DNA-damage 5UTR	0.000	YES	4.96	11.35	-	-	-	no
chr1	167189126	167190625	ENSG00000143190	POU2F1	POU class 2 homeobox 1 5UTR	0.000	YES	7.80	13.62	-	-	-	no
chr20	34041876	34043375	ENSG00000126001	CEP250	centrosomal protein 250 5UTR	0.000	YES	2.27	5.37	-	-	-	no
chr20	37100751	37102125	ENSG00000170471	RALGAPB	Ral GTPase activating protein 5UTR	0.003	YES	2.76	4.54	-	-	-	no
chr1	176176001	176177500	ENSG00000143207	RFWD2	ring finger and WD domain 5UTR	0.000	YES	3.40	7.23	-	-	-	no
chr20	39656751	39658125	ENSG00000198900	TOP1	topoisomerase (DNA) 5UTR	0.003	YES	8.65	14.86	-	-	-	no
chr1	42921501	42922875	ENSG00000127125	PPCS	phosphopantothine synthase 5UTR	0.000	YES	3.05	5.99	-	-	-	no
chr20	44485376	44486750	ENSG00000101473	ACOT8	acyl-CoA thioesterase 8 5UTR	0.000	YES	3.62	6.81	-	-	-	no
chr20	44562501	44564625	ENSG00000100982	PCIF1	PDX1 C-terminal interacting 5UTR	0.000	YES	11.63	20.02	-	-	-	no
chr1	201404251	201405625	ENSG00000159173	TNNI1	troponin I type 1 (muscle) upstream 5UTR	0.005	YES	2.41	3.92	-	-	-	no
chr1	202857501	202859125	ENSG00000183155	RABIF	RAB interacting factor 5UTR	0.000	YES	6.24	15.28	-	-	-	no
chr20	47565751	47567250	ENSG00000124198	ARFGEF2	ADP-ribosylation factor 2 intron	0.000	YES	1.77	4.95	-	-	-	no
chr1	45139376	45140750	ENSG00000198520	C1orf228	chromosome 1 open reading frame 228 5UTR	0.000	YES	1.63	3.92	-	-	-	no
chr1	216296751	216298000	ENSG00000042781	USH2A	Usher syndrome type 2 intron	0.012	YES	1.91	2.68	-	-	-	no
chr1	231472876	231474375	ENSG00000116903	EXOC8	exocyst complex component 8 5UTR	0.000	YES	10.14	18.58	-	-	-	no

chr1	45986876	45988250	ENSG00000117450	PRDX1	peroxiredoxin 1 [5' exon	0.000	YES	2.34	4.95	-	-	-	no
chr1	246169751	246171000	ENSG00000185420	SMYD3	SET and MYND domain intron	0.049	YES	0.50	1.65	-	-	-	no
chr2	264126	265625	ENSG00000143727	ACP1	acid phosphatase 5UTR	0.000	YES	4.68	11.97	-	-	-	no
chr2	20550001	20551500	ENSG00000055917	PUM2	pumilio homolog exon	0.000	YES	3.76	10.32	-	-	-	no
chr2	26100751	26102250	ENSG00000143970	ASXL2	additional sex combs 5UTR	0.000	YES	1.77	5.99	-	-	-	no
chr2	26256251	26257625	ENSG00000084733	RAB10	RAB10, member F 5UTR	0.000	YES	2.62	4.95	-	-	-	no
chr1	46768376	46769625	ENSG00000173660	UQCRH	ubiquinol-cytochrome c 5UTR	0.001	YES	0.78	3.72	-	-	-	no
chr2	26568001	26569625	ENSG00000173567	GPR113	G protein-coupled receptor 5UTR	0.000	YES	6.03	12.39	-	-	-	no
chr2	28973751	28975375	ENSG00000213639	PPP1CB	protein phosphatase 5UTR	0.000	YES	3.33	11.15	-	-	-	no
chr2	29116751	29118125	ENSG00000163811	WDR43	WD repeat domain 5UTR	0.000	YES	1.91	3.72	-	-	-	no
chr2	32287876	32289250	ENSG00000021574	SPAST	spastin [Source:HGSC] 5UTR	0.000	YES	1.70	5.57	-	-	-	no
chr2	70475126	70476500	ENSG00000116001	TIA1	TIA1 cytotoxic granule 5UTR	0.000	YES	2.62	5.37	-	-	-	no
chr20	57555376	57557000	ENSG00000101158	NELFCD	negative elongation factor 5UTR	0.000	YES	2.69	6.61	-	-	-	no
chr2	98261626	98263125	ENSG00000135940	COX5B	cytochrome c oxidase 5UTR	0.000	YES	2.76	4.13	-	-	-	no
chr20	60640376	60641875	ENSG00000130699	TAF4	TAF4 RNA polymerase II exon	0.000	YES	2.48	6.81	-	-	-	no
chr20	60641126	60642500	ENSG00000130699	TAF4	TAF4 RNA polymerase II promoter	0.017	YES	2.76	7.02	-	-	-	no
chr2	128458376	128459750	ENSG00000173349	SFT2D3	SFT2 domain containing 5UTR	0.000	YES	3.62	4.75	-	-	-	no
chr19	1204876	1206375	ENSG00000118046	STK11	serine/threonine kinase 5UTR	0.000	YES	1.42	4.54	-	-	-	no
chr19	1406626	1408000	ENSG00000071626	DAZAP1	DAZ associated protein 5UTR	0.002	YES	0.64	2.89	-	-	-	no
chr19	2327876	2329375	ENSG00000130332	LSM7	LSM7 homolog, U5 snRNP 5UTR	0.000	YES	2.62	8.46	-	-	-	no
chr19	4342126	4343625	ENSG00000008382	MPND	MPN domain containing 5UTR	0.000	YES	3.69	6.81	-	-	-	no
chr19	4342876	4344125	ENSG00000008382	MPND	MPN domain containing 5UTR	0.020	YES	3.05	5.99	-	-	-	no
chr19	5689376	5691000	ENSG00000130255	RPL36	ribosomal protein L36 5UTR	0.000	YES	2.20	7.02	-	-	-	no
chr19	5719876	5721375	ENSG00000174898	CATSPERD	catsper channel alpha 5UTR	0.000	YES	3.40	5.37	-	-	-	no
chr19	5977376	5979125	ENSG00000031823	RANBP3	RAN binding protein 5UTR	0.000	YES	5.32	10.53	-	-	-	no
chr19	6198751	6200500	ENSG00000087903	RFX2	regulatory factor X2 exon	0.000	YES	12.05	31.58	-	-	-	no
chr19	6372001	6373375	ENSG00000125652	ALKBH7	alkB, alkylation repair 5UTR	0.005	YES	1.77	3.30	-	-	-	no
chr19	11669376	11670875	ENSG00000198551	ZNF627	zinc finger protein 627 5UTR	0.000	YES	1.98	7.43	-	-	-	no
chr19	13055876	13057375	ENSG00000179262	RAD23A	RAD23 homolog A 5UTR	0.000	YES	2.41	5.16	-	-	-	no
chr19	18058126	18059500	ENSG00000105642	CTB-52I2.8	upstream open reading frame	0.004	YES	3.40	3.51	-	-	-	no
chr19	18303126	18304375	ENSG00000254858	MPV17L2	MPV17 mitochondrial 5UTR	0.000	YES	1.91	3.10	-	-	-	no

chr19	19143626	19145250	ENSG00000105676	ARMC6	armadillo repeat (5UTR	0.000	YES	5.10	9.50	-	-	-	no
chr2	169548501	169549750	ENSG00000172292	CERS6	ceramide synthas intron	0.035	YES	0.99	4.13	-	-	-	no
chr19	35614751	35616250	ENSG00000153902	LGI4	leucine-rich repeat 3UTR	0.000	YES	3.69	8.88	-	-	-	no
chr19	39339376	39341375	ENSG00000104824	HNRNPL	heterogeneous nt 5UTR	0.000	YES	7.80	16.51	-	-	-	no
chr19	39340501	39341875	ENSG00000104824	HNRNPL	heterogeneous nt 5UTR	0.000	YES	5.88	8.46	-	-	-	no
chr19	40022751	40024250	ENSG00000176401	EID2B	EP300 interacting 5UTR	0.000	YES	3.90	8.67	-	-	-	no
chr19	40931126	40932625	ENSG00000197019	SERTAD1	SERTA domain co 5UTR	0.000	YES	2.20	4.75	-	-	-	no
chr19	41769501	41770875	ENSG00000105323	HNRNPUL	heterogeneous nt 5UTR	0.000	YES	4.18	5.57	-	-	-	no
chr19	45873251	45874625	ENSG00000104884	ERCC2	excision repair cr 5UTR	0.000	YES	1.56	2.68	-	-	-	no
chr19	46087001	46088625	ENSG00000125741	OPA3	optic atrophy 3 (a 5UTR	0.000	YES	4.04	6.40	-	-	-	no
chr19	46405251	46406875	ENSG00000176182	MYPOP	Myb-related tran:exon	0.000	YES	4.89	11.97	-	-	-	no
chr19	47363001	47364500	ENSG00000042753	AP2S1	adaptor-related pupstre 5UTR	0.000	YES	2.41	6.19	-	-	-	no
chr19	49217001	49218500	ENSG00000176909	MAMSTR	MEF2 activating nexon	0.000	YES	2.34	4.54	-	-	-	no
chr19	50179376	50181000	ENSG00000126457	PRMT1	protein arginine r 5UTR	0.000	YES	2.62	5.78	-	-	-	no
chr19	50886751	50888250	ENSG00000062822	POLD1	polymerase (DNA 5UTR	0.000	YES	1.63	3.72	-	-	-	no
chr19	54640251	54641625	ENSG00000088038	CNOT3	CCR4-NOT transcr 5UTR	0.000	YES	3.33	5.57	-	-	-	no
chr19	54662876	54664500	ENSG00000105617	LENG1	leukocyte receptc 5UTR	0.000	YES	2.27	5.78	-	-	-	no
chr19	55769626	55771375	ENSG00000105063	PPP6R1	protein phosphat exon	0.000	YES	4.54	11.97	-	-	-	no
chr22	21270876	21272375	ENSG00000099942	CRKL	v-crk sarcoma viri 5UTR	0.000	YES	1.42	5.99	-	-	-	no
chr22	21355376	21357125	ENSG00000184436	THAP7	THAP domain con 5UTR	0.000	YES	2.20	6.61	-	-	-	no
chr22	24199251	24200750	ENSG00000133460	SLC2A11	solute carrier fam 5UTR	0.000	YES	4.40	9.08	-	-	-	no
chr22	28314501	28316125	ENSG00000180957	PITPNB	phosphatidylinosi 5UTR	0.000	YES	5.60	12.39	-	-	-	no
chr22	37171501	37172875	ENSG00000100360	IFT27	intraflagellar tran 5UTR	0.000	YES	2.13	3.51	-	-	-	no
chr22	39915876	39917125	ENSG00000128272	ATF4	activating transcri 5UTR	0.000	YES	1.63	4.54	-	-	-	no
chr22	41696876	41698125	ENSG00000100403	ZC3H7B	zinc finger CCCH-t 5UTR	0.003	YES	0.92	2.27	-	-	-	no
chr22	41842126	41843625	ENSG00000183864	TOB2	transducer of ERB exon	0.000	YES	2.84	6.40	-	-	-	no
chr2	216973251	216974750	ENSG00000079246	XRCC5	X-ray repair comp 5UTR	0.000	YES	8.22	17.34	-	-	-	no
chr21	30256876	30258500	ENSG00000156239	N6AMT1	N-6 adenine-spec 5UTR	0.000	YES	11.56	25.60	-	-	-	no
chr2	216978876	216980250	ENSG00000079246	XRCC5	X-ray repair comp intron	0.000	YES	3.26	4.54	-	-	-	no
chr21	35747001	35748500	ENSG00000205670	SMIM11	small integral mei 5UTR	0.000	YES	6.66	15.28	-	-	-	no
chr21	40720501	40721875	ENSG00000205581	HMG1	high mobility gro 5UTR	0.000	YES	2.34	5.99	-	-	-	no

chr21	44298626	44299875	ENSG00000160193	WDR4	WD repeat domain	5UTR	0.027	YES	8.86	12.80	-	-	-	no
chr21	44299001	44300500	ENSG00000160193	WDR4	WD repeat domain	5UTR	0.000	YES	8.79	12.59	-	-	-	no
chr21	45552751	45554250	ENSG00000160221	C21orf33	chromosome 21 centromere	5UTR	0.000	YES	6.17	11.35	-	-	-	no
chr2	224773251	224774625	ENSG00000085449	WDFY1	WD repeat and FY intron	5UTR	0.000	YES	2.91	5.16	-	-	-	no
chr2	233414626	233416000	ENSG00000221944	TIGD1	tigger transposon	5UTR	0.000	YES	1.91	3.92	-	-	-	no
chr2	242254501	242255875	ENSG00000168385	SEPT2	septin 2 [Source:HGSC	5UTR	0.000	YES	3.47	7.84	-	-	-	no
chr1	108677751	108679000	ENSG00000085491	SLC25A24	solute carrier family 24	3UTR	0.007	NO	1.98	3.92	-	-	-	no
chr1	114305751	114307125	ENSG00000081019	RSBN1	round spermatid protein	3UTR	0.006	NO	3.54	5.99	-	-	-	no
chr1	114436501	114437875	ENSG00000134262	AP4B1	adaptor-related protein	3UTR	0.009	NO	4.25	6.40	-	-	-	no
chr1	114437251	114438500	ENSG00000134262	AP4B1	adaptor-related protein	3UTR	0.043	NO	5.18	6.61	-	-	-	no
chr1	114935376	114936625	ENSG00000197323	TRIM33	tripartite motif class	3UTR	0.042	NO	3.47	6.40	-	-	-	no
chr1	114938876	114940125	ENSG00000197323	TRIM33	tripartite motif class	3UTR	0.040	NO	5.81	4.13	-	-	-	no
chr1	118419126	118420500	ENSG00000196505	GDAP2	ganglioside inducible	3UTR	0.004	NO	1.63	3.72	-	-	-	no
chr1	145012751	145014000	ENSG00000178104	PDE4DIP	phosphodiesterase	3UTR	0.008	NO	4.18	4.95	-	-	-	no
chr1	150669126	150670625	ENSG00000143452	HORMAD1	HORMA domain	3UTR	0.000	NO	3.12	4.95	-	-	-	no
chr10	75571126	75572375	ENSG00000148660	CAMK2G	calcium/calmodulin	3UTR	0.001	NO	0.99	3.30	-	-	-	no
chr11	61730251	61731500	ENSG00000167995	BEST1	bestrophin 1 [Source:HGSC	3UTR	0.046	NO	2.41	4.34	-	-	-	no
chr11	120200501	120201750	ENSG00000181264	TMEM136	transmembrane protein	3UTR	0.017	NO	0.64	3.10	-	-	-	no
chr16	3077626	3078875	ENSG00000131652	THOC6	THO complex 6 homolog	3UTR	0.014	NO	2.55	4.54	-	-	-	no
chr16	72046751	72048125	ENSG00000102967	DHODH	dihydroorotate dehydrogenase	3UTR	0.027	NO	1.70	3.10	-	-	-	no
chr16	89761751	89763000	ENSG00000185324	CDK10	cyclin-dependent kinase	3UTR	0.004	NO	2.34	3.51	-	-	-	no
chr17	57060126	57061375	ENSG00000108395	TRIM37	tripartite motif class	3UTR	0.001	NO	10.07	12.80	-	-	-	no
chr19	19647626	19648875	ENSG00000250067	YJEFN3	YjeF N-terminal domain	3UTR	0.010	NO	0.50	2.27	-	-	-	no
chr19	39125376	39126625	ENSG00000178982	EIF3K	eukaryotic translation	3UTR	0.039	NO	0.85	2.06	-	-	-	no
chr19	49653001	49654375	ENSG00000177380	PPFIA3	protein tyrosine phosphatase	3UTR	0.001	NO	1.21	3.30	-	-	-	no
chr19	51227626	51229000	ENSG00000105472	CLEC11A	C-type lectin domain	3UTR	0.026	NO	1.42	2.48	-	-	-	no
chr19	52448626	52449875	ENSG00000176024	ZNF613	zinc finger protein	3UTR	0.041	NO	0.71	1.86	-	-	-	no
chr20	46284251	46285625	ENSG00000124151	NCOA3	nuclear receptor corepressor	3UTR	0.000	NO	11.63	13.01	-	-	-	no
chr20	46284876	46286125	ENSG00000124151	NCOA3	nuclear receptor corepressor	3UTR	0.047	NO	11.20	9.91	-	-	-	no
chr20	53266876	53268125	ENSG00000101134	DOK5	docking protein 5	3UTR	0.017	NO	11.77	12.39	-	-	-	no
chr20	25056751	25058125	ENSG00000100987	VSX1	visual system homeobox	3UTR	0.000	NO	1.84	2.68	-	-	-	no

chr20	34292126	34293500	ENSG00000131051	RBM39	RNA binding moti	3UTR	0.035	NO	0.64	1.65	-	-	-	no
chr20	40125001	40126375	ENSG00000124177	CHD6	chromodomain h	3UTR	0.010	NO	2.91	3.30	-	-	-	no
chr3	7731876	7733125	ENSG00000196277	GRM7	glutamate recepti	3UTR	0.024	NO	0.99	3.10	-	-	-	no
chr3	63541001	63542250	ENSG00000163630	SYNPR	synaptoporin [So	3UTR	0.014	NO	3.90	5.16	-	-	-	no
chr3	63984751	63986000	ENSG00000163635	ATXN7	ataxin 7 [Source:f	3UTR	0.039	NO	10.14	13.21	-	-	-	no
chr3	63985501	63987000	ENSG00000163635	ATXN7	ataxin 7 [Source:f	3UTR	0.002	NO	12.26	14.66	-	-	-	no
chr3	63986501	63987750	ENSG00000163635	ATXN7	ataxin 7 [Source:f	3UTR	0.001	NO	9.43	10.94	-	-	-	no
chr3	63983501	63985250	ENSG00000163635	ATXN7	ataxin 7 [Source:f	3UTR	0.002	NO	16.45	18.17	-	-	-	no
chr3	122126126	122127375	ENSG00000114023	FAM162A	family with seque	3UTR	0.019	NO	0.99	2.89	-	-	-	no
chr3	14154501	14155750	ENSG00000163528	CHCHD4	coiled-coil-helix-c	3UTR	0.030	NO	0.92	2.06	-	-	-	no
chr6	26054876	26056125	ENSG00000187837	HIST1H1C	histone cluster 1,	3UTR	0.001	NO	4.75	2.48	-	-	-	no
chr1	8021126	8022375	ENSG00000116288	PARK7	parkinson protein	5UTR	0.006	NO	3.05	3.92	-	-	-	no
chr1	10458376	10459750	ENSG00000142657	PGD	phosphogluconat	5UTR	0.005	NO	0.85	3.30	-	-	-	no
chr1	24104251	24105500	ENSG00000057757	PITHD1	PITH (C-terminal	5UTR	0.000	NO	2.27	4.34	-	-	-	no
chr1	32670626	32671875	ENSG00000160051	IQCC	IQ motif containir	5UTR	0.031	NO	2.91	3.51	-	-	-	no
chr1	33219001	33220250	ENSG00000162522	KIAA1522	KIAA1522 [Source	5UTR	0.005	NO	0.99	2.68	-	-	-	no
chr1	41157126	41158375	ENSG00000066136	NFYC	nuclear transcript	5UTR	0.039	NO	2.13	2.06	-	-	-	no
chr1	110026001	110027250	ENSG00000162650	ATXN7L2	ataxin 7-like 2 [So	5UTR	0.039	NO	3.12	3.72	-	-	-	no
chr1	150459126	150460500	ENSG00000143374	TARS2	threonyl-tRNA syr	5UTR	0.016	NO	2.98	4.95	-	-	-	no
chr1	153606126	153607500	ENSG00000160679	CHTOP	chromatin target	5UTR	0.019	NO	3.26	4.54	-	-	-	no
chr1	153699626	153701000	ENSG00000143624	INTS3	integrator comple	5UTR	0.014	NO	2.06	4.95	-	-	-	no
chr1	155145126	155146500	ENSG00000163462	TRIM46	tripartite motif cc	5UTR	0.004	NO	1.98	4.13	-	-	-	no
chr1	156084001	156085250	ENSG00000160789	LMNA	lamin A/C [Source	5UTR	0.029	NO	2.13	3.51	-	-	-	no
chr1	156182126	156183375	ENSG00000160783	PMF1	polyamine-modul	5UTR	0.002	NO	2.41	3.72	-	-	-	no
chr1	160783751	160785125	ENSG00000122224	LY9	lymphocyte antig	5UTR	0.012	NO	1.28	2.27	-	-	-	no
chr1	172501001	172502250	ENSG00000094975	SUCO	SUN domain cont	5UTR	0.016	NO	2.76	4.54	-	-	-	no
chr1	179851001	179852375	ENSG00000143337	TOR1AIP1	torsin A interactir	5UTR	0.009	NO	3.97	3.72	-	-	-	no
chr1	200707376	200708750	ENSG00000118200	CAMSAP2	calmodulin regula	5UTR	0.002	NO	1.63	4.34	-	-	-	no
chr1	219346501	219347875	ENSG00000143353	LYPLAL1	lysophospholipas	5UTR	0.000	NO	2.62	5.57	-	-	-	no
chr1	227127126	227128375	ENSG00000163050	ADCK3	aarF domain cont	5UTR	0.041	NO	2.41	3.10	-	-	-	no
chr1	2322376	2323750	ENSG00000116151	MORN1	MORN repeat cor	5UTR	0.004	NO	0.92	3.92	-	-	-	no

chr1	6295376	6296625	ENSG00000116237	ICMT	isoprenylcysteine 5UTR	0.043	NO	0.50	2.89	-	-	-	no
chr1	6662251	6663500	ENSG00000162413	KLHL21	kelch-like family r 5UTR	0.037	NO	0.92	1.65	-	-	-	no
chr1	16563001	16564375	ENSG00000132881	RSG1	REM2 and RAB-lik 5UTR	0.001	NO	1.56	3.10	-	-	-	no
chr1	20987501	20988750	ENSG00000244038	DDOST	dolichyl-diphosph 5UTR	0.017	NO	1.84	2.48	-	-	-	no
chr1	31537876	31539250	ENSG00000134644	PUM1	pumilio homolog 5UTR	0.000	NO	1.49	4.13	-	-	-	no
chr1	109968376	109969750	ENSG00000143106	PSMA5	proteasome (pros 5UTR	0.003	NO	3.12	4.13	-	-	-	no
chr1	114429876	114431125	ENSG00000188761	BCL2L15	BCL2-like 15 [Soui 5UTR	0.030	NO	4.96	5.16	-	-	-	no
chr1	115053126	115054625	ENSG00000197323	TRIM33	tripartite motif cc 5UTR	0.000	NO	8.79	15.28	-	-	-	no
chr1	115299876	115301375	ENSG00000009307	CSDE1	cold shock domain 5UTR	0.000	NO	11.48	16.72	-	-	-	no
chr1	115282376	115283625	ENSG00000009307	CSDE1	cold shock domain 5UTR	0.033	NO	4.96	5.57	-	-	-	no
chr1	205179876	205181250	ENSG00000133059	DSTYK	dual serine/threo 5UTR	0.005	NO	2.84	4.54	-	-	-	no
chr1	246728876	246730125	ENSG00000162851	TFB2M	transcription fact 5UTR	0.028	NO	1.35	2.89	-	-	-	no
chr10	1033626	1034875	ENSG00000107937	GTPBP4	GTP binding prote 5UTR	0.000	NO	2.91	4.54	-	-	-	no
chr10	5726001	5727375	ENSG00000108021	FAM208B	family with seque 5UTR	0.000	NO	2.69	5.37	-	-	-	no
chr10	5931376	5932875	ENSG00000134452	FBXO18	F-box protein, hel 5UTR	0.000	NO	3.12	6.19	-	-	-	no
chr10	76585626	76586875	ENSG00000156650	KAT6B	K(lysine) acetyltra 5UTR	0.001	NO	2.84	3.51	-	-	-	no
chr10	93557501	93558750	ENSG00000107854	TNKS2	tankyrase, TRF1-i 5UTR	0.000	NO	2.48	3.92	-	-	-	no
chr10	96161626	96162875	ENSG00000108239	TBC1D12	TBC1 domain fam 5UTR	0.001	NO	0.64	3.30	-	-	-	no
chr10	127511001	127512250	ENSG00000107949	BCCIP	BRCA2 and CDKN: 5UTR	0.008	NO	3.05	5.37	-	-	-	no
chr10	127511376	127512750	ENSG00000107949	BCCIP	BRCA2 and CDKN: 5UTR	0.001	NO	3.54	5.99	-	-	-	no
chr10	94333126	94334750	ENSG00000119912	IDE	insulin-degrading 5UTR	0.008	NO	2.55	4.54	-	-	-	no
chr11	18343501	18344875	ENSG00000110768	GTF2H1	general transcript 5UTR	0.004	NO	2.20	3.92	-	-	-	no
chr11	18417126	18418375	ENSG00000134333	LDHA	lactate dehydroge 5UTR	0.005	NO	1.77	2.89	-	-	-	no
chr11	46638126	46639375	ENSG00000175224	ATG13	autophagy relate 5UTR	0.035	NO	2.41	4.13	-	-	-	no
chr11	58345876	58347125	ENSG00000255073	ZFP91-CN	ZFP91-CNTF read 5UTR	0.025	NO	1.35	4.13	-	-	-	no
chr11	61256126	61257500	ENSG00000162148	PPP1R32	protein phosphat 5UTR	0.000	NO	1.84	5.16	-	-	-	no
chr11	65382376	65383875	ENSG00000197136	PCNXL3	pecanex-like 3 (Di 5UTR	0.000	NO	3.69	6.40	-	-	-	no
chr11	70116126	70117375	ENSG00000131626	PPFIA1	protein tyrosine p 5UTR	0.001	NO	2.20	3.30	-	-	-	no
chr11	75109876	75111250	ENSG00000149273	RPS3	ribosomal proteir 5UTR	0.002	NO	1.63	3.10	-	-	-	no
chr11	47788501	47789750	ENSG00000109920	FNBP4	formin binding pr 5UTR	0.003	NO	2.20	3.92	-	-	-	no
chr11	59383126	59384375	ENSG00000110048	OSBP	oxysterol binding 5UTR	0.018	NO	2.48	4.34	-	-	-	no

chr11	59382751	59384000	ENSG00000110048	OSBP	oxysterol binding 5UTR	0.004	NO	2.55	4.13	-	-	-	no
chr11	62432001	62433500	ENSG00000162194	C11orf48	chromosome 11 c 5UTR	0.000	NO	3.83	4.54	-	-	-	no
chr11	64084376	64085625	ENSG00000173113	TRMT112	tRNA methyltrans 5UTR	0.012	NO	2.91	4.54	-	-	-	no
chr11	65429751	65431000	ENSG00000173039	RELA	v-rel reticuloendc 5UTR	0.004	NO	1.42	3.72	-	-	-	no
chr11	71813501	71814875	ENSG00000149357	LAMTOR1	late endosomal/l 5UTR	0.019	NO	1.56	3.30	-	-	-	no
chr11	77850001	77851375	ENSG00000159063	ALG8	ALG8, alpha-1,3-g 5UTR	0.000	NO	2.34	2.89	-	-	-	no
chr12	53845876	53847125	ENSG00000197111	PCBP2	poly(rC) binding p 5UTR	0.004	NO	2.13	4.34	-	-	-	no
chr12	54718126	54719500	ENSG00000111481	COPZ1	coatomer protein 5UTR	0.000	NO	3.12	4.34	-	-	-	no
chr3	40498251	40499500	ENSG00000188846	RPL14	ribosomal proteir 5UTR	0.002	NO	2.69	3.72	-	-	-	no
chr12	108078876	108080250	ENSG00000136045	PWP1	PWP1 homolog (S 5UTR	0.000	NO	2.69	4.34	-	-	-	no
chr12	124196251	124197500	ENSG00000185344	ATP6VOA2	ATPase, H+ trans 5UTR	0.014	NO	1.42	2.89	-	-	-	no
chr12	6579126	6580375	ENSG00000139190	VAMP1	vesicle-associatec 5UTR	0.045	NO	1.70	3.51	-	-	-	no
chr12	49524001	49525250	ENSG00000123416	TUBA1B	tubulin, alpha 1b 5UTR	0.003	NO	4.18	3.72	-	-	-	no
chr12	117627626	117628875	ENSG00000135108	FBXO21	F-box protein 21 5UTR	0.037	NO	1.84	2.27	-	-	-	no
chr13	20532251	20533500	ENSG00000121741	ZMYM2	zinc finger, MYM- 5UTR	0.000	NO	2.84	5.16	-	-	-	no
chr13	20356501	20357875	ENSG00000121390	PSPC1	paraspeckle com 5UTR	0.013	NO	2.84	2.89	-	-	-	no
chr13	39611501	39612875	ENSG00000120685	PROSER1	proline and serine 5UTR	0.000	NO	3.54	5.16	-	-	-	no
chr13	52026501	52027750	ENSG00000102786	INTS6	integrator comple 5UTR	0.001	NO	2.84	4.13	-	-	-	no
chr14	38063876	38065625	ENSG00000139865	TTC6	tetratricopeptide 5UTR	0.000	NO	5.88	14.66	-	-	-	no
chr14	76126751	76128000	ENSG00000119685	TTLL5	tubulin tyrosine li 5UTR	0.023	NO	2.69	3.72	-	-	-	no
chr14	78226751	78228125	ENSG00000197734	C14orf178	chromosome 14 c 5UTR	0.005	NO	1.98	4.75	-	-	-	no
chr14	94492001	94493250	ENSG00000089723	OTUB2	OTU domain, ubic 5UTR	0.012	NO	1.63	3.30	-	-	-	no
chr14	99947126	99948375	ENSG00000090061	CCNK	cyclin K [Source:H 5UTR	0.028	NO	2.27	3.10	-	-	-	no
chr14	78082626	78084000	ENSG00000100596	SPTLC2	serine palmitoyltr 5UTR	0.011	NO	2.06	4.75	-	-	-	no
chr12	120933251	120934500	ENSG00000088986	DYNLL1	dynein, light chair 5UTR	0.027	NO	2.20	3.51	-	-	-	no
chr14	91884001	91885250	ENSG00000015133	CCDC88C	coiled-coil domair 5UTR	0.048	NO	1.84	3.10	-	-	-	no
chr15	75315376	75316625	ENSG00000138621	PPCDC	phosphopantothe 5UTR	0.001	NO	1.63	3.10	-	-	-	no
chr15	93447001	93448250	ENSG00000173575	CHD2	chromodomain h 5UTR	0.028	NO	3.90	5.78	-	-	-	no
chr15	99790876	99792125	ENSG00000168904	LRRRC28	leucine rich repea 5UTR	0.021	NO	1.91	3.10	-	-	-	no
chr15	100105501	100106875	ENSG00000068305	MEF2A	myocyte enhance 5UTR	0.000	NO	3.26	5.16	-	-	-	no
chr15	65809251	65810500	ENSG00000074603	DPP8	dipeptidyl-peptid: 5UTR	0.025	NO	0.99	3.72	-	-	-	no

chr15	81281501	81282750	ENSG00000117899	MESDC2	mesoderm develc	5UTR	0.000	NO	2.20	3.92	-	-	-	no
chr15	102191876	102193125	ENSG00000184277	TM2D3	TM2 domain cont	5UTR	0.022	NO	2.34	5.37	-	-	-	no
chr16	284251	285625	ENSG00000167930	ITFG3	integrin alpha FG-	5UTR	0.000	NO	3.05	4.34	-	-	-	no
chr16	1832251	1833500	ENSG00000095906	NUBP2	nucleotide bindin	5UTR	0.023	NO	4.89	4.95	-	-	-	no
chr16	2932501	2933875	ENSG00000162076	FLYWCH2	FLYWCH family m	5UTR	0.000	NO	3.90	6.40	-	-	-	no
chr16	21964001	21965250	ENSG00000140740	UQCRC2	ubiquinol-cytochr	5UTR	0.029	NO	2.69	3.51	-	-	-	no
chr16	28835126	28836375	ENSG00000168488	ATXN2L	ataxin 2-like [Sou	5UTR	0.026	NO	2.84	6.40	-	-	-	no
chr16	12069876	12071125	ENSG00000048471	SNX29	sorting nexin 29 [5UTR	0.013	NO	0.85	2.89	-	-	-	no
chr16	50099501	50100875	ENSG00000155393	HEATR3	HEAT repeat cont	5UTR	0.000	NO	1.56	5.78	-	-	-	no
chr16	50775251	50776500	ENSG00000083799	CYLD	cylindromatosis (t	5UTR	0.034	NO	2.27	3.51	-	-	-	no
chr16	67193251	67194500	ENSG00000135722	FBXL8	F-box and leucine	5UTR	0.017	NO	1.70	3.30	-	-	-	no
chr16	70322751	70324125	ENSG00000157349	DDX19B	DEAD (Asp-Glu-Al	5UTR	0.000	NO	3.62	4.34	-	-	-	no
chr16	84852876	84854250	ENSG00000103196	CRISPLD2	cysteine-rich secr	5UTR	0.000	NO	1.42	4.95	-	-	-	no
chr16	88636001	88637250	ENSG00000158545	ZC3H18	zinc finger CCCH-t	5UTR	0.002	NO	1.98	4.13	-	-	-	no
chr16	3072251	3073625	ENSG00000103145	HCFC1R1	host cell factor C1	5UTR	0.002	NO	2.84	5.99	-	-	-	no
chr16	87416876	87418125	ENSG00000103264	FBXO31	F-box protein 31	5UTR	0.022	NO	1.56	4.95	-	-	-	no
chr17	79650251	79651500	ENSG00000185359	HGS	hepatocyte growt	5UTR	0.017	NO	2.62	4.13	-	-	-	no
chr17	1419251	1420500	ENSG00000132376	INPP5K	inositol polyphos	5UTR	0.043	NO	1.91	3.51	-	-	-	no
chr17	4458126	4459375	ENSG00000132382	MYBBP1A	MYB binding prot	5UTR	0.011	NO	0.50	2.48	-	-	-	no
chr16	2014126	2015375	ENSG00000140988	RPS2	ribosomal proteir	5UTR	0.017	NO	4.54	4.13	-	-	-	no
chr17	79817751	79819000	ENSG00000185624	P4HB	prolyl 4-hydroxyl	5UTR	0.012	NO	5.03	7.43	-	-	-	no
chr18	33708626	33710000	ENSG00000134759	ELP2	elongator acetyltr	5UTR	0.000	NO	2.48	5.99	-	-	-	no
chr18	33709126	33710375	ENSG00000134759	ELP2	elongator acetyltr	5UTR	0.010	NO	2.55	5.57	-	-	-	no
chr18	77438626	77439875	ENSG00000060069	CTDP1	CTD (carboxy-terr	5UTR	0.009	NO	1.28	2.68	-	-	-	no
chr19	4968251	4969625	ENSG00000127663	KDM4B	lysine (K)-specific	5UTR	0.001	NO	1.98	3.51	-	-	-	no
chr19	10827626	10829375	ENSG00000079805	DNM2	dynamin 2 [Sourc	5UTR	0.003	NO	6.03	4.95	-	-	-	no
chr19	16221626	16222875	ENSG00000167461	RAB8A	RAB8A, member f	5UTR	0.015	NO	2.20	3.51	-	-	-	no
chr19	17325751	17327125	ENSG00000053501	USE1	unconventional S	5UTR	0.007	NO	1.49	2.27	-	-	-	no
chr19	19303001	19304250	ENSG00000064490	RFXANK	regulatory factor	5UTR	0.048	NO	0.99	3.10	-	-	-	no
chr19	19626376	19627625	ENSG00000186010	NDUFA13	NADH dehydroge	5UTR	0.008	NO	1.06	1.86	-	-	-	no
chr19	36119001	36120375	ENSG00000126254	RBM42	RNA binding moti	5UTR	0.004	NO	1.98	4.34	-	-	-	no

chr19	36248376	36249625	ENSG00000167595	C19orf55	chromosome 19 c5UTR	0.004	NO	1.28	3.72	-	-	-	no
chr19	36605501	36607125	ENSG00000105254	TBCB	tubulin folding co5UTR	0.000	NO	3.19	5.99	-	-	-	no
chr19	38893001	38894250	ENSG00000130244	FAM98C	family with seque5UTR	0.025	NO	1.49	2.06	-	-	-	no
chr19	39902876	39904125	ENSG00000090924	PLEKHG2	pleckstrin homolc5UTR	0.001	NO	3.62	3.30	-	-	-	no
chr19	45393876	45395125	ENSG00000130204	TOMM40	translocase of out5UTR	0.002	NO	2.69	4.95	-	-	-	no
chr19	45393251	45394500	ENSG00000130204	TOMM40	translocase of out5UTR	0.049	NO	3.05	4.75	-	-	-	no
chr19	49990251	49991500	ENSG00000142541	RPL13A	ribosomal proteir5UTR	0.001	NO	3.12	2.27	-	-	-	no
chr19	50432126	50433375	ENSG00000169136	ATF5	activating transcri5UTR	0.031	NO	2.48	3.92	-	-	-	no
chr19	52429376	52430750	ENSG00000176024	ZNF613	zinc finger proteir5UTR	0.010	NO	0.78	2.06	-	-	-	no
chr19	52772251	52773500	ENSG00000196214	ZNF766	zinc finger proteir5UTR	0.003	NO	1.70	3.51	-	-	-	no
chr19	10675876	10677250	ENSG00000129347	KRI1	KRI1 homolog (S. 5UTR	0.000	NO	2.27	2.48	-	-	-	no
chr19	10679126	10680500	ENSG00000129355	CDKN2D	cyclin-dependent 5UTR	0.003	NO	0.71	3.30	-	-	-	no
chr19	11615751	11617000	ENSG00000161914	ZNF653	zinc finger proteir5UTR	0.037	NO	1.63	2.27	-	-	-	no
chr19	15489751	15491000	ENSG00000105127	AKAP8	A kinase (PRKA) a 5UTR	0.021	NO	2.76	3.72	-	-	-	no
chr19	15490126	15491375	ENSG00000105127	AKAP8	A kinase (PRKA) a 5UTR	0.020	NO	2.48	3.30	-	-	-	no
chr19	15529126	15530625	ENSG00000011243	AKAP8L	A kinase (PRKA) a 5UTR	0.002	NO	2.13	4.34	-	-	-	no
chr19	46194626	46196000	ENSG00000125743	SNRPD2	small nuclear ribo5UTR	0.001	NO	2.55	4.95	-	-	-	no
chr1	1334126	1335375	ENSG00000221978	CCNL2	cyclin L2 [Source: 5UTR	0.019	NO	1.35	3.10	-	-	-	no
chr2	9983126	9984375	ENSG00000115750	TAF1B	TATA box binding 5UTR	0.027	NO	1.70	4.54	-	-	-	no
chr2	32581376	32582750	ENSG00000115760	BIRC6	baculoviral IAP re 5UTR	0.001	NO	2.76	4.13	-	-	-	no
chr2	46843501	46844875	ENSG00000119878	CRIP1	cysteine-rich PDZ 5UTR	0.000	NO	3.26	6.40	-	-	-	no
chr2	64067501	64068750	ENSG00000169764	UGP2	UDP-glucose pyro5UTR	0.037	NO	2.98	3.92	-	-	-	no
chr2	68693876	68695250	ENSG00000169621	APLF	aprataxin and PNI5UTR	0.004	NO	1.21	4.34	-	-	-	no
chr2	70056001	70057375	ENSG00000087338	GMCL1	germ cell-less, spc5UTR	0.000	NO	2.98	5.37	-	-	-	no
chr2	70313501	70314875	ENSG00000169564	PCBP1	poly(rC) binding p5UTR	0.000	NO	3.90	4.75	-	-	-	no
chr2	75185126	75186500	ENSG00000115350	POLE4	polymerase (DNA 5UTR	0.028	NO	2.41	3.92	-	-	-	no
chr2	85765626	85766875	ENSG00000168906	MAT2A	methionine adenc5UTR	0.029	NO	4.18	5.78	-	-	-	no
chr2	101178751	101180375	ENSG00000115539	PDCL3	phosducin-like 3 [5UTR	0.000	NO	2.20	6.61	-	-	-	no
chr2	208394126	208395375	ENSG00000118260	CREB1	cAMP responsive 5UTR	0.035	NO	2.06	5.16	-	-	-	no
chr2	208393751	208395000	ENSG00000118260	CREB1	cAMP responsive 5UTR	0.016	NO	2.41	5.16	-	-	-	no
chr2	217362876	217364250	ENSG00000197756	RPL37A	ribosomal proteir5UTR	0.002	NO	3.19	3.72	-	-	-	no

chr2	219081126	219082500	ENSG00000163466	ARPC2	actin related prot 5UTR	0.000	NO	2.48	6.40	-	-	-	no
chr2	242088876	242090500	ENSG00000115685	PPP1R7	protein phosphat 5UTR	0.000	NO	4.54	7.23	-	-	-	no
chr2	96873876	96875250	ENSG00000084090	STARD7	StAR-related lipid 5UTR	0.000	NO	3.33	6.61	-	-	-	no
chr2	97523251	97524625	ENSG00000213337	ANKRD39	ankyrin repeat do 5UTR	0.007	NO	3.19	3.92	-	-	-	no
chr2	150443626	150445000	ENSG00000168288	MMADHC	methylmalonic ac 5UTR	0.000	NO	1.70	4.13	-	-	-	no
chr2	153573251	153574625	ENSG00000196504	PRPF40A	PRP40 pre-mRNA 5UTR	0.002	NO	3.76	4.75	-	-	-	no
chr2	232645376	232646750	ENSG00000156973	PDE6D	phosphodiesteras 5UTR	0.002	NO	2.27	3.51	-	-	-	no
chr20	306376	307875	ENSG00000177732	SOX12	SRY (sex determir 5UTR	0.004	NO	1.06	2.48	-	-	-	no
chr20	1098626	1099875	ENSG00000125818	PSMF1	proteasome (pros 5UTR	0.049	NO	1.06	2.68	-	-	-	no
chr20	3189376	3190625	ENSG00000125877	ITPA	inosine triphosph 5UTR	0.025	NO	0.28	1.65	-	-	-	no
chr20	3869626	3870875	ENSG00000125779	PANK2	pantothenate kin: 5UTR	0.023	NO	2.13	2.48	-	-	-	no
chr20	5107126	5108500	ENSG00000101290	CDS2	CDP-diacylglycero 5UTR	0.001	NO	0.57	2.89	-	-	-	no
chr20	16710001	16711250	ENSG00000125870	SNRPB2	small nuclear ribo 5UTR	0.020	NO	3.40	4.54	-	-	-	no
chr20	21283376	21284625	ENSG00000088930	XRN2	5'-3' exoribonucle 5UTR	0.010	NO	2.84	3.72	-	-	-	no
chr20	32581126	32582375	ENSG00000125970	RALY	RNA binding prot: 5UTR	0.017	NO	1.35	2.48	-	-	-	no
chr20	44044126	44045375	ENSG00000124155	PIGT	phosphatidylinosi 5UTR	0.047	NO	3.76	5.16	-	-	-	no
chr20	44509126	44510500	ENSG00000168612	ZSWIM1	zinc finger, SWIM 5UTR	0.003	NO	1.77	4.54	-	-	-	no
chr20	48428751	48430125	ENSG00000197818	SLC9A8	solute carrier fam 5UTR	0.004	NO	2.06	5.37	-	-	-	no
chr20	56963626	56964875	ENSG00000124164	VAPB	VAMP (vesicle-as: 5UTR	0.049	NO	3.62	5.37	-	-	-	no
chr20	60696376	60697750	ENSG00000149657	LSM14B	LSM14B, SCD6 ho 5UTR	0.006	NO	2.41	4.75	-	-	-	no
chr20	60812876	60814250	ENSG00000130703	OSBPL2	oxysterol binding 5UTR	0.001	NO	1.77	2.89	-	-	-	no
chr20	60877126	60878375	ENSG00000130706	ADRM1	adhesion regulati 5UTR	0.040	NO	2.13	3.51	-	-	-	no
chr20	61273501	61274875	ENSG00000101187	SLCO4A1	solute carrier org: 5UTR	0.004	NO	2.20	5.57	-	-	-	no
chr20	62495751	62497125	ENSG00000101150	TPD52L2	tumor protein D5 5UTR	0.011	NO	2.91	4.95	-	-	-	no
chr20	32307501	32308750	ENSG00000101417	PXMP4	peroxisomal mer: 5UTR	0.011	NO	1.42	1.86	-	-	-	no
chr20	39317251	39318750	ENSG00000204103	MAFB	v-maf musculoap: 5UTR	0.001	NO	1.35	3.92	-	-	-	no
chr2	32235501	32236750	ENSG00000162959	MEMO1	mediator of cell n 5UTR	0.020	NO	0.78	3.30	-	-	-	no
chr21	37528001	37529250	ENSG00000142197	DOPEY2	dopey family mer 5UTR	0.002	NO	2.41	4.13	-	-	-	no
chr21	40759001	40760375	ENSG00000182093	WRB	tryptophan rich b 5UTR	0.003	NO	2.13	3.92	-	-	-	no
chr21	45208626	45210000	ENSG00000160214	RRP1	ribosomal RNA pr 5UTR	0.000	NO	2.91	5.37	-	-	-	no
chr21	47878126	47879375	ENSG00000160305	DIP2A	DIP2 disco-interac 5UTR	0.005	NO	3.90	5.78	-	-	-	no

chr21	35287501	35288750	ENSG00000241837	ATP5O	ATP synthase, H+ 5UTR	0.001	NO	2.20	3.72	-	-	-	no
chr21	40685001	40686375	ENSG00000185658	BRWD1	bromodomain an 5UTR	0.000	NO	4.18	5.99	-	-	-	no
chr21	44527001	44528375	ENSG00000160201	U2AF1	U2 small nuclear l 5UTR	0.003	NO	2.69	5.78	-	-	-	no
chr22	20861501	20862750	ENSG00000099917	MED15	mediator comple 5UTR	0.035	NO	1.06	3.30	-	-	-	no
chr22	29663001	29664375	ENSG00000182944	EWSR1	Ewing sarcoma br 5UTR	0.000	NO	1.49	3.51	-	-	-	no
chr22	38597626	38598875	ENSG00000185022	MAFF	v-maf musculoap 5UTR	0.020	NO	2.27	2.89	-	-	-	no
chr22	41600751	41602000	ENSG00000100395	L3MBTL2	l(3)mbt-like 2 (Dr 5UTR	0.042	NO	0.78	2.06	-	-	-	no
chr22	24950501	24951875	ENSG00000138867	GUCD1	guanylyl cyclase d 5UTR	0.005	NO	2.62	4.95	-	-	-	no
chr22	30722126	30723375	ENSG00000099992	TBC1D10A	TBC1 domain fam 5UTR	0.038	NO	0.57	2.68	-	-	-	no
chr3	9470751	9472000	ENSG00000168137	SETD5	SET domain conta 5UTR	0.003	NO	1.77	2.89	-	-	-	no
chr3	122513251	122514500	ENSG00000138463	DIRC2	disrupted in renal 5UTR	0.041	NO	1.56	3.51	-	-	-	no
chr3	133291501	133292750	ENSG00000091527	CDV3	CDV3 homolog (r 5UTR	0.048	NO	1.77	3.72	-	-	-	no
chr3	141456501	141457750	ENSG00000114125	RNF7	ring finger proteir 5UTR	0.012	NO	1.28	3.72	-	-	-	no
chr3	142719751	142721000	ENSG00000163714	U2SURP	U2 snRNP-associa 5UTR	0.041	NO	0.99	4.13	-	-	-	no
chr3	179280001	179281250	ENSG00000136518	ACTL6A	actin-like 6A [Sou 5UTR	0.005	NO	2.48	1.86	-	-	-	no
chr3	185303251	185304500	ENSG00000163904	SENP2	SUMO1/sentrin/S 5UTR	0.008	NO	1.91	4.13	-	-	-	no
chr3	193310251	193311500	ENSG00000198836	OPA1	optic atrophy 1 (a 5UTR	0.000	NO	4.61	5.16	-	-	-	no
chr3	149688251	149689750	ENSG00000070087	PFN2	profilin 2 [Source: 5UTR	0.033	NO	3.26	5.78	-	-	-	no
chr3	195163001	195164500	ENSG00000114331	ACAP2	ArfGAP with coile 5UTR	0.000	NO	7.59	9.29	-	-	-	no
chr4	4291251	4292500	ENSG00000168826	ZBTB49	zinc finger and BT 5UTR	0.000	NO	1.77	2.68	-	-	-	no
chr4	6783751	6785000	ENSG00000170871	KIAA0232	KIAA0232 [Source 5UTR	0.010	NO	0.78	2.48	-	-	-	no
chr4	48832376	48833625	ENSG00000109180	OCIAD1	OCIA domain con 5UTR	0.039	NO	1.21	2.89	-	-	-	no
chr4	52708501	52709875	ENSG00000109184	DCUN1D4	DCN1, defective ii 5UTR	0.001	NO	3.12	3.30	-	-	-	no
chr4	87927501	87928750	ENSG00000172493	AFF1	AF4/FMR2 family, 5UTR	0.036	NO	1.84	3.10	-	-	-	no
chr4	87855626	87857000	ENSG00000172493	AFF1	AF4/FMR2 family, 5UTR	0.018	NO	1.42	1.86	-	-	-	no
chr4	1241876	1243125	ENSG00000159692	CTBP1	C-terminal bindin 5UTR	0.000	NO	1.49	4.34	-	-	-	no
chr4	2757251	2758500	ENSG00000168884	TNIP2	TNFAIP3 interacti 5UTR	0.011	NO	1.06	3.30	-	-	-	no
chr4	24585501	24586875	ENSG00000109606	DHX15	DEAH (Asp-Glu-Al 5UTR	0.000	NO	2.62	3.92	-	-	-	no
chr4	77996501	77998000	ENSG00000118816	CCNI	cyclin I [Source:H 5UTR	0.001	NO	4.82	5.37	-	-	-	no
chr4	103748126	103749500	ENSG00000109332	UBE2D3	ubiquitin-conjuga 5UTR	0.000	NO	2.20	4.34	-	-	-	no
chr4	108640751	108642250	ENSG00000138801	PAPSS1	3'-phosphoadeno 5UTR	0.000	NO	1.28	4.34	-	-	-	no

chr4	111543751	111545000	ENSG00000164093	PITX2	paired-like homec	5UTR	0.004	NO	0.78	2.48	-	-	-	no
chr1	226249626	226250875	ENSG00000163041	H3F3A	H3 histone, family	5UTR	0.010	NO	0.71	2.68	-	-	-	no
chr5	31531501	31532875	ENSG00000082213	C5orf22	chromosome 5 or	5UTR	0.000	NO	2.48	4.75	-	-	-	no
chr5	68389126	68390500	ENSG00000145740	SLC30A5	solute carrier fam	5UTR	0.000	NO	3.12	3.72	-	-	-	no
chr5	112311501	112313000	ENSG00000172795	DCP2	DCP2 decapping e	5UTR	0.000	NO	2.62	5.57	-	-	-	no
chr5	139780501	139782000	ENSG00000131503	ANKHD1	ankyrin repeat an	5UTR	0.002	NO	4.40	5.99	-	-	-	no
chr5	141348001	141349250	ENSG00000013561	RNF14	ring finger proteir	5UTR	0.038	NO	1.49	4.13	-	-	-	no
chr5	145826126	145827500	ENSG00000113649	TCERG1	transcription elon	5UTR	0.000	NO	3.40	3.92	-	-	-	no
chr5	148736876	148738250	ENSG00000145882	PCYOX1L	prenylcysteine ox	5UTR	0.001	NO	2.62	3.92	-	-	-	no
chr5	175223376	175224750	ENSG00000145920	CPLX2	complexin 2 [Sou	5UTR	0.000	NO	4.04	4.13	-	-	-	no
chr5	175874751	175876000	ENSG00000113194	FAF2	Fas associated fac	5UTR	0.003	NO	2.76	3.30	-	-	-	no
chr5	177557126	177558750	ENSG00000145916	RMND5B	required for meio	5UTR	0.000	NO	2.76	8.67	-	-	-	no
chr5	178985876	178987250	ENSG00000176783	RUFY1	RUN and FYVE do	5UTR	0.020	NO	1.70	4.13	-	-	-	no
chr5	179125001	179126625	ENSG00000127022	CANX	calnexin [Source:l	5UTR	0.000	NO	3.47	7.02	-	-	-	no
chr5	1345001	1346250	ENSG00000049656	CLPTM1L	CLPTM1-like [Sou	5UTR	0.002	NO	3.19	4.95	-	-	-	no
chr5	77071501	77072750	ENSG00000171530	TBCA	tubulin folding co	5UTR	0.010	NO	1.35	3.51	-	-	-	no
chr6	13614876	13616125	ENSG00000225921	NOL7	nucleolar protein	5UTR	0.020	NO	2.69	3.30	-	-	-	no
chr6	30584376	30585750	ENSG00000204568	MRPS18B	mitochondrial rib	5UTR	0.000	NO	2.55	5.78	-	-	-	no
chr6	37137251	37138500	ENSG00000137193	PIM1	pim-1 oncogene [5UTR	0.005	NO	1.70	3.92	-	-	-	no
chr6	109169001	109170250	ENSG00000118690	ARMC2	armadillo repeat	5UTR	0.000	NO	1.56	2.89	-	-	-	no
chr6	170151001	170152250	ENSG00000130023	C6orf70	chromosome 6 or	5UTR	0.000	NO	2.62	2.68	-	-	-	no
chr6	26056001	26057375	ENSG00000187837	HIST1H1C	histone cluster 1,	5UTR	0.000	NO	6.66	4.13	-	-	-	no
chr6	56708376	56709750	ENSG00000151914	DST	dystonin [Source:	5UTR	0.000	NO	1.63	2.68	-	-	-	no
chr6	135375251	135376750	ENSG00000112339	HBS1L	HBS1-like (S. cere	5UTR	0.000	NO	3.83	5.57	-	-	-	no
chr7	1576251	1577500	ENSG00000198517	MAFK	v-maf musculoap	5UTR	0.019	NO	2.27	4.95	-	-	-	no
chr7	100025751	100027000	ENSG00000146834	MEPCE	methylphosphate	5UTR	0.032	NO	3.76	5.99	-	-	-	no
chr7	100136001	100137250	ENSG00000106351	AGFG2	ArfGAP with FG r	5UTR	0.037	NO	1.28	4.13	-	-	-	no
chr7	100183251	100184875	ENSG00000106336	FBXO24	F-box protein 24	5UTR	0.000	NO	4.04	5.57	-	-	-	no
chr7	148981626	148983000	ENSG00000204946	ZNF783	zinc finger family	5UTR	0.013	NO	1.70	4.34	-	-	-	no
chr7	154861251	154862500	ENSG00000157219	HTR5A	5-hydroxytryptan	5UTR	0.010	NO	1.77	3.51	-	-	-	no
chr7	1498251	1499750	ENSG00000164877	MICALL2	MICAL-like 2 [Sou	5UTR	0.000	NO	1.70	5.37	-	-	-	no

chr6	74230376	74231625	ENSG00000156508	EEF1A1	eukaryotic transl	5UTR	0.024	NO	2.20	4.34	-	-	-	no
chr7	33101751	33103125	ENSG00000122643	NT5C3A	5'-nucleotidase, c	5UTR	0.000	NO	1.91	4.75	-	-	-	no
chr7	35734126	35735375	ENSG00000122557	HERPUD2	HERPUD family m	5UTR	0.002	NO	1.63	4.95	-	-	-	no
chr7	42971376	42972625	ENSG00000106588	PSMA2	proteasome (pros	5UTR	0.034	NO	1.49	2.06	-	-	-	no
chr7	91763376	91764625	ENSG00000001630	CYP51A1	cytochrome P450	5UTR	0.044	NO	1.56	2.48	-	-	-	no
chr8	29939876	29941250	ENSG00000133872	TMEM66	transmembrane μ	5UTR	0.005	NO	0.64	3.30	-	-	-	no
chr8	99129001	99130375	ENSG00000132541	HRSP12	heat-responsive μ	5UTR	0.000	NO	4.04	6.81	-	-	-	no
chr8	101733751	101735000	ENSG00000070756	PABPC1	poly(A) binding pr	5UTR	0.003	NO	2.20	4.95	-	-	-	no
chr8	144623251	144624500	ENSG00000014164	ZC3H3	zinc finger CCCH-t	5UTR	0.006	NO	1.91	3.10	-	-	-	no
chr9	129566626	129567875	ENSG00000169155	ZBTB43	zinc finger and BT	5UTR	0.005	NO	1.63	3.72	-	-	-	no
chr9	134000251	134001500	ENSG00000126883	NUP214	nucleoporin 214k	5UTR	0.044	NO	2.48	3.51	-	-	-	no
chr9	139743001	139744500	ENSG00000054148	PHPT1	phosphohistidine	5UTR	0.004	NO	2.98	5.16	-	-	-	no
chr9	94877001	94878250	ENSG00000090054	SPTLC1	serine palmitoyltr	5UTR	0.039	NO	1.49	3.72	-	-	-	no
chr9	100459001	100460250	ENSG00000136936	XPA	xeroderma pigme	5UTR	0.014	NO	2.76	4.75	-	-	-	no
chr9	127951501	127952750	ENSG00000119414	PPP6C	protein phosphat	5UTR	0.028	NO	1.56	2.48	-	-	-	no
chr9	140094626	140095875	ENSG00000176058	TPRN	taperin [Source:H	5UTR	0.009	NO	1.63	3.30	-	-	-	no
chrX	13670501	13671750	ENSG00000176896	TCEANC	transcription elon	5UTR	0.003	NO	1.49	3.72	-	-	-	no
chrX	48397376	48398750	ENSG00000068354	TBC1D25	TBC1 domain fam	5UTR	0.002	NO	1.13	2.27	-	-	-	no
chrX	146992626	146993875	ENSG00000102081	FMR1	fragile X mental r	5UTR	0.005	NO	1.28	2.89	-	-	-	no
chrX	16887876	16889125	ENSG00000102054	RBBP7	retinoblastoma bi	5UTR	0.016	NO	2.27	3.51	-	-	-	no
chrX	48814501	48815875	ENSG00000068308	OTUD5	OTU domain cont	5UTR	0.010	NO	2.48	4.34	-	-	-	no
chrX	106959626	106960875	ENSG00000157514	TSC22D3	TSC22 domain far	5UTR	0.008	NO	1.77	2.06	-	-	-	no
chr6	33167876	33169250	ENSG00000204231	RXR β	retinoid X recept	5UTR	0.000	NO	1.63	5.37	-	-	-	no
chr6	33238626	33240000	ENSG00000223501	VPS52	vacuolar protein ϵ	5UTR	0.001	NO	2.34	4.34	-	-	-	no
chr1	32816751	32818000	ENSG00000162526	TSSK3	testis-specific seri	exon	0.017	NO	1.42	3.30	-	-	-	no
chr1	114223376	114224625	ENSG00000081026	MAGI3	membrane associ	exon	0.003	NO	2.20	3.10	-	-	-	no
chr1	116930876	116932125	ENSG00000163399	ATP1A1	ATPase, Na ⁺ /K ⁺ t	exon	0.002	NO	3.69	6.19	-	-	-	no
chr1	116936251	116937500	ENSG00000163399	ATP1A1	ATPase, Na ⁺ /K ⁺ t	exon	0.000	NO	4.25	5.57	-	-	-	no
chr1	150248626	150249875	ENSG00000118292	C1orf54	chromosome 1 or	exon	0.004	NO	1.35	2.27	-	-	-	no
chr1	27816001	27817375	ENSG00000158195	WASF2	WAS protein fami	exon	0.004	NO	1.35	2.48	-	-	-	no
chr1	114949001	114950250	ENSG00000197323	TRIM33	tripartite motif cc	exon	0.039	NO	4.04	5.57	-	-	-	no

chr1	114968876	114970125	ENSG00000197323	TRIM33	tripartite motif cc exon	0.006	NO	4.82	5.37	-	-	-	no
chr1	115255876	115257125	ENSG00000213281	NRAS	neuroblastoma R/exon	0.013	NO	3.83	5.37	-	-	-	no
chr1	151762376	151763750	ENSG00000182134	TDRKH	tudor and KH don exon	0.000	NO	6.88	6.81	-	-	-	no
chr1	154945876	154947125	ENSG00000160691	SHC1	SHC (Src homolog exon	0.010	NO	2.91	5.57	-	-	-	no
chr1	155196876	155198125	ENSG00000160766	GBAP1	glucosidase, beta, exon	0.021	NO	2.48	4.13	-	-	-	no
chr1	160231626	160233000	ENSG00000132716	DCAF8	DDB1 and CUL4 a exon	0.000	NO	1.56	4.34	-	-	-	no
chr11	64901501	64903000	ENSG00000162298	SYVN1	synovial apoptosi exon	0.000	NO	4.18	4.54	-	-	-	no
chr11	66725126	66726375	ENSG00000173599	PC	pyruvate carboxyl exon	0.031	NO	1.42	3.92	-	-	-	no
chr11	122932626	122933875	ENSG00000109971	HSPA8	heat shock 70kDa exon	0.042	NO	2.13	3.51	-	-	-	no
chr13	26795376	26796625	ENSG00000127870	RNF6	ring finger proteir exon	0.002	NO	3.47	5.16	-	-	-	no
chr14	35342376	35343750	ENSG00000198604	BAZ1A	bromodomain ad exon	0.026	NO	2.91	3.51	-	-	-	no
chr15	23033876	23035125	ENSG00000140157	NIPAA2	non imprinted in exon	0.013	NO	1.13	1.86	-	-	-	no
chr15	72522876	72524250	ENSG00000067225	PKM	pyruvate kinase, r exon	0.005	NO	3.83	4.75	-	-	-	no
chr15	78591376	78592625	ENSG00000140395	WDR61	WD repeat domai exon	0.005	NO	1.56	3.10	-	-	-	no
chr17	57757876	57759125	ENSG00000141367	CLTC	clathrin, heavy ch exon	0.025	NO	1.98	4.75	-	-	-	no
chr17	60483376	60484625	ENSG00000172421	EFCAB3	EF-hand calcium t exon	0.019	NO	1.77	2.68	-	-	-	no
chr17	44270876	44272125	ENSG00000120071	KANSL1	KAT8 regulatory l exon	0.035	NO	0.78	2.27	-	-	-	no
chr17	47439126	47440375	ENSG00000198740	ZNF652	zinc finger proteir exon	0.050	NO	2.76	4.54	-	-	-	no
chr17	60001126	60002500	ENSG00000108506	INTS2	integrator comple exon	0.033	NO	2.06	3.72	-	-	-	no
chr17	59945001	59946500	ENSG00000108506	INTS2	integrator comple exon	0.007	NO	17.01	14.45	-	-	-	no
chr17	77983876	77985250	ENSG00000167291	TBC1D16	TBC1 domain fam exon	0.021	NO	1.06	3.30	-	-	-	no
chr19	1220626	1221875	ENSG00000118046	STK11	serine/threonine exon	0.037	NO	1.06	3.10	-	-	-	no
chr19	10490626	10492000	ENSG00000105397	TYK2	tyrosine kinase 2 exon	0.014	NO	1.63	3.72	-	-	-	no
chr19	10612251	10613625	ENSG00000079999	KEAP1	kelch-like ECH-ass exon	0.001	NO	1.91	4.75	-	-	-	no
chr19	14116501	14118125	ENSG00000132005	RFX1	regulatory factor exon	0.000	NO	4.68	6.40	-	-	-	no
chr19	41220876	41222125	ENSG00000123815	ADCK4	aarF domain cont exon	0.003	NO	1.13	2.89	-	-	-	no
chr19	58665876	58667125	ENSG00000181894	ZNF329	zinc finger proteir exon	0.000	NO	1.49	4.13	-	-	-	no
chr14	21737001	21738500	ENSG00000092199	HNRNPC	heterogeneous ni exon	0.000	NO	7.23	6.40	-	-	-	no
chr2	27578501	27579750	ENSG00000115207	GTF3C2	general transcript exon	0.049	NO	2.34	3.51	-	-	-	no
chr2	61765251	61766625	ENSG00000082898	XPO1	exportin 1 (CRM1 exon	0.000	NO	3.62	4.95	-	-	-	no
chr20	21311501	21312875	ENSG00000088930	XRN2	5'-3' exoribonucle exon	0.002	NO	0.57	1.86	-	-	-	no

chr20	37074751	37076000	ENSG00000174365	SNHG11	small nucleolar R	exon	0.029	NO	0.57	2.68	-	-	-	no
chr20	39743126	39744625	ENSG00000198900	TOP1	topoisomerase (D	exon	0.006	NO	2.41	3.92	-	-	-	no
chr20	39740501	39741750	ENSG00000198900	TOP1	topoisomerase (D	exon	0.020	NO	3.05	4.34	-	-	-	no
chr20	39741126	39742500	ENSG00000198900	TOP1	topoisomerase (D	exon	0.023	NO	2.62	2.89	-	-	-	no
chr20	46253376	46254625	ENSG00000124151	NCOA3	nuclear receptor	exon	0.026	NO	7.44	9.29	-	-	-	no
chr20	46262501	46263750	ENSG00000124151	NCOA3	nuclear receptor	exon	0.004	NO	10.70	12.39	-	-	-	no
chr20	46250126	46251500	ENSG00000124151	NCOA3	nuclear receptor	exon	0.004	NO	7.87	8.67	-	-	-	no
chr20	46267376	46268750	ENSG00000124151	NCOA3	nuclear receptor	exon	0.000	NO	15.60	15.69	-	-	-	no
chr20	46253876	46255125	ENSG00000124151	NCOA3	nuclear receptor	exon	0.018	NO	9.85	8.88	-	-	-	no
chr20	46265876	46267375	ENSG00000124151	NCOA3	nuclear receptor	exon	0.001	NO	11.06	9.91	-	-	-	no
chr20	46265126	46266500	ENSG00000124151	NCOA3	nuclear receptor	exon	0.001	NO	12.26	10.94	-	-	-	no
chr20	46261376	46262625	ENSG00000124151	NCOA3	nuclear receptor	exon	0.018	NO	9.92	7.84	-	-	-	no
chr20	20660501	20662125	ENSG00000188559	RALGAPAZ	Ral GTPase activa	exon	0.010	NO	0.99	2.27	-	-	-	no
chr20	25492501	25493750	ENSG00000101004	NINL	ninein-like [Sourc	exon	0.038	NO	1.70	1.65	-	-	-	no
chr20	34329876	34331250	ENSG00000131051	RBM39	RNA binding moti	exon	0.007	NO	2.41	4.34	-	-	-	no
chr20	40864501	40865750	ENSG00000196090	PTPRT	protein tyrosine	exon	0.048	NO	1.42	3.10	-	-	-	no
chr20	40864126	40865375	ENSG00000196090	PTPRT	protein tyrosine	exon	0.042	NO	1.49	2.89	-	-	-	no
chr20	40863626	40864875	ENSG00000196090	PTPRT	protein tyrosine	exon	0.021	NO	1.91	2.68	-	-	-	no
chr3	15073501	15074750	ENSG00000177463	NR2C2	nuclear receptor	exon	0.050	NO	1.28	2.68	-	-	-	no
chr3	63983001	63984250	ENSG00000163635	ATXN7	ataxin 7 [Source:	exon	0.011	NO	12.12	11.15	-	-	-	no
chr3	183438626	183439875	ENSG00000163872	YEATS2	YEATS domain core	exon	0.034	NO	0.57	1.45	-	-	-	no
chr3	48129751	48131000	ENSG00000047849	MAP4	microtubule-asso	exon	0.017	NO	1.35	3.30	-	-	-	no
chr3	48754001	48755250	ENSG00000068745	IP6K2	inositol hexakisph	exon	0.003	NO	1.49	2.89	-	-	-	no
chr3	63999251	64001000	ENSG00000163636	PSMD6	proteasome (pros	exon	0.000	NO	16.38	19.20	-	-	-	no
chr3	63998751	64000000	ENSG00000163636	PSMD6	proteasome (pros	exon	0.001	NO	10.63	11.77	-	-	-	no
chr3	113415001	113416250	ENSG00000176542	KIAA2018	KIAA2018 [Source	exon	0.002	NO	1.91	3.72	-	-	-	no
chr3	114865501	114866750	ENSG00000181722	ZBTB20	zinc finger and BT	exon	0.012	NO	1.35	4.34	-	-	-	no
chr3	125093501	125094750	ENSG00000163848	ZNF148	zinc finger proteir	exon	0.037	NO	1.28	2.68	-	-	-	no
chr1	202986126	202987375	ENSG00000163444	TMEM183	transmembrane	exon	0.040	NO	1.70	3.10	-	-	-	no
chr6	30180376	30181750	ENSG00000234127	TRIM26	tripartite motif	exon	0.001	NO	1.13	2.48	-	-	-	no
chr7	2691876	2693125	ENSG00000136295	TTYH3	tweety homolog	exon	0.002	NO	0.78	2.48	-	-	-	no

chr7	25164251	25165750	ENSG00000172115	CYCS	cytochrome c, sor exon	0.000	NO	1.91	5.16	-	-	-	no
chr7	32930626	32931875	ENSG00000170852	KBTBD2	kelch repeat and lexon	0.017	NO	3.19	4.54	-	-	-	no
chr7	45150626	45152000	ENSG00000136270	TBRG4	transforming grovexon	0.000	NO	1.35	4.34	-	-	-	no
chr8	101964376	101965875	ENSG00000164924	YWHAZ	tyrosine 3-monoc exon	0.000	NO	5.74	10.73	-	-	-	no
chr9	123963501	123964750	ENSG00000119396	RAB14	RAB14, member F exon	0.002	NO	2.13	3.72	-	-	-	no
chrX	48957501	48958750	ENSG00000196998	WDR45	WD repeat domai exon	0.008	NO	1.42	2.68	-	-	-	no
chrX	119763376	119764625	ENSG00000171155	C1GALT1C	C1GALT1-specific exon	0.004	NO	1.35	3.10	-	-	-	no
chr5	68628001	68629375	ENSG00000183323	CCDC125	coiled-coil domai exon	0.000	NO	1.49	3.92	-	-	-	no
chr1	33225251	33226625	ENSG00000162522	KIAA1522	KIAA1522 [Source intron	0.000	NO	0.78	5.57	-	-	-	no
chr1	116933626	116934875	ENSG00000163399	ATP1A1	ATPase, Na+/K+ ti intron	0.013	NO	4.18	4.75	-	-	-	no
chr1	181408126	181409375	ENSG00000198216	CACNA1E	calcium channel, i intron	0.028	NO	1.49	2.89	-	-	-	no
chr1	181446501	181447875	ENSG00000198216	CACNA1E	calcium channel, i intron	0.017	NO	2.41	3.30	-	-	-	no
chr1	58487751	58489000	ENSG00000173406	DAB1	Dab, reelin signal intron	0.013	NO	0.99	1.65	-	-	-	no
chr1	112413876	112415125	ENSG00000171385	KCND3	potassium voltage intron	0.007	NO	3.54	5.57	-	-	-	no
chr1	112450126	112451375	ENSG00000171385	KCND3	potassium voltage intron	0.030	NO	3.40	3.51	-	-	-	no
chr1	114990376	114991875	ENSG00000197323	TRIM33	tripartite motif cc intron	0.020	NO	6.17	7.84	-	-	-	no
chr1	115038001	115039375	ENSG00000197323	TRIM33	tripartite motif cc intron	0.002	NO	5.25	5.57	-	-	-	no
chr1	116304126	116305375	ENSG00000118729	CASQ2	calsequestrin 2 (c intron	0.005	NO	2.06	5.57	-	-	-	no
chr1	145008876	145010250	ENSG00000178104	PDE4DIP	phosphodiesteras intron	0.001	NO	3.76	6.81	-	-	-	no
chr1	145034501	145035875	ENSG00000178104	PDE4DIP	phosphodiesteras intron	0.002	NO	2.84	4.95	-	-	-	no
chr1	145025126	145026500	ENSG00000178104	PDE4DIP	phosphodiesteras intron	0.003	NO	6.10	7.23	-	-	-	no
chr1	145041251	145042625	ENSG00000178104	PDE4DIP	phosphodiesteras intron	0.026	NO	5.60	5.57	-	-	-	no
chr1	145001001	145002250	ENSG00000178104	PDE4DIP	phosphodiesteras intron	0.036	NO	5.81	5.37	-	-	-	no
chr1	145010376	145011625	ENSG00000178104	PDE4DIP	phosphodiesteras intron	0.026	NO	2.62	2.27	-	-	-	no
chr1	145023376	145024625	ENSG00000178104	PDE4DIP	phosphodiesteras intron	0.049	NO	5.81	4.95	-	-	-	no
chr1	144987376	144988625	ENSG00000178104	PDE4DIP	phosphodiesteras intron	0.041	NO	4.75	3.92	-	-	-	no
chr1	144943251	144944500	ENSG00000178104	PDE4DIP	phosphodiesteras intron	0.042	NO	3.69	2.89	-	-	-	no
chr1	167048501	167049750	ENSG00000143167	GPA33	glycoprotein A33 intron	0.047	NO	0.85	2.27	-	-	-	no
chr1	175491626	175492875	ENSG00000116147	TNR	tenascin R [Source intron	0.045	NO	0.50	2.68	-	-	-	no
chr1	216525751	216527000	ENSG00000042781	USH2A	Usher syndrome i intron	0.048	NO	1.84	4.13	-	-	-	no
chr1	216885626	216886875	ENSG00000196482	ESRRG	estrogen-related intron	0.037	NO	2.27	2.68	-	-	-	no

chr10	5700501	5701750	ENSG00000196372	ASB13	ankyrin repeat an intron	0.019	NO	0.99	3.92	-	-	-	no
chr11	63280751	63282000	ENSG00000133317	LGALS12	lectin, galactoside intron	0.003	NO	0.71	2.48	-	-	-	no
chr11	69469251	69470500	ENSG00000149716	ORAOV1	oral cancer overe intron	0.000	NO	4.18	5.16	-	-	-	no
chr11	70883876	70885125	ENSG00000162105	SHANK2	SH3 and multiple intron	0.018	NO	1.06	3.10	-	-	-	no
chr15	49961001	49962250	ENSG00000140285	FGF7	fibroblast growth intron	0.035	NO	1.91	4.13	-	-	-	no
chr15	50046626	50047875	ENSG00000140285	FGF7	fibroblast growth intron	0.023	NO	1.70	2.89	-	-	-	no
chr15	54327501	54328750	ENSG00000137766	UNC13C	unc-13 homolog (intron	0.045	NO	1.70	4.54	-	-	-	no
chr15	54310001	54311250	ENSG00000137766	UNC13C	unc-13 homolog (intron	0.029	NO	2.62	3.51	-	-	-	no
chr16	88994376	88995625	ENSG00000129993	CBFA2T3	core-binding fact intron	0.033	NO	1.49	4.34	-	-	-	no
chr17	11321376	11322625	ENSG00000188803	SHISA6	shisa homolog 6 (intron	0.003	NO	0.14	1.65	-	-	-	no
chr17	57973751	57975000	ENSG00000108443	RPS6KB1	ribosomal protein intron	0.005	NO	9.07	11.97	-	-	-	no
chr17	1698751	1700000	ENSG00000186532	SMYD4	SET and MYND dc intron	0.026	NO	0.00	1.45	-	-	-	no
chr17	57134751	57136125	ENSG00000108395	TRIM37	tripartite motif cc intron	0.002	NO	1.84	3.72	-	-	-	no
chr17	57114501	57115750	ENSG00000108395	TRIM37	tripartite motif cc intron	0.000	NO	5.39	6.81	-	-	-	no
chr17	57077001	57078250	ENSG00000108395	TRIM37	tripartite motif cc intron	0.023	NO	7.09	8.46	-	-	-	no
chr17	57170501	57171750	ENSG00000108395	TRIM37	tripartite motif cc intron	0.021	NO	8.44	9.08	-	-	-	no
chr17	57095001	57096375	ENSG00000108395	TRIM37	tripartite motif cc intron	0.004	NO	5.03	5.37	-	-	-	no
chr17	57138626	57139875	ENSG00000108395	TRIM37	tripartite motif cc intron	0.044	NO	9.71	8.46	-	-	-	no
chr17	58138126	58139375	ENSG00000068097	HEATR6	HEAT repeat cont intron	0.007	NO	8.86	12.18	-	-	-	no
chr17	58145501	58146750	ENSG00000068097	HEATR6	HEAT repeat cont intron	0.042	NO	9.50	12.80	-	-	-	no
chr17	58557376	58558625	ENSG00000062725	APPBP2	amyloid beta prec intron	0.043	NO	8.44	8.05	-	-	-	no
chr17	59963751	59965000	ENSG00000108506	INTS2	integrator comple intron	0.010	NO	9.15	10.32	-	-	-	no
chr17	60078376	60079750	ENSG00000108510	MED13	mediator comple intron	0.013	NO	14.32	14.24	-	-	-	no
chr17	60094876	60096125	ENSG00000108510	MED13	mediator comple intron	0.027	NO	11.70	6.19	-	-	-	no
chr17	71362251	71363500	ENSG00000069188	SDK2	sidekick cell adhe intron	0.040	NO	0.64	1.86	-	-	-	no
chr19	50489876	50491250	ENSG00000105053	VRK3	vaccinia related k intron	0.003	NO	2.69	2.68	-	-	-	no
chr2	71804501	71805750	ENSG00000135636	DYSF	dysferlin, limb gir intron	0.018	NO	0.64	2.06	-	-	-	no
chr20	2105501	2106875	ENSG00000125834	STK35	serine/threonine intron	0.025	NO	0.50	2.06	-	-	-	no
chr20	10416751	10418250	ENSG00000149346	SLX4IP	SLX4 interacting p intron	0.000	NO	0.64	1.65	-	-	-	no
chr20	12994876	12996250	ENSG00000172296	SPTLC3	serine palmitoyltr intron	0.001	NO	1.13	2.68	-	-	-	no
chr20	14647126	14648625	ENSG00000172264	MACROD2	MACRO domain c intron	0.001	NO	0.35	2.89	-	-	-	no

chr20	14322001	14323375	ENSG00000172264	MACROD2	MACRO domain c intron	0.001	NO	0.43	1.86	-	-	-	no
chr20	14145751	14147250	ENSG00000172264	MACROD2	MACRO domain c intron	0.000	NO	0.78	1.86	-	-	-	no
chr20	15245126	15246500	ENSG00000172264	MACROD2	MACRO domain c intron	0.003	NO	1.13	2.48	-	-	-	no
chr20	24614126	24615375	ENSG00000101463	SYNDIG1	synapse different intron	0.023	NO	1.21	2.27	-	-	-	no
chr20	24617501	24618750	ENSG00000101463	SYNDIG1	synapse different intron	0.015	NO	0.99	1.45	-	-	-	no
chr20	24506251	24507625	ENSG00000101463	SYNDIG1	synapse different intron	0.000	NO	0.99	1.24	-	-	-	no
chr20	30557876	30559375	ENSG00000101321	XKR7	XK, Kell blood gro intron	0.000	NO	0.85	2.06	-	-	-	no
chr20	39732626	39733875	ENSG00000198900	TOP1	topoisomerase (D intron	0.009	NO	2.48	4.34	-	-	-	no
chr20	39738751	39740000	ENSG00000198900	TOP1	topoisomerase (D intron	0.028	NO	2.06	3.51	-	-	-	no
chr20	39710001	39711375	ENSG00000198900	TOP1	topoisomerase (D intron	0.016	NO	3.05	3.72	-	-	-	no
chr20	39710626	39712000	ENSG00000198900	TOP1	topoisomerase (D intron	0.003	NO	3.19	3.72	-	-	-	no
chr20	43522751	43524500	ENSG00000166913	YWHAB	tyrosine 3-monoc intron	0.001	NO	1.84	3.10	-	-	-	no
chr20	44563876	44565125	ENSG00000100982	PCIF1	PDX1 C-terminal i intron	0.009	NO	2.13	3.30	-	-	-	no
chr20	45785501	45786750	ENSG00000064655	EYA2	eyes absent hom c intron	0.017	NO	11.06	12.39	-	-	-	no
chr20	46142501	46143750	ENSG00000124151	NCOA3	nuclear receptor i intron	0.042	NO	3.62	4.95	-	-	-	no
chr20	46168001	46169250	ENSG00000124151	NCOA3	nuclear receptor i intron	0.025	NO	7.23	8.88	-	-	-	no
chr20	46227001	46228375	ENSG00000124151	NCOA3	nuclear receptor i intron	0.000	NO	5.39	6.61	-	-	-	no
chr20	46224126	46225375	ENSG00000124151	NCOA3	nuclear receptor i intron	0.041	NO	7.51	9.08	-	-	-	no
chr20	46179626	46181250	ENSG00000124151	NCOA3	nuclear receptor i intron	0.001	NO	13.97	16.10	-	-	-	no
chr20	46159626	46160875	ENSG00000124151	NCOA3	nuclear receptor i intron	0.048	NO	11.41	11.97	-	-	-	no
chr20	46227876	46229125	ENSG00000124151	NCOA3	nuclear receptor i intron	0.026	NO	6.52	6.81	-	-	-	no
chr20	46167626	46168875	ENSG00000124151	NCOA3	nuclear receptor i intron	0.025	NO	8.72	9.08	-	-	-	no
chr20	46180626	46182000	ENSG00000124151	NCOA3	nuclear receptor i intron	0.025	NO	9.71	9.91	-	-	-	no
chr20	46179001	46180500	ENSG00000124151	NCOA3	nuclear receptor i intron	0.005	NO	11.77	11.97	-	-	-	no
chr20	46271626	46272875	ENSG00000124151	NCOA3	nuclear receptor i intron	0.041	NO	7.51	7.64	-	-	-	no
chr20	46141876	46143125	ENSG00000124151	NCOA3	nuclear receptor i intron	0.047	NO	5.10	5.16	-	-	-	no
chr20	46231251	46232500	ENSG00000124151	NCOA3	nuclear receptor i intron	0.019	NO	8.37	8.26	-	-	-	no
chr20	46242626	46243875	ENSG00000124151	NCOA3	nuclear receptor i intron	0.023	NO	12.48	12.18	-	-	-	no
chr20	46228876	46230375	ENSG00000124151	NCOA3	nuclear receptor i intron	0.000	NO	6.88	6.61	-	-	-	no
chr20	46202501	46203750	ENSG00000124151	NCOA3	nuclear receptor i intron	0.000	NO	12.26	11.77	-	-	-	no
chr20	46221126	46222375	ENSG00000124151	NCOA3	nuclear receptor i intron	0.040	NO	7.23	6.40	-	-	-	no

chr20	46248876	46250125	ENSG00000124151	NCOA3	nuclear receptor (intron	0.006	NO	7.73	6.81	-	-	-	no
chr20	46221876	46223125	ENSG00000124151	NCOA3	nuclear receptor (intron	0.010	NO	5.46	4.75	-	-	-	no
chr20	46269126	46270375	ENSG00000124151	NCOA3	nuclear receptor (intron	0.040	NO	7.02	5.99	-	-	-	no
chr20	46206001	46207375	ENSG00000124151	NCOA3	nuclear receptor (intron	0.004	NO	10.85	8.88	-	-	-	no
chr20	46230251	46231500	ENSG00000124151	NCOA3	nuclear receptor (intron	0.028	NO	10.35	8.26	-	-	-	no
chr20	46246001	46247250	ENSG00000124151	NCOA3	nuclear receptor (intron	0.029	NO	6.73	5.37	-	-	-	no
chr20	46237126	46238375	ENSG00000124151	NCOA3	nuclear receptor (intron	0.048	NO	8.65	6.61	-	-	-	no
chr20	46184876	46186250	ENSG00000124151	NCOA3	nuclear receptor (intron	0.018	NO	10.56	7.64	-	-	-	no
chr20	46203626	46205000	ENSG00000124151	NCOA3	nuclear receptor (intron	0.010	NO	14.32	9.70	-	-	-	no
chr20	46244876	46246250	ENSG00000124151	NCOA3	nuclear receptor (intron	0.004	NO	7.80	5.16	-	-	-	no
chr20	46165376	46166625	ENSG00000124151	NCOA3	nuclear receptor (intron	0.048	NO	5.67	3.30	-	-	-	no
chr20	53125626	53126875	ENSG00000101134	DOK5	docking protein 5 intron	0.018	NO	3.90	6.61	-	-	-	no
chr20	53135126	53136875	ENSG00000101134	DOK5	docking protein 5 intron	0.000	NO	7.02	11.77	-	-	-	no
chr20	53164126	53165875	ENSG00000101134	DOK5	docking protein 5 intron	0.018	NO	8.37	12.80	-	-	-	no
chr20	53122876	53124125	ENSG00000101134	DOK5	docking protein 5 intron	0.016	NO	4.82	7.23	-	-	-	no
chr20	53223876	53225375	ENSG00000101134	DOK5	docking protein 5 intron	0.000	NO	5.67	8.46	-	-	-	no
chr20	53146626	53148000	ENSG00000101134	DOK5	docking protein 5 intron	0.026	NO	8.93	12.59	-	-	-	no
chr20	53206876	53208125	ENSG00000101134	DOK5	docking protein 5 intron	0.018	NO	7.94	11.15	-	-	-	no
chr20	53158626	53160250	ENSG00000101134	DOK5	docking protein 5 intron	0.000	NO	9.85	13.83	-	-	-	no
chr20	53183501	53184750	ENSG00000101134	DOK5	docking protein 5 intron	0.011	NO	4.32	5.99	-	-	-	no
chr20	53233126	53234500	ENSG00000101134	DOK5	docking protein 5 intron	0.029	NO	4.96	6.81	-	-	-	no
chr20	53126251	53127500	ENSG00000101134	DOK5	docking protein 5 intron	0.019	NO	8.44	11.56	-	-	-	no
chr20	53242376	53243750	ENSG00000101134	DOK5	docking protein 5 intron	0.000	NO	8.93	11.97	-	-	-	no
chr20	53113376	53115000	ENSG00000101134	DOK5	docking protein 5 intron	0.003	NO	10.99	14.24	-	-	-	no
chr20	53128126	53129375	ENSG00000101134	DOK5	docking protein 5 intron	0.010	NO	9.85	12.59	-	-	-	no
chr20	53115876	53117500	ENSG00000101134	DOK5	docking protein 5 intron	0.004	NO	10.21	13.01	-	-	-	no
chr20	53116626	53117875	ENSG00000101134	DOK5	docking protein 5 intron	0.015	NO	4.89	6.19	-	-	-	no
chr20	53184126	53185375	ENSG00000101134	DOK5	docking protein 5 intron	0.003	NO	5.32	6.61	-	-	-	no
chr20	53192126	53193375	ENSG00000101134	DOK5	docking protein 5 intron	0.024	NO	6.66	8.26	-	-	-	no
chr20	53153126	53154625	ENSG00000101134	DOK5	docking protein 5 intron	0.001	NO	8.72	10.73	-	-	-	no
chr20	53211876	53213125	ENSG00000101134	DOK5	docking protein 5 intron	0.047	NO	10.14	12.18	-	-	-	no

chr20	53257501	53258750	ENSG00000101134	DOK5	docking protein 5 intron	0.011	NO	8.58	10.12	-	-	-	no
chr20	53215126	53216500	ENSG00000101134	DOK5	docking protein 5 intron	0.010	NO	10.28	11.97	-	-	-	no
chr20	53246626	53248250	ENSG00000101134	DOK5	docking protein 5 intron	0.018	NO	9.15	10.53	-	-	-	no
chr20	53112751	53114000	ENSG00000101134	DOK5	docking protein 5 intron	0.017	NO	7.51	8.46	-	-	-	no
chr20	53143126	53144375	ENSG00000101134	DOK5	docking protein 5 intron	0.049	NO	10.14	11.35	-	-	-	no
chr20	53176126	53177750	ENSG00000101134	DOK5	docking protein 5 intron	0.000	NO	11.13	12.39	-	-	-	no
chr20	53114251	53115625	ENSG00000101134	DOK5	docking protein 5 intron	0.023	NO	11.34	12.39	-	-	-	no
chr20	53094751	53096125	ENSG00000101134	DOK5	docking protein 5 intron	0.009	NO	10.00	10.73	-	-	-	no
chr20	53193126	53194625	ENSG00000101134	DOK5	docking protein 5 intron	0.000	NO	12.69	13.62	-	-	-	no
chr20	53105001	53106625	ENSG00000101134	DOK5	docking protein 5 intron	0.003	NO	10.42	11.15	-	-	-	no
chr20	53194876	53196250	ENSG00000101134	DOK5	docking protein 5 intron	0.004	NO	7.16	7.64	-	-	-	no
chr20	53174376	53175875	ENSG00000101134	DOK5	docking protein 5 intron	0.018	NO	10.85	11.56	-	-	-	no
chr20	53173876	53175125	ENSG00000101134	DOK5	docking protein 5 intron	0.047	NO	8.93	9.50	-	-	-	no
chr20	53114876	53116125	ENSG00000101134	DOK5	docking protein 5 intron	0.047	NO	11.56	12.18	-	-	-	no
chr20	53103751	53105125	ENSG00000101134	DOK5	docking protein 5 intron	0.019	NO	11.34	11.56	-	-	-	no
chr20	53257001	53258250	ENSG00000101134	DOK5	docking protein 5 intron	0.018	NO	8.93	9.08	-	-	-	no
chr20	53248376	53249625	ENSG00000101134	DOK5	docking protein 5 intron	0.016	NO	6.59	6.61	-	-	-	no
chr20	53147376	53148625	ENSG00000101134	DOK5	docking protein 5 intron	0.048	NO	11.34	10.94	-	-	-	no
chr20	53206251	53207625	ENSG00000101134	DOK5	docking protein 5 intron	0.005	NO	10.99	10.32	-	-	-	no
chr20	53103251	53104500	ENSG00000101134	DOK5	docking protein 5 intron	0.025	NO	10.63	9.91	-	-	-	no
chr20	53137376	53138625	ENSG00000101134	DOK5	docking protein 5 intron	0.040	NO	8.51	7.84	-	-	-	no
chr20	53118376	53119625	ENSG00000101134	DOK5	docking protein 5 intron	0.023	NO	9.57	8.67	-	-	-	no
chr20	53245251	53246500	ENSG00000101134	DOK5	docking protein 5 intron	0.028	NO	12.05	10.53	-	-	-	no
chr20	53106251	53107500	ENSG00000101134	DOK5	docking protein 5 intron	0.043	NO	9.57	7.64	-	-	-	no
chr20	56931501	56932750	ENSG00000124209	RAB22A	RAB22A, member intron	0.004	NO	1.49	3.10	-	-	-	no
chr20	57259751	57261125	ENSG00000254995	STX16-NPI	STX16-NPEPL1 re:intron	0.004	NO	2.20	4.13	-	-	-	no
chr20	25525001	25526250	ENSG00000101004	NINL	ninein-like [Source: Ensembl] intron	0.038	NO	0.50	1.86	-	-	-	no
chr20	40170251	40171500	ENSG00000124177	CHD6	chromodomain h intron	0.006	NO	1.35	3.51	-	-	-	no
chr20	40169251	40170625	ENSG00000124177	CHD6	chromodomain h intron	0.000	NO	1.98	3.92	-	-	-	no
chr20	40199876	40201375	ENSG00000124177	CHD6	chromodomain h intron	0.002	NO	2.06	3.30	-	-	-	no
chr20	40139376	40140625	ENSG00000124177	CHD6	chromodomain h intron	0.040	NO	2.34	2.27	-	-	-	no

chr20	41087376	41088750	ENSG00000196090	PTPRT	protein tyrosine ζ intron	0.025	NO	1.91	5.16	-	-	-	no
chr20	41086751	41088000	ENSG00000196090	PTPRT	protein tyrosine ζ intron	0.016	NO	2.13	5.16	-	-	-	no
chr20	40775126	40776750	ENSG00000196090	PTPRT	protein tyrosine ζ intron	0.004	NO	2.55	5.78	-	-	-	no
chr20	40720251	40721625	ENSG00000196090	PTPRT	protein tyrosine ζ intron	0.016	NO	1.56	3.30	-	-	-	no
chr20	40903501	40905000	ENSG00000196090	PTPRT	protein tyrosine ζ intron	0.003	NO	1.49	3.10	-	-	-	no
chr20	41027876	41029750	ENSG00000196090	PTPRT	protein tyrosine ζ intron	0.000	NO	1.84	3.72	-	-	-	no
chr20	41122251	41123625	ENSG00000196090	PTPRT	protein tyrosine ζ intron	0.000	NO	2.34	2.68	-	-	-	no
chr20	40831626	40833000	ENSG00000196090	PTPRT	protein tyrosine ζ intron	0.005	NO	4.40	4.95	-	-	-	no
chr22	19450501	19451750	ENSG00000070010	UFD1L	ubiquitin fusion d intron	0.028	NO	0.50	2.06	-	-	-	no
chr3	1421876	1423125	ENSG00000134115	CNTN6	contactin 6 [Source: intron	0.021	NO	1.06	3.30	-	-	-	no
chr3	2854751	2856000	ENSG00000144619	CNTN4	contactin 4 [Source: intron	0.043	NO	0.92	2.27	-	-	-	no
chr3	2277126	2278625	ENSG00000144619	CNTN4	contactin 4 [Source: intron	0.037	NO	1.28	2.89	-	-	-	no
chr3	7102376	7103625	ENSG00000196277	GRM7	glutamate recepti intron	0.040	NO	0.78	3.30	-	-	-	no
chr3	7730251	7731500	ENSG00000196277	GRM7	glutamate recepti intron	0.025	NO	1.42	3.51	-	-	-	no
chr3	7641001	7642250	ENSG00000196277	GRM7	glutamate recepti intron	0.025	NO	1.42	2.48	-	-	-	no
chr3	9461126	9462375	ENSG00000168137	SETD5	SET domain conta intron	0.041	NO	0.92	2.68	-	-	-	no
chr3	19219251	19220500	ENSG00000183960	KCNH8	potassium voltage intron	0.044	NO	1.13	2.89	-	-	-	no
chr3	38238876	38240125	ENSG00000172939	OXSRI	oxidative-stress r intron	0.049	NO	0.92	2.06	-	-	-	no
chr3	50051126	50052375	ENSG00000004534	RBM6	RNA binding moti intron	0.029	NO	0.14	1.45	-	-	-	no
chr3	63215501	63216750	ENSG00000163630	SYNPR	synaptoporin [Soi intron	0.003	NO	3.90	7.23	-	-	-	no
chr3	63455751	63457000	ENSG00000163630	SYNPR	synaptoporin [Soi intron	0.004	NO	3.69	6.81	-	-	-	no
chr3	63220751	63222000	ENSG00000163630	SYNPR	synaptoporin [Soi intron	0.012	NO	3.33	5.99	-	-	-	no
chr3	63220251	63221500	ENSG00000163630	SYNPR	synaptoporin [Soi intron	0.004	NO	3.90	6.61	-	-	-	no
chr3	63566001	63567250	ENSG00000163630	SYNPR	synaptoporin [Soi intron	0.009	NO	4.61	6.19	-	-	-	no
chr3	63376251	63377750	ENSG00000163630	SYNPR	synaptoporin [Soi intron	0.004	NO	5.74	7.43	-	-	-	no
chr3	63512001	63513250	ENSG00000163630	SYNPR	synaptoporin [Soi intron	0.006	NO	5.46	7.02	-	-	-	no
chr3	63919501	63920750	ENSG00000163635	ATXN7	ataxin 7 [Source: f intron	0.022	NO	7.16	8.26	-	-	-	no
chr3	63919001	63920250	ENSG00000163635	ATXN7	ataxin 7 [Source: f intron	0.030	NO	7.73	7.64	-	-	-	no
chr3	63894751	63896250	ENSG00000163635	ATXN7	ataxin 7 [Source: f intron	0.008	NO	7.59	7.43	-	-	-	no
chr3	77448126	77449375	ENSG00000185008	ROBO2	roundabout, axor intron	0.031	NO	0.64	2.68	-	-	-	no
chr3	85291126	85292375	ENSG00000175161	CADM2	cell adhesion mol intron	0.032	NO	0.21	1.45	-	-	-	no

chr3	85714126	85715375	ENSG00000175161	CADM2	cell adhesion mol	intron	0.032	NO	0.35	1.86	-	-	-	no
chr3	86022126	86023375	ENSG00000175161	CADM2	cell adhesion mol	intron	0.032	NO	0.85	2.06	-	-	-	no
chr3	97124876	97126125	ENSG00000080224	EPHA6	EPH receptor A6	[intron	0.032	NO	0.28	2.06	-	-	-	no
chr3	107365626	107366875	ENSG00000114439	BBX	bobby sox homol	intron	0.033	NO	0.50	2.68	-	-	-	no
chr3	151473126	151474375	ENSG00000197953	AADACL2	arylacetamide de	intron	0.034	NO	1.42	2.48	-	-	-	no
chr3	158722376	158723625	ENSG00000214216	IQCJ	IQ motif containir	intron	0.034	NO	0.99	2.89	-	-	-	no
chr3	160645501	160646750	ENSG00000163590	PPM1L	protein phosphat	intron	0.015	NO	0.71	2.48	-	-	-	no
chr3	17970501	17971750	ENSG00000131374	TBC1D5	TBC1 domain fam	intron	0.043	NO	0.50	2.27	-	-	-	no
chr3	18246376	18247625	ENSG00000131374	TBC1D5	TBC1 domain fam	intron	0.026	NO	0.71	2.06	-	-	-	no
chr3	18429876	18431125	ENSG00000131374	TBC1D5	TBC1 domain fam	intron	0.042	NO	0.99	2.27	-	-	-	no
chr3	25768126	25769375	ENSG00000151092	NGLY1	N-glycanase 1	[So intron	0.046	NO	1.13	1.86	-	-	-	no
chr3	118677501	118678750	ENSG00000144847	IGSF11	immunoglobulin s	intron	0.018	NO	0.57	1.86	-	-	-	no
chr3	131660126	131661375	ENSG00000196353	CPNE4	copine IV	[Source intron	0.033	NO	0.99	1.65	-	-	-	no
chr3	137801001	137802250	ENSG00000158163	DZIP1L	DAZ interacting p	intron	0.013	NO	1.06	2.27	-	-	-	no
chr3	139240251	139241500	ENSG00000114115	RBP1	retinol binding pr	intron	0.037	NO	0.85	2.06	-	-	-	no
chr3	165506001	165507250	ENSG00000114200	BCHE	butyrylcholineste	intron	0.026	NO	0.99	2.48	-	-	-	no
chr3	170736876	170738125	ENSG00000163581	SLC2A2	solute carrier fam	intron	0.034	NO	0.85	3.30	-	-	-	no
chr3	197411501	197412750	ENSG00000145016	KIAA0226	KIAA0226	[Source intron	0.016	NO	1.28	3.72	-	-	-	no
chr4	144437126	144438375	ENSG00000153147	SMARCA5	SWI/SNF related,	intron	0.034	NO	0.64	2.68	-	-	-	no
chr4	148990376	148991625	ENSG00000071205	ARHGAP11	Rho GTPase activi	intron	0.040	NO	0.28	2.27	-	-	-	no
chr4	174464001	174465250	ENSG00000237125	RP11-471J12.1		intron	0.005	NO	0.28	2.06	-	-	-	no
chr4	5618376	5619750	ENSG00000173040	EVC2	Ellis van Creveld s	intron	0.006	NO	0.50	2.27	-	-	-	no
chr4	155258001	155259375	ENSG00000197410	DCHS2	dachsous 2 (Dros	intron	0.017	NO	1.13	1.65	-	-	-	no
chr6	7112001	7113250	ENSG00000124782	RREB1	ras responsive ele	intron	0.026	NO	0.85	2.06	-	-	-	no
chr7	1571001	1572250	ENSG00000198517	MAFK	v-maf musculoapi	intron	0.006	NO	2.76	4.95	-	-	-	no
chr8	121682126	121683375	ENSG00000172164	SNTB1	syntrophin, beta	intron	0.019	NO	1.28	2.27	-	-	-	no
chr1	116913751	116915125	ENSG00000163399	ATP1A1	ATPase, Na ⁺ /K ⁺ ti	promot	0.002	NO	4.04	4.13	-	-	-	no
chr11	120206251	120207500	ENSG00000196914	ARHGEF12	Rho guanine nucl	promot	0.021	NO	1.42	2.89	-	-	-	no
chr22	41843126	41844375	ENSG00000183864	TOB2	transducer of ERE	promot	0.008	NO	1.56	3.92	-	-	-	no
chr1	168521251	168522500	ENSG00000143185	XCL2	chemokine (C mo	upstre	0.023	NO	0.71	2.89	-	-	-	no
chr14	105281751	105283000	ENSG00000258701	LINC00638	long intergenic nc	upstre	0.013	NO	2.20	5.16	-	-	-	no

chr15	50565376	50566625	ENSG00000140287	HDC	histidine decarboxylase upstream	0.035	NO	1.42	2.68	-	-	-	no
chr17	19308751	19310000	ENSG00000128482	RNF112	ring finger protein upstream	0.041	NO	0.14	2.06	-	-	-	no
chr17	58668376	58669625	ENSG00000170836	PPM1D	protein phosphatase upstream	0.035	NO	9.92	8.67	-	-	-	no
chr18	11154251	11155500	ENSG00000154864	PIEZO2	piezo-type mechanosensory channel upstream	0.048	NO	0.92	2.68	-	-	-	no
chr19	36192751	36194000	ENSG00000011590	ZBTB32	zinc finger and BTB domain protein upstream	0.006	NO	1.35	2.27	-	-	-	no
chr19	58985376	58986625	ENSG00000083838	ZNF446	zinc finger protein upstream	0.019	NO	0.21	2.48	-	-	-	no
chr20	3020376	3021750	ENSG00000125787	GNRH2	gonadotropin-releasing hormone 2 upstream	0.001	NO	0.21	2.06	-	-	-	no
chr20	46127626	46128875	ENSG00000124151	NCOA3	nuclear receptor corepressor 3 upstream	0.040	NO	2.41	4.95	-	-	-	no
chr20	53083251	53084500	ENSG00000101134	DOK5	docking protein 5 upstream	0.000	NO	11.70	10.94	-	-	-	no
chr20	53089876	53091125	ENSG00000101134	DOK5	docking protein 5 upstream	0.048	NO	9.92	8.67	-	-	-	no
chr3	64012251	64013750	ENSG00000163636	PSMD6	proteasome (prosome) subunit 6 upstream	0.001	NO	14.39	12.80	-	-	-	no
chr3	64016501	64018250	ENSG00000163636	PSMD6	proteasome (prosome) subunit 6 upstream	0.007	NO	13.12	11.56	-	-	-	no
chr4	148644251	148645500	ENSG00000071205	ARHGAP10	Rho GTPase activator 10 upstream	0.030	NO	0.43	2.06	-	-	-	no
chr6	40298751	40300125	ENSG00000204091	TDRG1	testis development regulator 1 upstream	0.040	NO	0.71	2.27	-	-	-	no
chr8	105482501	105483750	ENSG00000147647	DPYS	dihydropyrimidinase upstream	0.026	NO	1.98	4.34	-	-	-	no
chr3	196044501	196045750	ENSG00000213123	TCTEX1D2	Tctex1 domain containing 2 5'UTR	0.000	YES	4.25	7.02	-	-	-	na
chr5	217626	219000	ENSG00000073578	SDHA	succinate dehydrogenase subunit A 5'UTR	0.000	YES	1.56	4.34	-	-	-	na
chr1	16939376	16940750	ENSG00000219481	NBPF1	neuroblastoma breakpoint family protein 1 exon	0.000	YES	2.13	6.40	-	-	-	na
chr7	55954501	55955875	ENSG00000178665	ZNF713	zinc finger protein 713 5'UTR	0.000	YES	0.85	3.30	-	-	-	na
chr8	125191751	125193125	ENSG00000253868	FER1L6-AS1	FER1L6 antisense 1 upstream	0.000	YES	2.69	5.16	-	-	-	na
chr1	149223126	149224750	ENSG00000206737	RNU1-5	RNA, U1 small nuclear RNA 5'UTR	0.000	YES	12.76	9.91	-	-	-	na
chr2	198363876	198365500	ENSG00000115541	HSPE1	heat shock 10kDa protein 1 5'UTR	0.000	YES	16.31	40.25	-	-	-	na
chr19	41283376	41284750	ENSG00000167578	RAB4B	RAB4B, member RAB4 family, small GTPase 5'UTR	0.000	NO	2.41	3.72	-	-	-	na
chr19	58789501	58790875	ENSG00000267216	AC010642	Uncharacterized protein 5'UTR	0.000	NO	3.26	4.13	-	-	-	na
chr2	86789876	86791250	ENSG00000115561	CHMP3	charged multivesicular body protein 3 5'UTR	0.000	NO	4.47	4.75	-	-	-	na
chr20	34252126	34253500	ENSG00000214078	CPNE1	copine I [Source:Ensembl] 5'UTR	0.011	NO	3.12	3.72	-	-	-	na
chr3	9856751	9858000	ENSG00000214021	TTLL3	tubulin tyrosine lyase 3 exon	0.038	NO	2.06	3.51	-	-	-	na
chr1	231774501	231775750	ENSG00000162946	DISC1	disrupted in schizophrenia 1 intron	0.049	NO	0.21	1.86	-	-	-	na
chr20	35213501	35214875	ENSG00000118707	TGIF2	TGF-beta-induced factor 2 intron	0.024	NO	1.84	2.06	-	-	-	na

Table S6. Identification of over-represented transcription factor motifs within PKC- θ binding genes.										
TF Familie	Nr. of Input	Nr. of Match	Expected (log)	Over represented	Z-Score (log)	Expected (log)	Over represented	Z-Score (log)	Description	Binding Factors
V\$ZF5F	51	498	17.62	28.26	114.34	147.37	3.38	28.87	ZF5 POZ domain zinc finger	Zfp161
V\$E2FF	65	741	109.87	6.74	60.21	295.89	2.5	25.9	E2F-myc activator/cell cycle regulator	E2f1, E2f2, E2f3, E2f4, E2f5, E2f6, E2f7, E2f8, Tfdp1, Tfdp2, Tfdp3
V\$ZF02	67	787	113.68	6.92	63.15	345.01	2.28	23.83	C2H2 zinc finger transcription factors 2	Slc12ab, Zbtb7a, Zbtb7b, Zkscan3, Znf148, Znf219, Znf202, Znf281, Znf300
V\$EGRF	63	658	75.51	8.71	67.01	271	2.43	23.52	EGR/nerve growth factor induced protein C & related factors	Egr1, Egr2, Egr4, Egr3, Wt1
V\$SP1F	63	606	75.75	8	60.9	245.08	2.47	23.06	GC-Box factors SP1/GC	Cdca7l, Eapp, Klf10, Klf11, Klf16, Klf5, Sp1, Sp2, Sp3, Sp4, Sp5, Sp6, Sp7, Sp8
V\$NRF1	45	304	6.9	44.08	112.95	93.91	3.24	21.64	Nuclear respiratory factor 1	Nrf1
V\$CTCF	65	462	49.03	9.42	58.92	182.25	2.53	20.71	CTCF and BORIS gene family, transcriptional regulators with 11 highly conserved zinc finger domains	Ctcf, Ctcf1
V\$PLAG	62	452	76.22	5.93	43.01	196.65	2.3	18.2	Pleomorphic adenoma gene	Plag1, Plagl1, Plagl2
V\$HDBP	45	169	5.31	31.85	70.84	51.45	3.29	16.33	Huntington's disease gene regulatory region binding proteins	Slc2a4rg, Znf395
V\$MAZF	57	316	40.86	7.73	42.98	132.58	2.38	15.9	Myc associated zinc fingers	Maz, Patz1
V\$KLFS	67	592	191.19	3.1	28.99	341.45	1.73	13.57	Krueppel like transcription factors	Klf1, Klf12, Klf13, Klf15, Klf2, Klf3, Klf4, Klf6, Klf7, Klf8, Klf9
V\$AP2F	59	305	58.65	5.2	32.12	150.35	2.03	12.58	Activator protein 2	Tfap2a, Tfap2b, Tfap2c, Tfap2d, Tfap2e
V\$NDPK	55	224	31.28	7.16	34.38	101	2.22	12.2	Nucleoside diphosphate kinase	Nme1, Nme2
V\$CDEF	43	85	5.14	16.53	34.99	30.78	2.76	9.68	Cell cycle regulators: Cell cycle dependent element	not known
V\$DEAF	48	84	10.48	8.02	22.56	31.87	2.64	9.15	Homolog to deformed epidermal autoregulatory factor-1 from D. melanogaster	Deaf1
V\$NFkB	56	185	67.94	2.72	14.15	102.97	1.8	8.04	Nuclear factor kappa B/c-rel	Hivep1, Hivep2, Hivep3, Nfkb1, Nfkb2, Rel, Rela, Relb
V\$ZF07	49	139	25.79	5.39	22.2	71.4	1.95	7.94	C2H2 zinc finger transcription factors 7	Znf263
V\$NOLF	56	156	42.19	3.7	17.45	83.25	1.87	7.92	Neuron-specific olfactory factor	Ebf1, Ebf2, Ebf3, Ebf4
V\$NRSF	54	161	41.94	3.84	18.31	87.18	1.85	7.86	Neuron-restrictive silencer factor	Rest
V\$WHNF	43	81	9.88	8.2	22.46	36.65	2.21	7.25	Winged helix binding sites	Foxn1, Foxn2
V\$HESF	54	185	59.7	3.1	16.16	109	1.7	7.24	Vertebrate homologues of enhancer of split complex	Hes1, Hes2, Hey1, Hey2, Helt, Itgb3bp
V\$AHRR	54	139	35.73	3.89	17.2	75.83	1.83	7.2	AHR-arnt heterodimers and AHR-related factors	Ahr, Arnt, Npas4, Sim1, Sim2
V\$ZF57	38	76	13.49	5.63	16.88	34.12	2.23	7.09	KRAB domain zinc finger protein 57	Zfp57