

Supplementary Table 1 – Difference in gene expression between WTC and non WTC cases -
FDR ≤ 0.1 and |FCH|≥1.5

Genes (down-reg)	Log ₂ (WTC vs. non-WTC)	WTC vs. non-WTC	FDR	Genes (up-reg)	Log ₂ (WTC vs. non-WTC)	WTC vs. non-WTC	FDR	Genes (up-reg)	Log ₂ (WTC vs. non-WTC)	WTC vs. non-WTC	FDR
BCL6	-0.94	-1.92	0.0415	AMBP	1.3	2.46	0.0632	IL4	1.5	2.83	0.0546
C1S	-0.93	-1.91	0.0117	BAGE	1.65	3.15	0.0316	IL9	1.22	2.33	0.0282
CD163	-1.2	-2.3	0.0477	BIRC5	1.16	2.24	0.0444	IRF3	1.08	2.11	0.0006
CD53	-0.86	-1.82	0.0994	C4B	2.14	4.42	0.0251	KIR3DL3	1.6	3.02	0.0415
CD58	-0.75	-1.69	0.0188	C6	1.63	3.09	0.0219	KIR_Activating_Subgroup_1	0.79	1.72	0.0662
CEBPB	-1.05	-2.08	0.0172	C8G	1.41	2.66	0.0172	LILRA1	1.22	2.33	0.0373
CSF1	-1.12	-2.17	0.0033	CCL16	0.93	1.9	0.0253	LTK	0.94	1.91	0.0444
CTSH	-0.91	-1.88	0.0079	CCL26	1.05	2.07	0.0493	MAGEC2	1.36	2.56	0.0726
CTSL	-0.62	-1.54	0.0089	CCR9	0.86	1.81	0.0807	MASP2	1.95	3.86	0.0089
CX3CL1	-1.18	-2.27	0.0118	CD1A	1.34	2.53	0.0180	MIF	0.95	1.93	0.0057
CXCL10	-2.14	-4.4	0.0128	CD24	1.3	2.46	0.0070	MNX1	1.93	3.81	0.0509
CXCL12	-1.03	-2.05	0.0206	CD3EAP	1.11	2.16	0.0064	MPPED1	1.2	2.3	0.0509
ETS1	-0.91	-1.88	0.0138	CD70	1.11	2.16	0.0628	OSM	1.84	3.59	0.0160
GZMB	-1.14	-2.21	0.0715	CD79B	1.26	2.4	0.0570	PASD1	1.42	2.67	0.0330
HLA-DPB1	-0.97	-1.95	0.0415	CFI	0.81	1.75	0.0697	PBK	1.03	2.04	0.0330
HLA-DRA	-1.13	-2.19	0.0391	CR2	1.75	3.37	0.0089	PLA2G1B	1.25	2.38	0.0615
HLA-G	-1.44	-2.72	0.0097	CREBBP	0.84	1.8	0.0182	PLA2G6	0.78	1.72	0.0070
HMGB1	-0.62	-1.53	0.0032	CTCF	1.29	2.44	0.0633	S100A7	1.67	3.18	0.0273
IFI16	-0.65	-1.57	0.0608	CX3CR1	1.21	2.32	0.0415	SPACA3	0.99	1.99	0.0712
IFITM1	-1.22	-2.33	0.0096	CXCR1	0.99	1.99	0.0684	SPINK5	2.02	4.07	0.0168
IL13RA2	-1.07	-2.09	0.0444	EBI3	0.96	1.94	0.0456	SPO11	1.19	2.29	0.0693
ITGA5	-1.33	-2.52	0.0160	ELANE	1.23	2.34	0.0615	TCF7	0.82	1.77	0.0562
LGALS3	-1.21	-2.31	0.0128	ENTPD1	0.84	1.8	0.0398	TFE3	0.63	1.54	0.0742
MAPK1	-0.82	-1.76	0.0006	FADD	1.16	2.23	0.0012	TFEB	0.8	1.74	0.0070
MRC1	-1.14	-2.2	0.0078	ICAM4	0.87	1.82	0.0743	TIRAP	0.65	1.57	0.0078
MSR1	-0.97	-1.96	0.0493	IFNA7	1.47	2.76	0.0493	TLR9	0.92	1.89	0.0493

NFATC2	-1.55	-2.92	0.0012	IFNB1	1.1	2.15	0.0415	TNFRSF11B	1.28	2.42	0.0171
PDGFRB	-0.72	-1.65	0.0182	IFNG	1.41	2.65	0.0415	TNFSF11	1.43	2.69	0.0373
STAT5B	-0.82	-1.77	0.0170	IFNL1	1.92	3.77	0.0015	TNFSF13	1.61	3.05	0.0003
TFRC	-0.76	-1.7	0.0353	IGLL1	1.48	2.8	0.0391	TNFSF15	1.16	2.23	0.0072
TGFB2	-0.87	-1.82	0.0591	IL12A	1.42	2.67	0.0247	TPTE	1.22	2.33	0.0605
UBC	-0.78	-1.72	0.0570	IL12RB1	1.5	2.84	0.0198	TRAF2	0.81	1.75	0.0006
VCAM1	-0.76	-1.69	0.0585	IL13	1.36	2.57	0.0391	ULBP2	1.34	2.52	0.0245
YTHDF2	-0.67	-1.6	0.0180	IL17F	1.15	2.23	0.0376	ZNF205	1.01	2.01	0.0006
NOL7	-0.7	-1.62	0.0078	IL19	1.02	2.02	0.0608	CC2D1B	1.44	2.72	0.0012
USP39	-0.73	-1.65	0.0165	IL22RA2	1.27	2.4	0.0788	GPATCH3	0.9	1.86	0.0168
				IL23A	1.1	2.14	0.0570	GUSB	0.65	1.57	0.0206
				IL24	1.6	3.03	0.0330	PPIA	0.84	1.79	0.0024
				IL25	1.02	2.03	0.0391	SF3A3	0.84	1.79	0.0020
				IL26	1.44	2.71	0.0477				
				IL2RB	0.94	1.92	0.0596				
				IL3	1.35	2.55	0.0591				

Supplementary Table 2: Genes in the Hallmark pathway collection

Hallmark Collection	Genes in Set
Protein Secretion	<p>ARCN1, TMED10, COPB2, RAB14, ATP7A, COPB1, LAMP2, EGFR, IGF2R, COPE, PPT1, AP3S1, BET1, CLCN3, AP2S1, CLTC, AP2M1, RER1, KIF1B, ARF1, OCRL, ICA1, MON2, ARFGF2, TMED2, NAPG, TMX1, PAM, SCAMP1, SH3GL2, RAB2A, COG2, VAMP3, ERGIC3, DOPEY1, VAMP4, VPS4B, NAPA, GNAS, STX7, SEC22B, VPS45, STX16, YKT6, SNX2, ARFGF1, CLTA, CLN5, M6PR, SGMS1, USO1, TSG101, DNM1L, LMAN1, YIPF6, ARFIP1, ANP32E, TSPAN8, DST, SCR1, SEC31A, VAMP7, SCAMP3, AP2B1, RAB22A, AP3B1, TPD52, ATP6V1H, GBF1, KRT18, CAV2, ATP1A1, BNIP3, ZW10, GALC, ADAM10, RAB5A, GOLGA4, SEC24D, AP1G1, MAPK1, GOSR2, RPS6KA3, STAM, ABCA1, SNAP23, SOD1, GLA, ATP6V1B1, STX12, CD63, TOM1L1, SSPN, ARFGAP3, RAB9A, CTSC</p>
DNA Repair	<p>POLR2H, POLR2A, POLR2G, POLR2E, POLR2J, POLR2F, POLR2C, POLR2K, GTF2H3, POLR2D, ERCC3, DDB2, POLR1C, XPC, PCNA, POLR2I, SUPT4H1, POLD3, POLR3GL, POLR3C, GTF2B, POLR1D, NCBP2, RDBP, GTF2F1, ERCC5, LIG1, ERCC1, ERCC4, POLD4, COBRA1, RFC2, ELL, TAF10, RRM2B, SUPT5H, RPA3, SNAPC5, SSRP1, RFC3, RPA2, TCEB3, TAF12, TH1L, TAF13, TAF6, TAF9, GTF2A2, VPS37D, NME1, RNMT, ERCC2, POLE4, VPS37B, NT5C3, SNAPC4, AAAS, ZNRD1, RFC4, ITPA, POM121, BRF2, RFC5, SAC3D1, CLP1, NME4, PRIM1, VPS28, TSG101, USP11, TAF1C, TARBP2, POLH, CETN2, POLD1, CANT1, PDE4B, DGCR8, RAD51, SURF1, PNP, ADA, NME3, GTF3C5, NT5C, AK1, GTF2H1, HCLS1, APRT, ERCC8, IMPDH2, POLB, SDCBP, SF3A3, DAD1, UPF3B, GUK1, TP53, ADRM1, SEC61A1, POLA2, FEN1, ZNF707, NUDT9, PDE6G, TYMS, BCAP31, DDB1, NFX1, RAD52, ADCY6, ARL6IP1, DGUOK, POLL, SMAD5, MPG, DUT, POLA1, EIF2C4, RALA, ZWINT, BCAM, TK2, CSTF3, GTF2H5, HPRT1, BOLA2, GPX4, BRP44, CDA, THOC4, MRPL40, NPR2, REV3L, EDF1, DFNA5, TMED2, STX3, RAE1, UMPS, EIF1B, AK3, NUDT21, RBX1, SRSF6, GMPR2, DCTN4, COX17, CMPK2, CCNO</p>
G2M Checkpoint	<p>AURKA, CCNA2, TOP2A, CCNB2, CENPA, BIRC5, CDC20, PLK1, TTK, PRC1, NDC80, KIF11, NUSAP1, CKS2, KIF2C, MKI67, AURKB, TPX2, SMC4, BUB1, CENPF, RACGAP1, CENPE, KIF23, UBE2C, MCM6, MCM3, PTTG1, CDK1, KIF4A, ESPL1, MAD2L1, NEK2, KIF22, HMMR, KPNA2, CDKN3, CDC25A, H2AFX, CDC25B, PLK4, CDC6, CCNF, MCM5, LMNB1, E2F3, KIF15, CHEK1, UBE2S, WHSC1, HMGB3, DBF4, TACC3, MCM2, CDKN2C, CDKN1B, FANCC, NASP, STAG1, GINS2, FBXO5, POLQ, EZH2, RAD21, STMN1, SUV39H1,</p>

	<p>PRIM2, E2F1, CHAF1A, NOLC1, GSPT1, BUB3, SMC1A, ILF3, CDC7, INCENP, CKS1B, EXO1, H2AFZ, TFDP1, CCND1, KPNB1, HN1, LBR, HUS1, KIF20B, TOP1, PDS5B, SRSF1, STIL, ABL1, DTYMK, CDC27, BARD1, ATF5, CDC45, ODC1, XPO1, SFPQ, TMPO, PML, BRCA2, CTCF, CASC5, SETD8, SLC38A1, TRA2B, MYBL2, TROAP, PAPD7, CUL3, MAPK14, HIST1H2BK, MYC, AMD1, CBX1, CHMP1A, DKC1, YTHDC1, CCNT1, TGFB1, ATRX, LIG3, NUP50, SLC7A5, RBL1, NUMA1, RAD54L, EFNA5, PRPF4B, UCK2, ARID4A, CUL1, UPF1, DR1, MNAT1, SMC2, RBM14, RPA2, SQLE, ORC6, CDK4, POLE, RASAL2, HOXC10, RPS6KA5, CUL4A, SLC7A1, FOXN3, HMGA1, SS18, TRAI, PRMT5, CUL5, DDX39A, MARCKS, PBK, ORC5, SAP30, KATNA1, HNRNPD, POLA2, HIRA, HIF1A, SYNCRIP, TLE3, NCL, RAD23B, E2F2, EGF, HMG2, SRSF10, SNRPD1, CASP8AP2, SMARCC1, SLC12A2, NOTCH2, TNPO2, SMAD3, ZAK, HSPA8, G3BP1, PTTG3P, DMD, MEIS1, HNRNPU, SRSF2, MT2A, NUP98, EWSR1, KIF5B, MTF2, E2F4, BCL3, PURA, MEIS2, PAFAH1B1, WRN, H2AFV, ODF2</p>
Glycolysis	<p>PGK1, ALDOA, ENO1, TPI1, PFKF, ERO1L, ALDOB, VEGFA, MXI1, PKM2, HK2, LDHA, EXT1, SLC25A10, GUSB, PFKFB1, PGAM1, PYGB, AK4, P4HA1, PMM2, FAM162A, SDC1, EGLN3, PC, B4GALT7, FBP2, IGFBP3, CHPF, B3GAT3, CHST12, HS2ST1, MPI, GNPDA1, AKR1A1, PPFIA4, B3GAT1, CHPF2, G6PD, MDH2, CHST6, PGLS, PGAM2, CHST1, GPC1, TSTA3, ALG1, GFPT1, PRPS1, GOT1, MDH1, SLC35A3, GALK1, EGFR, ANGPTL4, CITED2, PLOD2, QSOX1, ME2, SPAG4, P4HA2, GAPDHS, ENO2, GOT2, EXT2, SLC25A13, HMMR, PDK3, CXCR4, GPC4, ECD, GNE, B4GALT2, FUT8, MIOX, VCAN, GPC3, B3GALT6, HSPA5, ME1, ADORA2B, UGP2, MIF, NANP, ZNF292, STC2, TPST1, PGM2, GYS1, TKTL1, TGFA, CHST2, PHKA2, STMN1, GALE, MET, LCT, IRS2, POLR3K, B4GALT1, EFNA3, LHX9, KDEL3, TALDO1, DPYSL4, VLDLR, CD44, AGL, SOX9, DDIT4, IDUA, CASP6, GLCE, COPB2, DSC2, HS6ST2, CDK1, PLOD1, SDC2, GMPPB, PAXIP1, NSDHL, RARS, SLC16A3, GLRX, SRD5A3, SDC3, HDLBP, COL5A1, CLDN9, TFF3, STC1, KIF20A, GYS2, SLC37A4, LHPP, SDHC, NASP, AURKA, B3GNT3, ISG20, LDHC, ARPP19, CENPA, HOMER1, BIK, CYB5A, HAX1, COG2, IL13RA1, NOL3, CLDN3, AGRN, CLN6, TXN, PAM, CAPN5, PKP2, ABCB6, DCN, GMPPA, BPNT1, ANG, GPR87, GAL3ST1, ALDH7A1, NT5E, IDH1, PYGL, NDUFV3, NDST3, PPP2CB, PSMC4, TPBG, TGFBI, GALK2, CTH, KIF2A, CACNA1H, ANKZF1, SAP30, RBCK1, ELF3, RPE, B4GALT4, DEPDC1, RRAGD, IER3, ALDH9A1, DLD, MERTK, GCLC, FKBP4, SOD1, MED24, AK3, XYLT2, ARTN, PPIA, CHST4</p>

Supplemental Table 3. Testing differences in overall Pathway activity: GSA Hallmark (batch)(FDR<0.1)

	lgFCH_WvC	FCH_WvC	pvals_WvC	fdrs_WvC	StatusFCH1FDR0.1_WvC
HALLMARK_DNA_REPAIR	1.48	2.79	0.00385	0.094	1
HALLMARK_G2M_CHECKPOINT	2.05	4.15	0.00768	0.094	1
HALLMARK_PROTEIN_SECRETION	-1.33	-2.51	0.0073	0.094	-1
HALLMARK_GLYCOLYSIS	1.82	3.52	0.0055	0.094	1

Supplementary Table 4: Testing differences in overall Pathway activity: GSVA Cell type (batch)(FDR<0.1)

	lgFCH_WvC	FCH_WvC	pvals_WvC	fdrs_WvC	StatusFCH1FDR0.1_WvC	geneInPTW
NK CD56bright cell	2.08	4.23	0.000707	0.017	1	FOXJ1,MPPED1,PLA2G6,RRAD,,,
NK cell	2.13	4.39	0.002997	0.036	1	BCL2,FUT5,NCR1,ZNF205,,,
Th17 cell	1.52	2.88	0.008122	0.065	1	IL17A,IL17RA,RORC,,,

Supplemental Table 5. Pathway analysis in rat prostate RNA-seq (WTC vs. normal air)

pathway	t
REACTOME_TCA_CYCLE_AND_RESPIRATORY_ELECTRON_TRANSPORT (108)	17.21
REACTOME_RESPIRATORY_ELECTRON_TRANSPORT_ATP_SYNTHESIS_BY_CHEMIOSMOTIC_COUPLING_AND_HEAT_PRODUCTION_BY_UNCOUPLING_PROTEINS_ (72)	14.11
KEGG_OXIDATIVE_PHOSPHORYLATION (104)	13.21
REACTOME_RESPIRATORY_ELECTRON_TRANSPORT (57)	11.81
KEGG_PEROXISOME (73)	10.47

KEGG_PARKINSONS_DISEASE (100)	9.60
REACTOME_METABOLISM_OF_LIPIDS_AND_LIPOPROTEINS (420)	9.59
MIPS_PA700_20S_PA28_COMPLEX (36)	7.88
REACTOME_FATTY_ACID_TRIACYLGLYCEROL_AND_KETONE_BODY_METABOLISM (154)	7.80
KEGG_HUNTINGTONS_DISEASE (146)	7.58
KEGG_CITRATE_CYCLE_TCA_CYCLE (30)	7.50
BIOCARTA_PROTEASOME_PATHWAY (28)	7.44
MIPS_26S_PROTEASOME (22)	7.33
KEGG_VALINE_LEUCINE_AND_ISOLEUCINE_DEGRADATION (38)	7.25
REACTOME_CDT1_ASSOCIATION_WITH_THE_CDC6_ORC_ORIGIN_COMPLEX (54)	7.00
REACTOME_ASSEMBLY_OF_THE_PRE_REPLICATIVE_COMPLEX (62)	6.84
REACTOME_REGULATION_OF_ORNITHINE_DECARBOXYLASE_ODC (48)	6.22
REACTOME_M_G1_TRANSITION (76)	5.95
KEGG_PROTEASOME (44)	5.86
REACTOME_METABOLISM_OF_AMINO_ACIDS_AND_DERIVATIVES (179)	5.73
REACTOME_ORC1_REMOVAL_FROM_CHROMATIN (65)	5.52
KEGG_FATTY_ACID_METABOLISM (35)	5.45
REACTOME_SIGNALING_BY_WNT (58)	5.45
REACTOME_SYNTHESIS_OF_DNA (89)	5.45
REACTOME_ER_PHAGOSOME_PATHWAY (53)	5.43
REACTOME_S_PHASE (104)	5.43
REACTOME_CROSS_PRESENTATION_OF_SOLUBLE_EXOGENOUS_ANTIGENS_ENDOSOMES (45)	5.42
REACTOME_MITOTIC_G1_G1_S_PHASES (123)	5.39
REACTOME_VIF_MEDIATED_DEGRADATION_OF_APOBEC3G (48)	5.37

REACTOME_CDK_MEDIATED_PHOSPHORYLATION_AND_REMOVAL_OF_CDC6 (46)	5.33
REACTOME_AUTODEGRADATION_OF_THE_E3_UBIQUITIN_LIGASE_COP1 (47)	5.31
REACTOME_TRIGLYCERIDE_BIOSYNTHESIS (37)	5.30
REACTOME_TRANSCRIPTIONAL_REGULATION_OF_WHITE_ADIPOCYTE_DIFFERENTIATION (66)	5.24
REACTOME_P53_DEPENDENT_G1_DNA_DAMAGE_RESPONSE (53)	5.20
REACTOME_CHOLESTEROL_BIOSYNTHESIS (20)	5.20
REACTOME_G1_S_TRANSITION (104)	5.07
REACTOME_SCF_BETA_TRCP_MEDIATED_DEGRADATION_OF_EMI1 (49)	4.98
REACTOME_AUTODEGRADATION_OF_CDH1_BY_CDH1_APC_C (55)	4.97
REACTOME_PYRUVATE_METABOLISM_AND_CITRIC_ACID_TCA_CYCLE (40)	4.86
REACTOME_MITOCHONDRIAL_PROTEIN_IMPORT (41)	4.78
MIPS_PA700_COMPLEX (20)	4.71
MIPS_55S_RIBOSOME_MITOCHONDRIAL (71)	4.54
KEGG_STEROID_BIOSYNTHESIS (15)	4.49
MIPS_20S_PROTEASOME (14)	4.43
REACTOME_P53_INDEPENDENT_G1_S_DNA_DAMAGE_CHECKPOINT (48)	4.41
REACTOME_SCF_SKP2_MEDIATED_DEGRADATION_OF_P27_P21 (53)	4.35
REACTOME_DOWNSTREAM_SIGNALING_EVENTS_OF_B_CELL_RECEPTOR_BCR (87)	4.31
REACTOME_CITRIC_ACID_CYCLE_TCA_CYCLE (19)	4.30
REACTOME_CYCLIN_E_ASSOCIATED_EVENTS_DURING_G1_S_TRANSITION_ (61)	4.25
REACTOME_ANTIGEN_PROCESSING_CROSS_PRESENTATION (64)	4.23
REACTOME_CELL_CYCLE_CHECKPOINTS (108)	4.23
REACTOME_MITOCHONDRIAL_FATTY_ACID_BETA_OXIDATION (12)	4.19
REACTOME_HIV_INFECTION (172)	4.19

REACTOME_ACTIVATION_OF_NF_KAPPAB_IN_B_CELLS (57)	4.06
REACTOME_REGULATION_OF_APOPTOSIS (55)	4.04
REACTOME_DESTABILIZATION_OF_MRNA_BY_AUF1_HNRNP_D0 (49)	4.03
MIPS_PA28_20S_PROTEASOME (16)	4.02
REACTOME_METABOLISM_OF_VITAMINS_AND_COFACTORS (46)	3.98
KEGG_PYRUVATE_METABOLISM (36)	3.96
REACTOME_GENERIC_TRANSCRIPTION_PATHWAY (123)	3.95
REACTOME_FATTY_ACYL_COA_BIOSYNTHESIS (18)	3.90
REACTOME_APC_C_CDC20_MEDIATED_DEGRADATION_OF_MITOTIC_PROTEINS (64)	3.81
REACTOME_ANTIGEN_PROCESSING_UBIQUITINATION_PROTEASOME_DEGRADATION (181)	3.70
REACTOME_BRANCHED_CHAIN_AMINO_ACID_CATABOLISM (16)	3.63
REACTOME_VITAMIN_B5_PANTOTHENATE_METABOLISM (10)	3.58
KEGG_LYSINE_DEGRADATION (39)	3.58
KEGG_STEROID_HORMONE_BIOSYNTHESIS (36)	3.36
REACTOME_RNA_POL_II_PRE_TRANSCRIPTION_EVENTS (46)	3.34
KEGG_BUTANOATE_METABOLISM (32)	3.27
KEGG_METABOLISM_OF_XENOBIOTICS_BY_CYTOCHROME_P450 (43)	3.23
REACTOME_CLASS_I_MHC_MEDIATED_ANTIGEN_PROCESSING_PRESENTATION (210)	3.19
REACTOME_NUCLEOTIDE_EXCISION_REPAIR (41)	3.15
KEGG_PPAR_SIGNALING_PATHWAY (62)	3.11
REACTOME_REGULATION_OF_MRNA_STABILITY_BY_PROTEINS_THAT_BIND_AU_RICH_ELEMENTS (78)	3.10
REACTOME_APC_C_CDH1_MEDIATED_DEGRADATION_OF_CDC20_AND_OTHER_APC_C_CDH1_TARGETED_PROTEINS_IN_LATE_MITOSIS_EARLY_G1 (63)	3.08
KEGG_ALZHEIMERS_DISEASE (142)	3.08

REACTOME_NUCLEAR_RECEPTOR_TRANSCRIPTION_PATHWAY (41)	3.01
KEGG_GNRH_SIGNALING_PATHWAY (88)	-3.00
KEGG_TYPE_I_DIABETES_MELLITUS (20)	-3.01
MIPS_H2AX_COMPLEX_ISOLATED_FROM_CELLS_WITHOUT_IR_EXPOSURE (12)	-3.08
REACTOME_NEUROTRANSMITTER_RECEPTOR_BINDING_AND_DOWNSTREAM_TRANSMISSION_IN_THE_POSTSYNAPTIC_CELL (128)	-3.09
REACTOME_EXTRACELLULAR_MATRIX_ORGANIZATION (59)	-3.11
REACTOME_COLLAGEN_FORMATION (37)	-3.13
REACTOME_NCAM_SIGNALING_FOR_NEURITE_OUT_GROWTH (56)	-3.14
PID_CD8TCRDOWNSTREAMPATHWAY (49)	-3.15
BIOCARTA_AGR_PATHWAY (32)	-3.15
REACTOME_ACTIVATION_OF_THE_MRNA_UPON_BINDING_OF_THE_CAP_BINDING_COMPLEX_AND_EIFS_AND_SUBSEQUENT_BINDING_TO_43S (51)	-3.23
REACTOME_RNA_POL_I_PROMOTER_OPENING (14)	-3.24
BIOCARTA_ACH_PATHWAY (15)	-3.29
REACTOME_PACKAGING_OF_TELOMERE_ENDS (17)	-3.30
PID_AVB3_INTEGRIN_PATHWAY (61)	-3.30
REACTOME_PHOSPHOLIPASE_C_MEDIATED_CASCADE (48)	-3.31
REACTOME_ACETYLCHOLINE_NEUROTRANSMITTER_RELEASE_CYCLE (10)	-3.40
REACTOME_ACTIVATION_OF_NMDA_RECEPTOR_UPON_Glutamate_BINDING_AND_POSTSYNAPTIC_EVENTS (36)	-3.54
KEGG_PATHWAYS_IN_CANCER (290)	-3.64
REACTOME_POTASSIUM_CHANNELS (93)	-3.75
REACTOME_AMYLOIDS (24)	-3.79
PID_IL12_STAT4PATHWAY (28)	-3.81

KEGG_CALCIIUM_SIGNALING_PATHWAY (164)	-3.82
REACTOME_FORMATION_OF_THE_TERNARY_COMPLEX_AND_SUBSEQUENTLY_THE_43S_COMPLEX (44)	-3.86
PID_FGF_PATHWAY (49)	-3.87
KEGG_HYPERTROPHIC_CARDIOMYOPATHY_HCM (74)	-3.91
KEGG_ECM_RECEPTOR_INTERACTION (65)	-4.01
PID_SYNDECAN_4_PATHWAY (29)	-4.01
KEGG_DILATED_CARDIOMYOPATHY (79)	-4.02
REACTOME_GLYCOSAMINOGLYCAN_METABOLISM (92)	-4.11
REACTOME_STRIATED_MUSCLE_CONTRACTION (26)	-4.19
REACTOME_SMOOTH_MUSCLE_CONTRACTION (22)	-4.22
BIOCARTA_STATHMIN_PATHWAY (18)	-4.51
MIPS_TRBP_CONTAINING_COMPLEX_1 (23)	-4.83
KEGG_SYSTEMIC_LUPUS_ERYTHEMATOSUS (55)	-5.03
KEGG_FOCAL_ADHESION (175)	-5.32
REACTOME_NCAM1_INTERACTIONS (32)	-5.42
KEGG_CELL_ADHESION_MOLECULES_CAMS (103)	-5.43
KEGG_ARRHYTHMOGENIC_RIGHT_VENTRICULAR_CARDIOMYOPATHY_ARVC (63)	-5.50
PID_SYNDECAN_1_PATHWAY (37)	-5.52
REACTOME_TRANSMISSION_ACROSS_CHEMICAL_SYNAPSES (174)	-5.58
MIPS_40S_RIBOSOMAL_SUBUNIT_CYTOPLASMIC (29)	-5.80
REACTOME_MUSCLE_CONTRACTION (44)	-6.07
REACTOME_TRANSLATION (135)	-6.45
REACTOME_NEURONAL_SYSTEM (261)	-7.24
REACTOME_INFLUENZA_LIFE_CYCLE (118)	-7.50

REACTOME_AXON_GUIDANCE (213)	-7.78
REACTOME_SRP_DEPENDENT_COTRANSLATIONAL_PROTEIN_TARGETING_TO_MEMBRANE (100)	-8.92
MIPS_60S_RIBOSOMAL_SUBUNIT_CYTOPLASMIC (45)	-9.48
REACTOME_INFLUENZA_VIRAL_RNA_TRANSCRIPTION_AND_REPLICATION (88)	-10.91
MIPS_NOP56P_ASSOCIATED_PRE_RRNA_COMPLEX (95)	-10.91
REACTOME_NONSENSE_MEDIATED_DECAY_ENHANCED_BY_THE_EXON_JUNCTION_COMPLEX (94)	-11.37
REACTOME_3_UTR_MEDIATED_TRANSLATIONAL_REGULATION (96)	-11.71
KEGG_RIBOSOME (80)	-14.22
MIPS_RIBOSOME_CYTOPLASMIC (76)	-14.24
REACTOME_PEPTIDE_CHAIN_ELONGATION (78)	-15.33