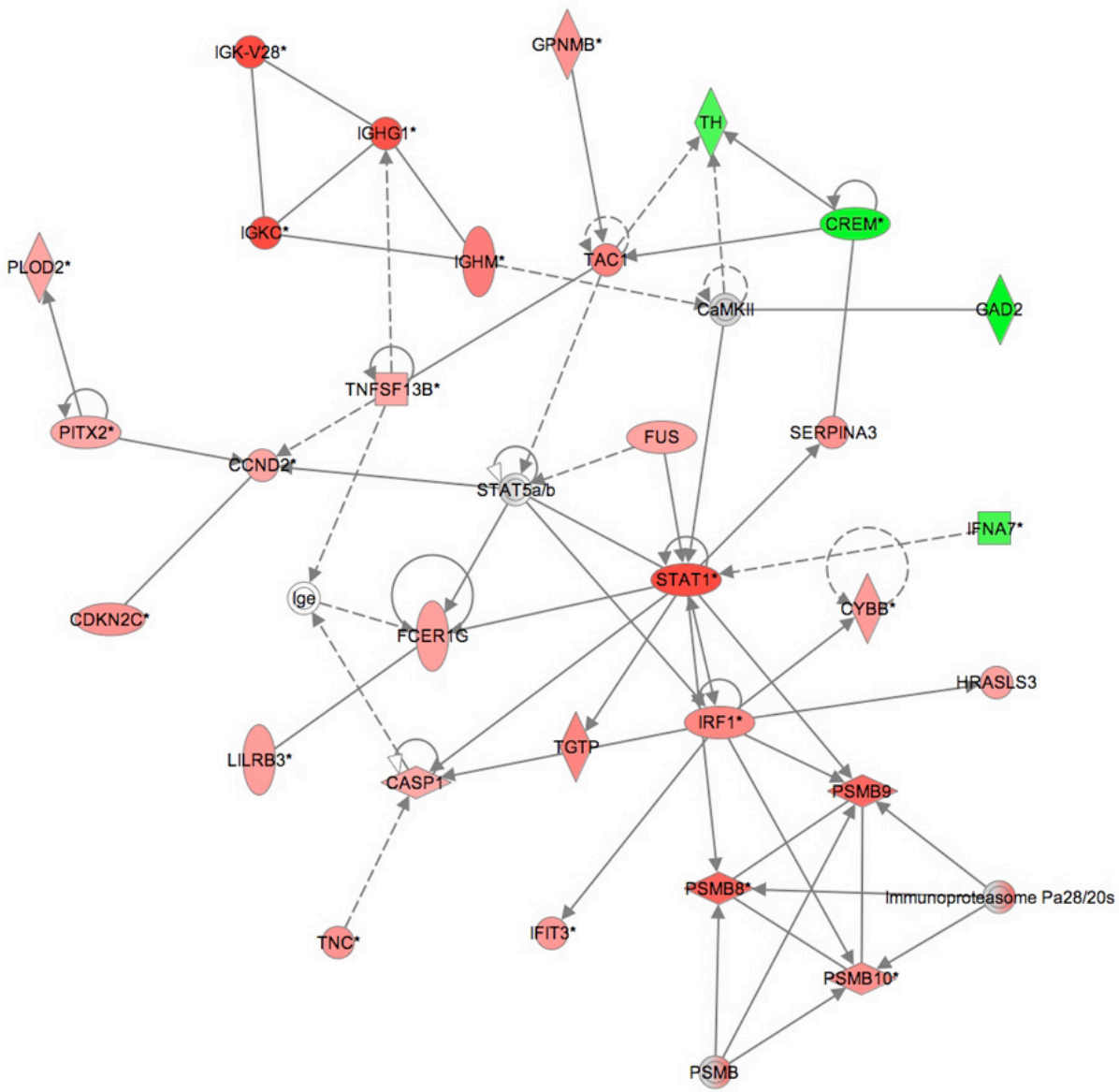
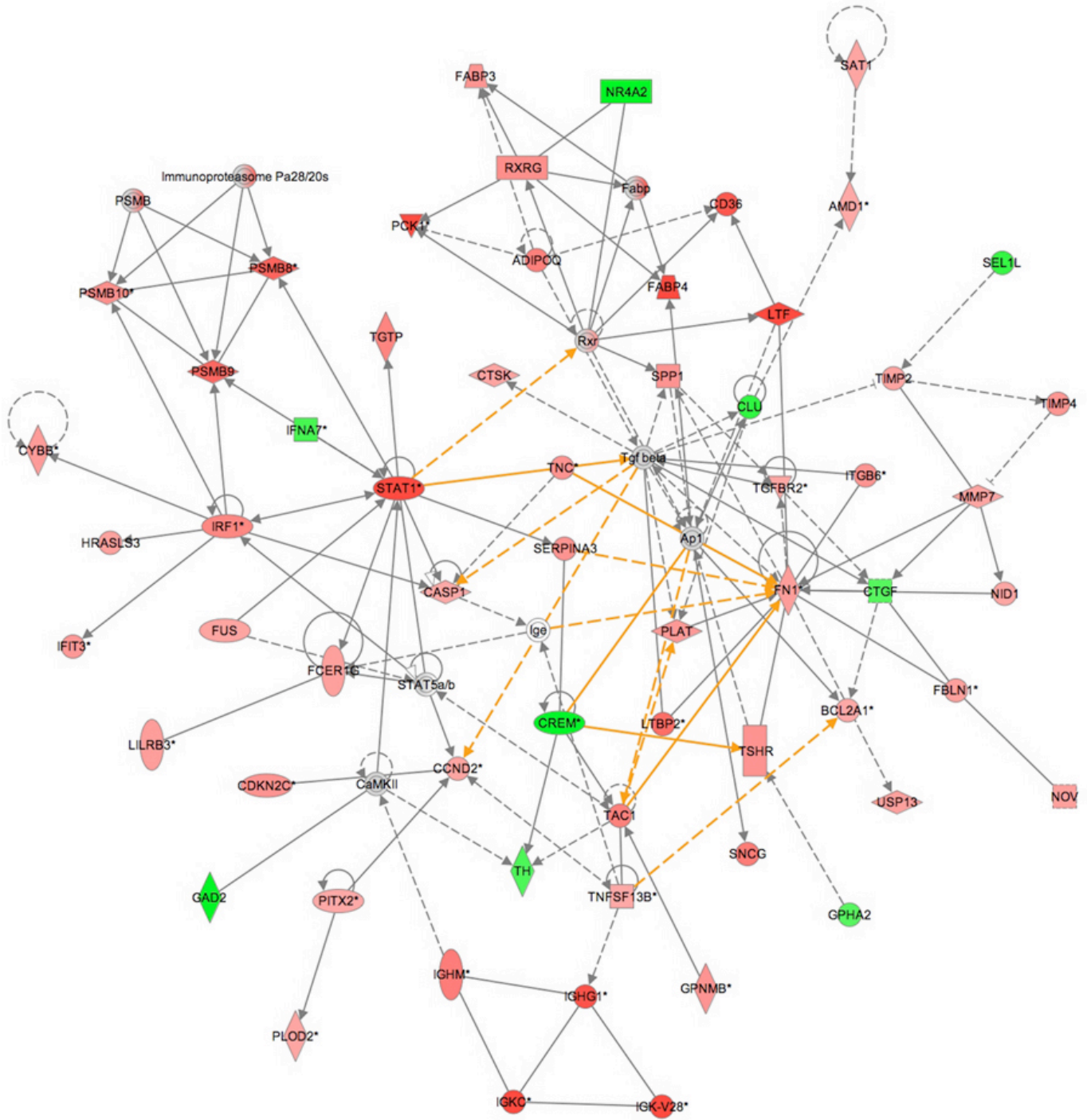


Supplementary data figure 1: Fig. 5A. Network 2.

The network is a graphical representation of the molecular relationships between genes or gene products (Ingenuity® Systems, www.ingenuity.com). Genes or gene products are represented as nodes, and the biological relationship between two nodes is represented as an edge (line). All edges are supported by at least 1 reference from the literature, from a textbook, or from canonical information stored in the Ingenuity Pathways Knowledge Base. The node color indicates up- (red) or down- (green) regulation. Nodes are displayed using various shapes that represent the functional class of the gene product.



Supplementary data figure 2: Fig. 5A. Network 3



Supplementary data figure 3: Fig. 5A. Network 2&3 merge

Supplemental Table 1. Prostate cancer-related genes

Name	Description	Fold Change	p-value	Entrez Gene ID (Human)
ACTC1	actin, alpha, cardiac muscle 1	4.023	0.018	70
AGTR1	angiotensin II receptor, type 1	2.536	0.009	185
AMD1	adenosylmethionine decarboxylase 1	1.515	0.013	262
APOD	apolipoprotein D	2.831	0.02	347
ARHGDI2B	Rho GDP dissociation inhibitor (GDI) beta	1.528	0.016	397
C3	complement component 3	1.77	0.005	718
C1R	complement component 1, r subcomponent	-1.729	0.046	715
CD74	CD74 molecule	1.906	0.031	972
CFH	complement factor H	1.69	0.002	3075
CLU	clusterin	-1.764	0.009	1191
EDNRB	endothelin receptor type B	1.64	0.005	1910
EPHA4	EPH receptor A4	1.535	0.016	2043
FABP4	fatty acid binding protein 4, adipocyte	3.294	0.003	2167
GBP2	guanylate binding protein 2, interferon-inducible	1.852	0.015	2634
GPX3	glutathione peroxidase 3 (plasma)	1.693	0.026	2878
HDAC9	histone deacetylase 9	2.022	0.002	9734
HDAC7A	histone deacetylase 7A	-1.518	0.012	51564
IBSP	integrin-binding sialoprotein (bone sialoprotein)	3.13	0.001	3381
IGF1	insulin-like growth factor 1 (somatomedin C)	1.614	0.01	3479
IRF1	interferon regulatory factor 1	2.06	0.004	3659
KLK3	kallikrein-related peptidase 3	1.845	0.005	354
KRT7	keratin 7	1.922	0.002	3855
LTF	lactotransferrin	12.049	0.013	4057
MMP7	matrix metalloproteinase 7 (matrilysin, uterine)	1.608	0.013	4316
PLEKHB1	pleckstrin homology domain containing, family B	1.534	0.007	58473
PPARG	peroxisome proliferator-activated receptor gamma	2.088	0.006	5468
PSAT1	phosphoserine aminotransferase 1	-1.64	0.025	29968
RNASEL	ribonuclease L	1.631	0.007	6041
SAT1	spermidine/spermine N1-acetyltransferase 1	1.555	0.012	6303
SERPINB1	serpin peptidase inhibitor	1.886	0.006	1992
SIM2	single-minded homolog 2 (Drosophila)	3.014	0.024	6493
SPP1	secreted phosphoprotein 1	1.863	0.025	6696
WFDC2	WAP four-disulfide core domain 2	1.941	0.004	10406

Supplemental Table 2. Inflammation-related genes

Name	Description	Fold Change	p-value	Entrez Gene ID (Human)
ABCB4	ATP-binding cassette, sub-family B (MDR/TAP)	2.099	0.036	5244
ARG1	arginase, liver	1.542	0.019	383
C3	complement component 3	1.77	0.005	718
C1QA	complement component 1, q subcomponent, A chain	1.504	0.007	712
C4B	complement component 4B (Chido blood group)	2.211	0.003	721
CASP1	caspase 1	1.502	0.027	834
CCL11	chemokine (C-C motif) ligand 11	1.984	0.047	6356
CD1D	CD1d molecule	2.033	0.009	912
CFH	complement factor H	1.69	0.002	3075
CLU	clusterin	-1.764	0.009	1191
CTSS	cathepsin S	1.872	0.009	1520
CYBB	cytochrome b-245, beta polypeptide	1.731	0.003	1536
FCER1G	Fc fragment of IgE	1.661	0.007	2207
GAD2	glutamate decarboxylase 2	-2.445	0.001	2572
HPR	haptoglobin-related protein	2.722	0	3250
HSPA5	heat shock 70kDa protein 5	-2.209	0.002	3309
IGF1	insulin-like growth factor 1	1.614	0.01	3479
IGHM	immunoglobulin heavy constant mu	2.226	0.002	3507
ITGB1	integrin, beta 1	-1.591	0.018	3688
ITGB2	integrin, beta 2	1.586	0.013	3689
LEP	leptin	2.678	0.016	3952
LGALS3	lectin, galactoside-binding, soluble, 3	2.373	0.007	3958
LTC4S	leukotriene C4 synthase	1.787	0.038	4056
LTF	lactotransferrin	12.049	0.013	4057
MBP	myelin basic protein	1.763	0.043	4155
MME	membrane metallo-endopeptidase	1.759	0.005	4311
PLA2G7	phospholipase A2, group VII	1.823	0.007	7941
PLAT	plasminogen activator, tissue	1.775	0.005	5327
PPARG	peroxisome proliferator-activated receptor gamma	2.088	0.006	5468
PPT2	palmitoyl-protein thioesterase 2	-1.554	0.014	9374
PTGS1	prostaglandin-endoperoxide synthase 1	-1.51	0.021	5742
RASGRP1	RAS guanyl releasing protein 1	-2.333	0.023	10125
SFTPD	surfactant, pulmonary-associated protein D	1.554	0.012	6441
SPP1	secreted phosphoprotein 1	1.863	0.025	6696
STAT1	signal transducer and activator of transcription 1, 91kDa	3.033	0.012	6772
SYVN1	synovial apoptosis inhibitor 1, synoviolin	-2.492	0.001	84447
TAC1	tachykinin, precursor 1	2.161	0.001	6863
TAP1	transporter 1, ATP-binding cassette, sub-family B (MDR/TAP)	2.059	0.01	6890
TGFBR2	transforming growth factor, beta receptor II	1.548	0.014	7048
TGM2	transglutaminase 2	1.519	0.01	7052
TLR2	toll-like receptor 2	1.584	0.01	7097
TNFSF10	tumor necrosis factor (ligand) superfamily, member 10	1.627	0.017	8743
TYROBP	TYRO protein tyrosine kinase binding protein	1.827	0.002	7305

Supplemental Table 3. Genes in network 2 and 3

Name	Description	Fold Change	p-value	Network	Entrez Gene ID (Human)
ADIPOQ	adiponectin	2.19	0.02	2	9370
BCL2A1	BCL2-related protein A1	1.507	0.027	2	597
CD36	CD36 molecule	2.805	0.004	2	948
CLU	clusterin	-1.764	0.009	2	1191
CTGF	connective tissue growth factor	-1.534	0.006	2	1490
CTSK	cathepsin K	1.585	0.009	2	1513
FABP3	fatty acid binding protein 3	1.836	0.014	2	2170
FABP4	fatty acid binding protein 4, adipocyte	3.294	0.003	2	2167
FBLN1	fibulin 1	1.657	0.003	2	2192
FN1	fibronectin 1	1.694	0.004	2	2335
GPHA2	glycoprotein hormone alpha 2	-1.518	0.02	2	170589
ITGB6	integrin, beta 6	1.855	0.003	2	3694
LTBP2	latent transforming growth factor beta binding protein 2	2.492	0.001	2	4053
MMP7	matrix metalloproteinase 7	1.608	0.013	2	4316
NID1	nidogen 1	1.563	0.017	2	4811
NOV	nephroblastoma overexpressed gene	1.66	0.015	2	4856
NR4A2	nuclear receptor subfamily 4	-2.244	0.002	2	4929
PLAT	plasminogen activator, tissue	1.775	0.005	2	5327
RXRG	retinoid X receptor, gamma	1.93	0.002	2	6258
SAT1	spermidine/spermine N1-acetyltransferase 1	1.555	0.012	2	6303
SPP1	secreted phosphoprotein 1	1.863	0.025	2	6696
TGFBR2	transforming growth factor, beta receptor II	1.548	0.014	2	7048
TIMP2	TIMP metalloproteinase inhibitor 2	1.593	0.008	2	7077
TIMP4	TIMP metalloproteinase inhibitor 4	1.831	0.019	2	7079
USP13	ubiquitin specific peptidase 13 (isopeptidase T-3)	1.657	0.02	2	8975
CASP1	caspase 1, apoptosis-related cysteine peptidase	1.502	0.027	3	834
CCND2	cyclin D2	1.569	0.004	3	894
CDKN2C	cyclin-dependent kinase inhibitor 2C	1.874	0.001	3	1031
CREM	cAMP responsive element modulator	-1.936	0.001	3	1390
CYBB	cytochrome b-245, beta polypeptide	1.731	0.003	3	1536
FCER1G	Fc fragment of IgE	1.661	0.007	3	2207
FUS	fusion	1.605	0.004	3	2521
GAD2	glutamate decarboxylase 2	-2.445	0.001	3	2572
GPNMB	glycoprotein nmb	1.857	0.009	3	10457
HRASLS3	HRAS-like suppressor 3	1.626	0.011	3	11145
IFIT3	interferon-induced protein with tetratricopeptide repeats 3	1.782	0.019	3	3437
IFNA7	interferon, alpha 7	-1.628	0.007	3	3444
IGHM	immunoglobulin heavy constant mu	2.226	0.002	3	3507
IGKC	immunoglobulin kappa constant	3.391	0.001	3	3514
IRF1	interferon regulatory factor 1	2.06	0.004	3	3659
LILRB3	leukocyte immunoglobulin-like receptor	1.688	0.004	3	11025
PITX2	paired-like homeodomain transcription factor 2	1.51	0.028	3	5308
PLOD2	procollagen-lysine, 2-oxoglutarate 5-dioxygenase 2	1.553	0.02	3	5352
PSMB8	proteasome subunit, beta type, 8	2.619	0.01	3	5696
PSMB9	proteasome subunit, beta type, 9	2.569	0.002	3	5698
PSMB10	proteasome subunit, beta type, 10	1.934	0.001	3	5699
SERPINA3	serpin peptidase inhibitor, clade A	1.876	0.001	3	12
STAT1	signal transducer and activator of transcription 1	3.033	0.012	3	6772
TH	tyrosine hydroxylase	-1.586	0.008	3	7054
TNC	tenascin C (hexabrachion)	1.873	0.004	3	3371
TNFSF13B	tumor necrosis factor 13b	1.518	0.012	3	10673

Supplemental Table 4. The expression levels of multiple genes in NF- κ B-mediated pathway are elevated in the prostate gland of Vav3 transgenic mice.

Oligo ID	Accession	Gene Name	symbol	TG/WT	p.value
mMR026458	NM_009742	B-cell leukemia/lymphoma 2A1a	Bcl2a1a	1.51	0.0271643
mMR026911	NM_007534	B-cell leukemia/lymphoma 2A1b	Bcl2a1b	1.43	0.0564063
mMR028756	NM_007536	B-cell leukemia/lymphoma 2A1d	Bcl2a1d	1.35	0.0967898
mMR029813	NM_011124	chemokine (C-C motif) ligand 21b	Ccl21b	1.34	0.0244349
mMR029936	NM_023052	chemokine (C-C motif) ligand 21c	Ccl21c	1.51	0.0065963
mMC015327	NM_009139	chemokine (C-C motif) ligand 6	Ccl6	1.59	0.0445995
mMC018241	NM_021443	chemokine (C-C motif) ligand 8	Ccl8	3.19	0.001913
mMC011417	NM_011338	chemokine (C-C motif) ligand 9	Ccl9	1.93	0.0010844
mMC019538	NM_009917	chemokine (C-C motif) receptor 5	Ccr5	1.41	0.0274764
mMC009388	NM_009987	chemokine (C-X3-C) receptor 1	Cx3cr1	1.76	0.0075135
mMC009720	NM_018866	chemokine (C-X-C motif) ligand 13	Cxcl13	1.82	0.0049747
mMR030424	NM_019568	chemokine (C-X-C motif) ligand 14	Cxcl14	1.47	0.025979
mMC011383	NM_019568	chemokine (C-X-C motif) ligand 14	Cxcl14	1.33	0.0520974
mMC002432	NM_011339	chemokine (C-X-C motif) ligand 15	Cxcl15	1.87	0.0257997
mMC012732	NM_019932	chemokine (C-X-C motif) ligand 4	Cxcl4	1.28	0.0460845
mMC016261	NM_023785	chemokine (C-X-C motif) ligand 7	Cxcl7	1.54	0.0807087
mMR028932	NM_008599	chemokine (C-X-C motif) ligand 9	Cxcl9	2.37	0.0154008
mMC016480	NM_009910	chemokine (C-X-C motif) receptor 3	Cxcr3	1.29	0.0648933
mMC008605	NM_007778	colony stimulating factor 1	Csf1	1.35	0.0322997
mMC012508	NM_007779	colony stimulating factor 1 receptor	Csf1r	1.50	0.0103233
mMA032118	NM_010140	Eph receptor A3	Epha3	1.59	0.0230165
mMR028978	NM_007936	Eph receptor A4	Epha4	1.54	0.0164085
mMC016646	NM_007912	epidermal growth factor receptor	Egfr	1.27	0.0640235
mMA034894	BC030485	fibroblast growth factor 12	Fgf12	1.43	0.0249133
mMC007281	NM_010207	fibroblast growth factor receptor 2	Fgfr2	1.30	0.0443986
mMC007222	NM_007836	growth arrest-DNA-damage-inducible 45a	Gadd45a	1.45	0.0111434
mMA032885	M64404	interleukin 1 receptor antagonist	Il1rn	1.25	0.0953925
mMC016450	NM_008348	interleukin 10 receptor, alpha	Il10ra	1.33	0.0837505
mMC020667	NM_008349	interleukin 10 receptor, beta	Il10rb	1.46	0.0164681
mMR028239	NM_010549	interleukin 11 receptor, alpha chain 1	Il11ra1	1.25	0.0961248
mMR026687	NM_008351	interleukin 12a	Il12a	1.32	0.0499481
mMC013213	NM_008356	interleukin 13 receptor, alpha 2	Il13ra2	1.30	0.052852
mMC014670	NM_145826	interleukin 17 receptor E	Il17re	1.42	0.0469731
mMA035644	AK008452	interleukin 18 binding protein	Il18bp	1.24	0.0956273
mMC022255	NM_174851	interleukin 28 receptor alpha	Il28ra	1.28	0.0798595
mMC017079	NM_010557	interleukin 4 receptor, alpha	Il4ra	1.31	0.0535764
mMC023706	NM_008372	interleukin 7 receptor	Il7r	1.43	0.025404
mMC006889	NM_019676	phospholipase C, delta 1	Plcd1	1.29	0.0713723
mMC025803	NM_019588	phospholipase C, epsilon 1	Plce1	1.47	0.0140237
mMR030940	NM_013880	phospholipase C-like 2	Plcl2	1.41	0.0228803
mMA031851	NM_009369	transforming growth factor, b induced	Tgfbi	1.61	0.0068306
mMA032934	NM_009371	transforming growth factor, b receptor II	Tgfr2	1.55	0.0139771
mMC020668	NM_011578	transforming growth factor, b receptor III	Tgfr3	1.29	0.0806209
mMC011682	NM_009396	tumor necrosis factor, a-induced protein 2	Tnfaip2	1.62	0.0078088
mMC025060	NM_134131	tumor necrosis factor, a-induced protein 8	Tnfaip8	1.38	0.043358
mMC012574	NM_009505	vascular endothelial growth factor A	Vegfa	1.23	0.085429