Supplemental materials

Supplemental Methods

Cell lines

The GIST48 and GIST882 cell lines were obtained from Dr. Jonathan A. Fletcher (Dana-Farber Cancer Institute) and were maintained as previously described (1). The GIST-T1 cell line was obtained from Dr. Takahiro Taguchi (Kochi University, Nankoku, Kochi, Japan) (2) . The melanoma cell lines A375 and Colo800 were provided by the laboratory of Joan Massagué (3)(Memorial Sloan-Kettering Cancer Center, New York, New York, USA), and A2058 cells were provided by Dr. David Solit (4)(Memorial Sloan-Kettering Cancer Center, New York, New York, USA). A375 cells and A2058 cells were maintained in DMEM medium. Colo800 cells were maintained in RPMI medium. For retrovirus and lentivirus production, HEK293T cells were purchased (Clontech) and cultured in DMEM. All media were supplemented with L-glutamine (2 mM), penicillin (100 U/ml), and streptomycin (100 μg/ml), and 10% heat-inactivated fetal bovine serum (FBS) except the medium used for GIST882 cells was supplemented with 15% FBS. All cell lines were cultured at 37 °C in 5% CO_2 and were biochemically tested negative for mycoplasma contamination.

shRNA knockdown and CRISPR/Cas9-mediated knockout

We utilized two different lentiviral constructs for shRNA knockdown, pLKO.1 based and pGIPZ-mir-E based (5). To knockdown *ETV1* in GIST882 and A375 cells for transcriptome analysis, we used two lentiviral pLKO.1 constructs against *ETV1* (ETV1sh1, ETV1sh2) and a pLKO.1 scramble shRNA, a gift from David Sabatini (Addgene plasmid # 1864) (6) (Whitehead Institute for Biomedical Research, Cambridge, USA). To knockdown *COP1*, we used Mir30 based shRNAs obtained in MSCV-mir30-PGK-puromycin-IRES-tGFP (MLP) backbone either

from Kenneth Chang or purchased from Transomics. The mir30 shRNA was converted to Mir-E optimized backbone cloned into the pGIPZ lentiviral vector, that express TurboGFP using primers miRE-Xho-short-fw and miRE-EcoPlasmid-rev (5) and experiments were performed using the pGIPZ-mirE vectors. Lentiviruses were generated by co-transfecting the shRNA constructs with psPax2 (Addgene plasmid #12260, gift from Didier Trono, Ecole polytechnique fédérale de Lausanne, Lausanne, Switzerland) and pVSVG (Addgene plasmid #8454, gift from Bob Weinberg, Whitehead Institute for Biomedical Research, Cambridge, USA) into 293FT cells (Invitrogen) using Lipofectamine 2000 (Invitrogen).

For CRISPR/Cas9 mediated knockout of *COP1*and *DET1* in cell lines, we designed guide RNA (sgRNA) sequences for human *COP1*and *DET1* using the design tool from the Feng Zhang Lab and cloned the targeting sgRNAs into lentiCRISPR v2, a gift from Feng Zhang (Addgene plasmid # 52961) (7) (Broad Institute, Cambridge, USA). Lentiviruses for *COP1* sgRNAs, *DET1* sgRNAs control sgEGFP or control sgCON (empty vector with no guide RNA) were generated in 293FTcells as above. GIST and melanoma cells were infected with lentivirus for 48 hours and selected with 2 μg/ml puromycin for 14 days. Please see Supplemental Table 9 for shRNA and sgRNA sequences.

siRNA transfection

GIST and melanoma cells were transfected with siRNAs using DharmaFECT2 (GE healthcare) according to the manufacture's protocol. In brief, transfection was performed under serum free conditions. For a 6-well plate, 20nM siRNA in opti-MEM was used. SiETV1 (#L-003801-00-0020), siETV4 (#E-004207-00-0005), siCOP1 (#L-007049-00-0005) and siSCR (#D-001810-10-20) smart pools and siCOP1 single siRNAs (#LU-007049-00-0002) were from Dharmacon (GE healthcare). SiETV5 siRNAs (#GS2119) were from Qiagen.

Generation of MAPK-ETV1 protein stability sensor cells

We generated two MAPK-ETV1 sensor cell lines. The first line is an A2058 melanoma single cell clone that expresses the MSCV-EGFPnETV1-IRES-tdTomato, which was used for the RNAi screen. To clone the vector, we first generated various PCR fragments of ETV1 spanning several regions that lack the ETS domain. We chose to exclude the ETS domain to minimize transcriptional and other functional effects of the sensor. We found the amino-terminal 174 amino acid fusion (EGFPnETV1) to be highly expressed and to retain strong MAPK dependent protein stability. We cloned this into the MSCV-mcs-IRES-tdTomato vector, infected A2058 cells at low MOI. To select single clones, we used FACS sorting of single cells into wells of 96-well plates. We screened ~10 clones for sharp EGFP fluorescence peak and optimal loss after vemurafenib treatment and picked one clone for the screening experiment. A second line is an A375 melanoma single cell clone expressing MSCV-mCherry-nETV1, used for validation studies, that was similarly generated. Notable differences are that A375 cells are sensitive to MAPK inhibitor, lack of a second color for ratiometric measurement but allowing expression of a second gene with EGFP.

Genome-wide RNAi screen for modifiers of ETV1 protein stability

We used the third-generation mir30-based shRNA library (GE Healthcare/Open Biosystems) with shRNA designs derived using the DSIR algorithm (8) containing ~76,000 hairpins at whole genome (human) coverage (~20,000 genes) was obtained from Kenneth Chang (Gregory Hannon's Lab) at Cold Spring Harbor Laboratory. The vector of this shRNA library has MSCV promoter driving expression of the shRNA-mir, followed by a PGK promoter driving expression of puromycin resistance gene and an internal ribosome entry site following EGFP. In order to use EGFP fluorescence as the screen readout, we removed the IRES-EGFP cassette from

the vector, leaving MSCV-shRNAmir-PGK-Puro. The quality and distribution of this genome shRNA library were validated by next generation sequencing. This shRNA library was co-transfected with retroviral packaging plasmid, pCL-Ampho, into HEK293T cells and virus was harvested after 48 hours. We transduced 75 million A2058 MAPK-ETV1 sensor cells at MOI of ~0.5, added the viral stock with 8 ug/ml polybrene (# H9268, Sigma) as growth medium directly onto 75 million A2058 reporter cells and made sure MOI was 0.5 and added 2 ug/ml puromycin 2 days after transduction for 2 days.

We split the transduced cells into three and carried out the screen in triplicates. Throughout the screen, we maintained >75 million cells for each replicate to maintain library representation. We performed the first FACS sort (Sort 1), at 5 days after transduction. For each sort, we treated cells with 1 μM vemurafenib for 24 hours prior to FACS (starting at day 4 after transduction for Sort 1). We gated the top and bottom 5% of EGFP/tdTomato fluorescence ratio as well as the middle 20%. Of the sorted cells, 80% were used for genomic DNA isolation and library preparation while 20% were used for propagation and repeat FACS sorting. Cells were propagated for 2 weeks without vemurafenib prior to next cycle of sorting. Genomic DNA was extracted from 2 million sorted cells.

Library generation, sequencing and shRNA quantification were modified from previous work (9). To generate sequencing library from genomic DNA, we performed nested PCR. For first PCR we used primers Mir5-F located upstream of the Mir30 and PGKpro-R located at the 5' of the PGK promoter. For the second PCR, we used P5-Ex3_N6_mir30Loop_F primer consisting of universal Illumina P5 sequence, Illumina primer binding site (SBS3), 6 random nucleotides, followed by the mir30 loop sequence. The P7_IndexN_Truseq_N2_PGKpro-R primer has the universal Illumina P7 sequence, 6 nucleotide Illumina index for multiplexing, Illumina Truseq

primer binding site, 2 random nucleotides, followed by the reverse PGK promoter sequence. Please see supplemental Table 9 for primer sequences.

For first PCR, we set up 4 PCR reactions per sample and use 500 ng genomic DNA as the template for PCR1. PCR1 was carried out using 50 ul volume of Taq PCR, annealing temperature 60°C for 15 seconds and extension time is 20 seconds at 72°C. We combined and gel purified 4 PCR products (500 ng DNA) as the template for PCR2. For second PCR, we set up 2 PCR reactions per sample, using annealing temperature 52°C for 15 seconds and extension time is 20 seconds at 72°C. We combined 2 PCR products and perform gel purification for Illumina sequencing. Gel purification was performed using the E-Gel SizeSelect 2% agarose gel (Invitrogen).

To analyze screen data, we quantified hairpin counts using Bowtie alignment software (10) (Supplemental Tables 7-8). To identify shRNAmir that were enriched in cells sorted for high EGFP/tdTomato fluorescence compared to low EGFP/tdTomato fluorescence, we used HiTSelect (11) that ranks genes by effect of shRNA and reproducibility across multiple individual shRNA for each of the three FACS Sort.

Protein stability assay in A375-mCherry-MAPK-ETV1 sensor cells

At 3 days after transduction at MOI~0.5, A375-mCherry-nETV1 cells were split as triplicates and treated with 1μM vemurafenib or DMSO for 24 hours. The cells were analyzed using LSRFortessa cytometer for TurboGFP to indicate shRNA expression or COP1 and DET1 WT or mutations expression and mCherry for ETV1 protein levels (BD Biosciences). Analysis of the data was performed by FlowJo V10.

FACS based growth competition assay

To assay the fitness of cells with shRNA knockdown with or without drug treatment, we transduced the cells with single vector containing the shRNA-mirE together with a fluorescence protein. We quantified percentage of fluorescent cells over time with either vehicle or drug treatment. Transduced cells that express the shRNA were marked by TurboGFP (tGFP) fluorescence. We transduced cells at MOI 10-50%. At 3 days after infection, cells were split as triplicates and treated either with MAPK pathway inhibitors or DMSO as control.

For GIST-T1 cells, we found that they expressed Mir-30 poorly and exhibited low levels of knockdown. To test the role of COP1 loss on drug sensitivity, we generated CRISPR/Cas9-mediated COP1 knockout GIST-T1 cells. We first generated the pooled GIST-T1 cells expressing CRISPR/Cas9 with empty guide control or specific guide against COP1 that co-expressed with the puromycin selection marker, namely, GIST-T1/sgCON and GIST-T1/sgCOP1, respectively (Figure 6A). We then transduced these two cell lines with a vector containing EGFP, Luciferase, and G418 (neomycin)–selection marker and selected the EGFP-positive cells with G418 (neomycin), which also expressed the desired sgCON vs. sgCOP1 (Figure 6A). For the competition assay, we mixed EGFP-positive sgCOP1 cells or sgCON cells with EGFP-negative parental GIST-T1 cells and followed the percentage of EGFP-positive cells over time under different drug treatment conditions as indicated (Figure 6A-6B).

For all competition assays, media was replaced every 3-4 days and the tGFP- or EGFP-positive cells were tracked using LSRFortessa cytometer (BD Biosciences).

Transcriptome analysis

Total RNA was isolated from tissue culture cells using QIAGEN RNeasy kits (#74104, Qiagen). Transcriptional profiles were performed either using Illumina Human HT-12 bead array or RNA-sequencing, both performed by the MSKCC genomics core facility. For RNA-seq,

library preparation and RNA sequencing were performed by MSKCC Genomics Core Laboratory using Illumina HiSeq2500 with 50-bp single reads, and 30 million reads were generated for each sample. The reads were mapped human genome reference sequence (GRC37/hg19) using STAR (ver 2.3)(12) and quantified into RPKM using Cufflinks with upper quartile normalization (ver 2.1)(13).

Gene set enrichment analysis was performed using the JAVA program (http://www.broadinstitute.org/gsea) as described (1, 14) . We performed GSEA on 2 transcriptional profiles: GIST882 cells treated with vehicle or PD325901, and A375 cells treated with vehicle or vemurafenib. To identify gene sets enriched among MAPK pathway inhibitor downregulated genes in each cell line, we used ~6,000 gene sets from the Molecular Signatures Database (MSigDB) as well as custom gene sets of ETV1 and COP regulated genes in GIST and melanoma cells (Supplemental Tables 1-6).

To calculate Z-score of sum MAPK output in GIST882 and A375 cell lines, we defined MAPK induced genes as those that are downregulated 2-fold by PD325901 in GIST882 and vemurafenib in A375 and MAPK suppressed genes as those that are upregulated 2-fold. We then calculated the MAPK output as the sum Log2 normalized expression of MAPK induced genes subtracted by sum of MAPK suppressed genes. The Z-score is the number of standard deviations away from average of the average MAPK output in all tested conditions. Heatmaps were generated using GENE-E (http://www.broadinstitute.org/cancer/software/GENE-E).

Chromatin immunoprecipitation followed by next-generation sequencing (ChIP-seq)

For GIST48, we used previously generated ETV1 ChIP-seq data (GSE22441)(1) and reanalyzed as below. Chromatin isolation from GIST882, GIST-T1, A375, and Colo800 cells was performed as previously described (1) . Next-generation sequencing was performed on

either an Illumina Genome Analyzer IIx using 36-bp single end reads (GIST48) or a HiSeq2500 with 50-bp single reads (GIST-T1, A375, Colo800). Reads were aligned to the human genome (hg 19) using the Bowtie alignment software (10), and duplicate reads were eliminated for subsequent analysis. Peak calling was performed using MACS 2.1 comparing immunoprecipitated chromatin with input chromatin (15). To map peaks to genes, we used Homer annotatePeaks software (16) . For peak overlap, we considered peaks in different cell lines overlapping if their peak summits were within 250 bp, using Homer mergePeaks software. For visualization of overlapping peaks, we selected peaks that were overlapping in at least two cell lines. We clustered and plotted the peak overlap using s, using KMeans linear algorithm (17). To determine the significance of overlap, we used hypergeometric test (phyper in R) assuming a total of 100,000 potential TF binding sites. The ChIP-seq profiles presented were generated using Integrated Genome Browser software (18) of SGR format files.

Immunoprecipitation and Immunoblots

Cell lysates were prepared in RIPA buffer supplemented with proteinase/phosphatase inhibitor. Proteins were resolved in NuPAGE Novex 4–12% Bis-Tris Protein Gels (#NP0321BOX, Life Technologies) and transferred electrophoretically onto a nitrocellulose 0.45 μm membrane (#162-0115, BioRad). Membranes were blocked for 1 hour at room temperature in Blocking Buffer and were incubated overnight at 4 °C with the primary antibodies. The following primary antibodies were used: ETV1 (#ab81086, Abcam), ETV1/4 (#10684-1-AP, Proteintech), ETV5 (#H00002119-M01, Abnova), COP1 (#A300-894A, Bethyl Laboratory), DUSP6 (#ab76310, Abcam), SPRY4 (#sc-30051, Santa Cruz), HA (clone 3F10, Roche), GAPDH (#ab9385, Abcam). The following antibodies were from Cell Signaling Technology: c-KIT (#3308), phospho-c- KIT (Tyr703)(#3073), phospho-p44/42 MAPK (Erk1/2)

(Thr202/Tyr204) (#4370), p44/42 MAPK (Erk1/2) (#4695), p-p90RSK (Ser380)(#12032), p90RSK(#9355). Signal was visualized either with secondary HRP conjugated antibodies and ECL or secondary antibodies (IRDye 800CW goat anti-Rabbit #926-32211, 1:20,000, LI-COR; IRDye 680RD goat anti-mouse #926-68070, 1:20,000, LI-COR) in 50% Odyssey Blocking Buffer in PBS plus 0,1% Tween 20 and a LI-COR Odyssey CLx scanner and adjusted using LI-COR Image Studio. Immunoblots were independently performed at least twice and a representative experiment is shown.

For ETV1 IP and COP1 IP, GIST882, GIST-T1, and A375 cells were lysed in 20 mM Tris-HCl (pH 7.5), 1% Triton X-100, 150 mM NaCl, 1 mM EDTA, 1 mM DTT, 1 mM PMSF, and proteinase/phosphatase inhibitors. After incubation and centrifugation, 120 µl supernatant was used as input, and 1000 µl for immunoprecipitation using the following antibodies: 0.5 µg of anti-ETV1 antibody, 0.5ug of anti-COP1 antibody and 0.5ug of rabbit IgG as control. 20µl of Protein A/G UltraLink Resin (#53133, Thermo Scientific) were used for immunoprecipitation. The immunoprecipitated material was eluted in 4 × SDS loading buffer for immunoblotting. Co-Immunoprecipitation was independently performed at least three times and a representative immunoblot is shown.

***In vitro* cell viability assay**

For *in vitro* viability assays, 5,000 cells were seeded in triplicates in 96 wells. The cells were treated with DMSO or indicated drugs at 2-fold serial dilution 24 hours after seeding. At day5, 100µl of CellTiter-Glo was added to each well and the plate was read on a Veritas microplate reader/luminometer (Turner Biosystems). IC-50 calculation was performed using Graphpad Prism software.

Expression plasmids

For co-immunoprecipitation and competition assay $ETV1^{WT}$ and $ETV1^{AAD}$ cDNA were sub-cloned into MSCV-IRES-GFP-Dest backbone using gateway method. GFP was cloned into the same vector as control.

COP1 cDNA was purchased from Human ORFeome (the CCSB human ORFEOM collection) (MHS1010-98075405). DET1 cDNA was purchased from Open Biosystems. COP1 and DET1 gene were amplified and inserted into pENTR vector using a pENTR/D-TOPO Cloning Kit (#K240020, Thermofisher) and then sub-cloned into MSCV-IRES-GFP-Dest backbone using Gateway LR Clonase Enzyme Mix (#11791043, Thermofisher). Silent mutations and missense mutations of COP1 and DET1 was generated using site directed Mutagenesis method. Please see Supplemental Table 9 for the primer sequences. All the plasmids were confirmed by digestion and sequencing.

Structure modeling

The complex structure of COP1 β propeller bound to ETV1 peptide (DEQFVPDY) was modeled based on the COP1-Trib1 complex structure (PDB: 5IGQ) (19). The surface presentation of the structure was generated in PyMOL (http://www.pymol.org/).

Gene Expression Omnibus (GEO) Accession numbers of datasets generated or used:

- GSE19396: Illumina bead array expression profile of ETV1 knockdown (Scrambled vs. 2 ETV1 shRNAs) in GIST48 and GIST882 cells from our previous study (1).
- GSE19396: Illumina bead array expression profile of ETV1 knockdown (Scrambled vs. 2 ETV1 shRNAs) in GIST-T1.
- GSE80352: RNA-seq expression profile of ETV1 knockdown (Scrambled vs. 2 ETV1

shRNAs) in A375 and Colo800

- GSE22433: Illumina bead array expression of vehicle, PD0325901 and imatinib treatment in GIST48, GIST882, and GIST-T1 cells
- GSE64741: RNA-seq expression profile of vemurafenib vs vehicle treatment in Colo800 cells, publically from a previous study (3).
- GSE80305: RNA-seq expression profile of GIST882 cells transfected with scrambled and two COP1 siRNA and treated with vehicle or PD-325901
- GSE80313: RNA-seq expression profile of A375 cells transfected with scrambled and COP1 siRNA and treated with vehicle, vemurafenib, or trametinib
- GSE22441: ETV1 ChIP-seq in GIST48 cells from our previous study (1).
- GSE80443: ETV1 ChIP-seq in GIST882, GIST-T1, A375 and Colo800 cells.

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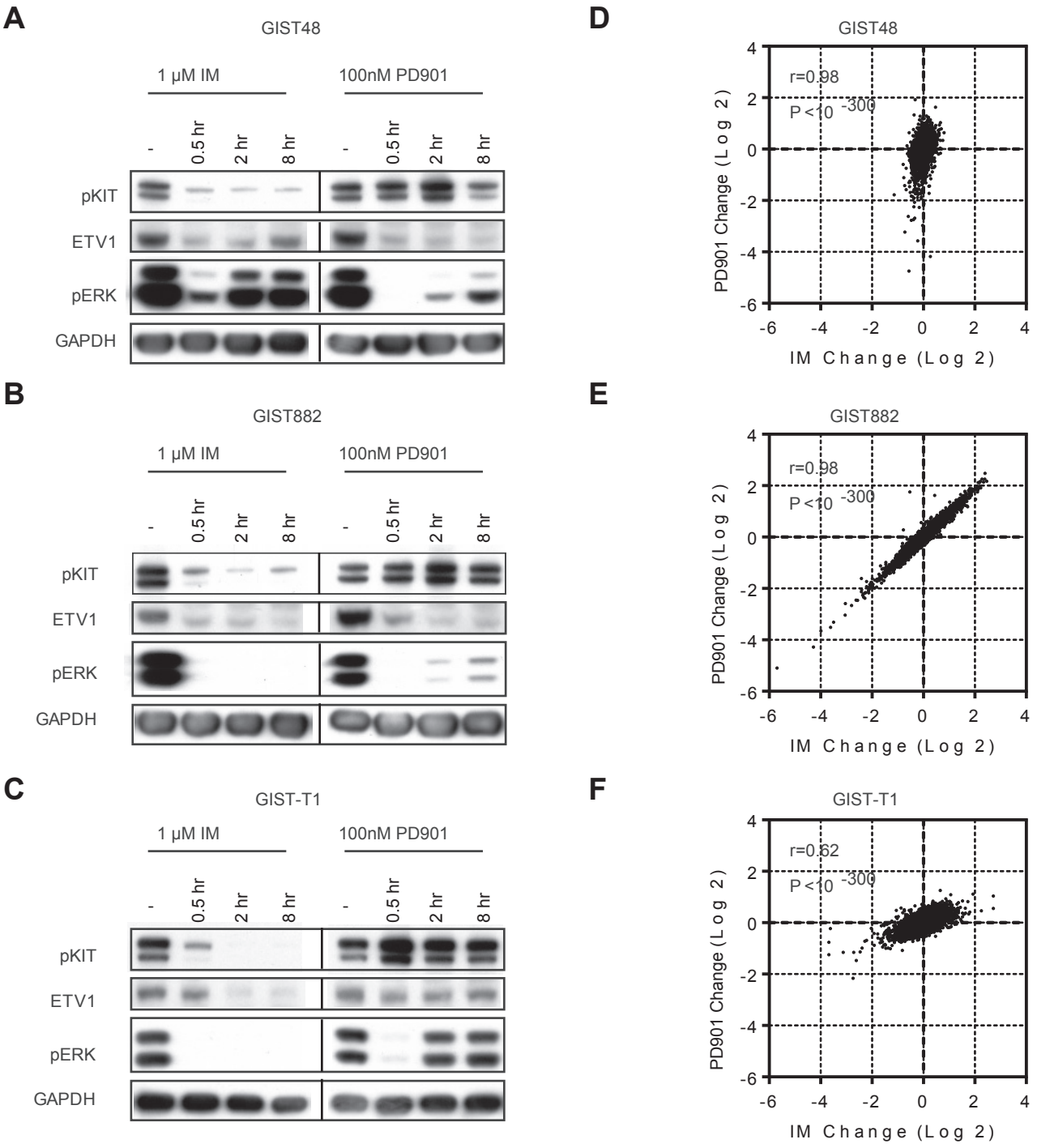
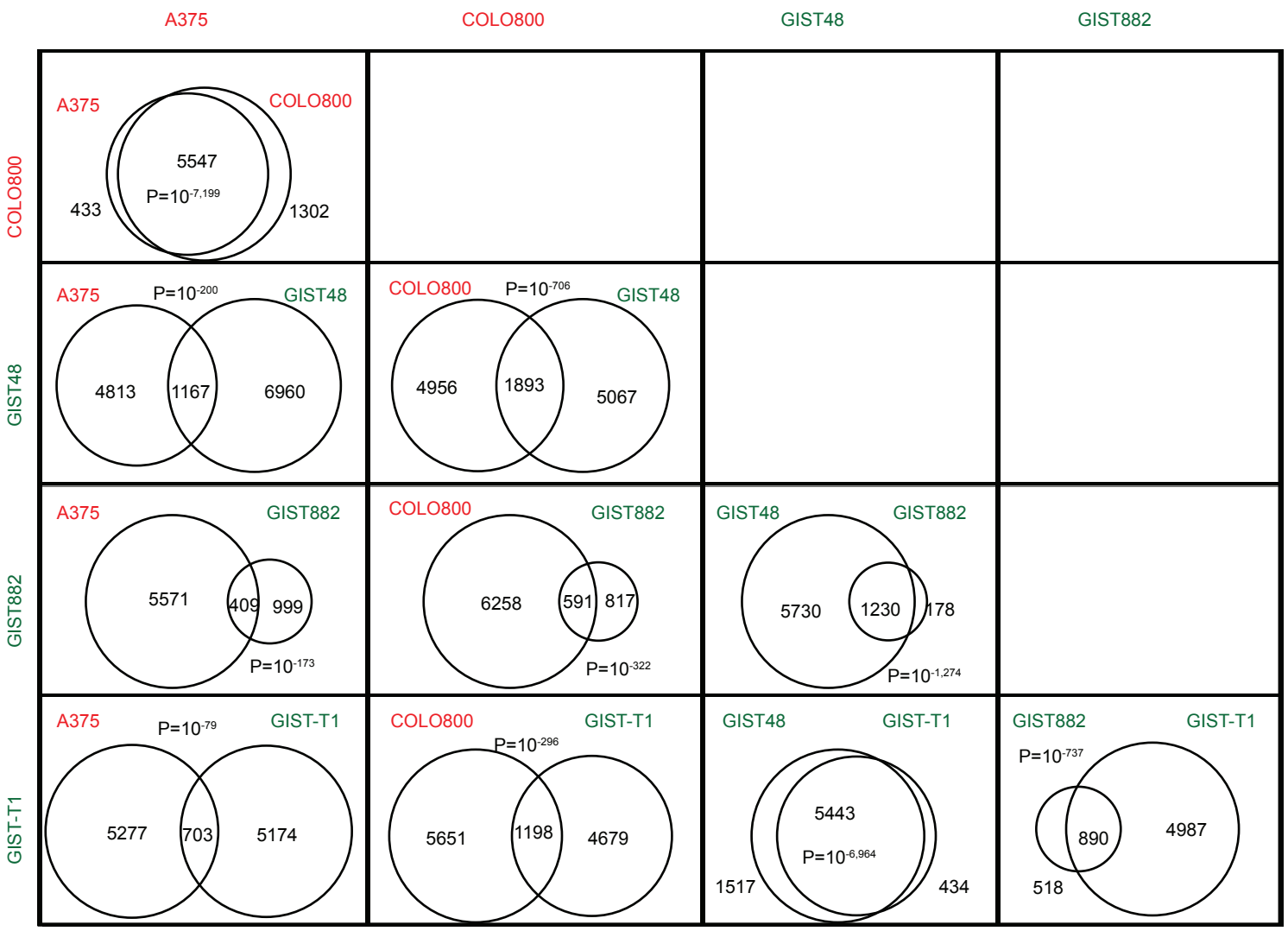
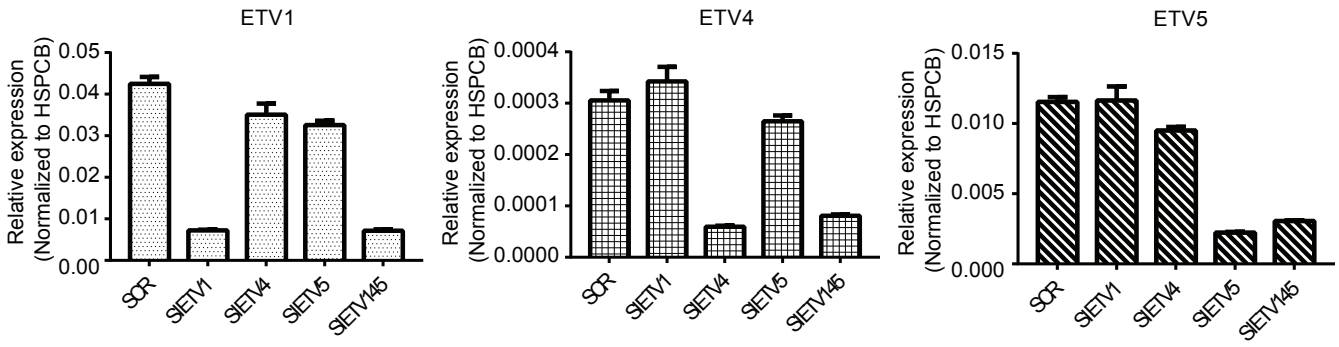


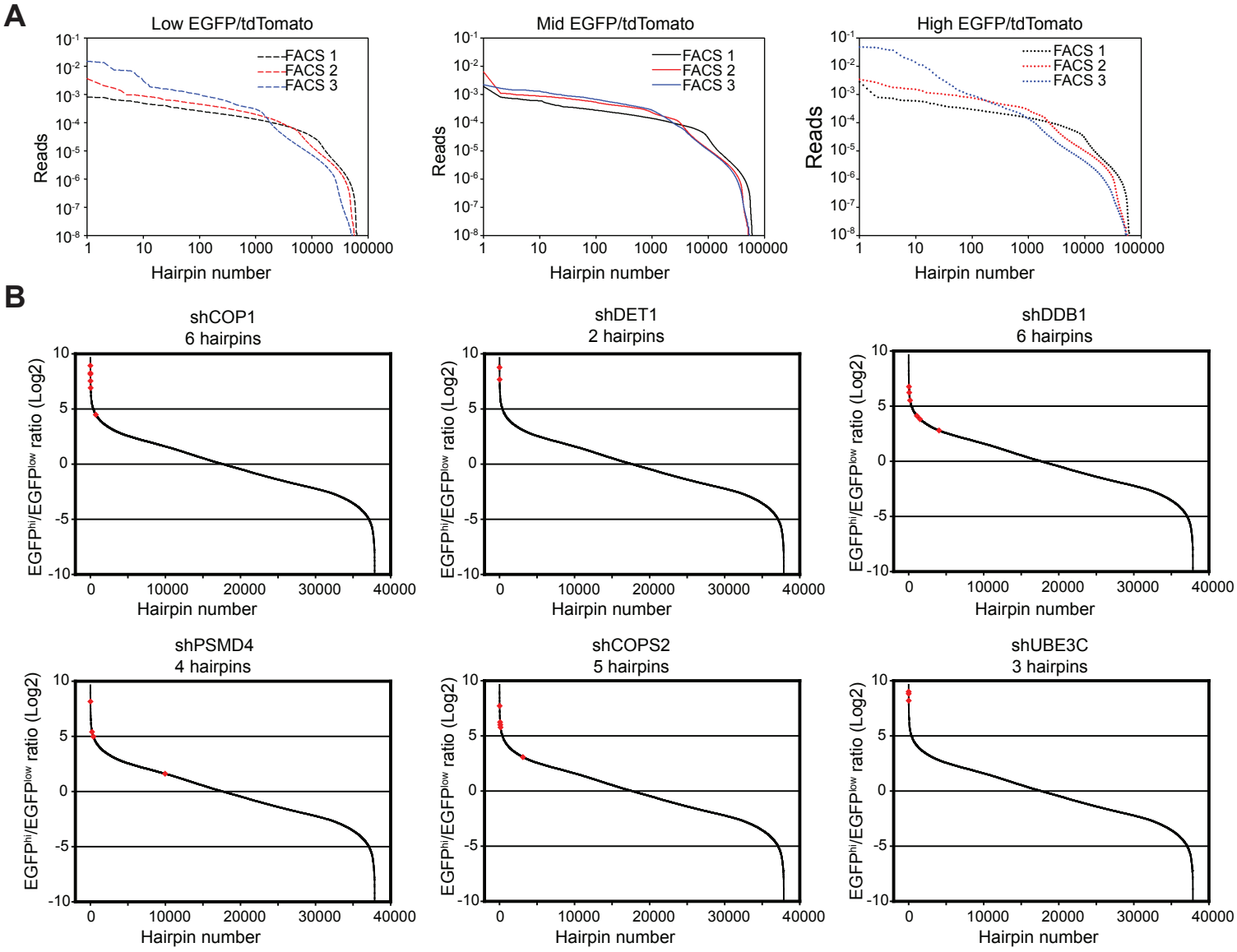
Supplemental Figure 1. Correlation between gene expression changes induced by imatinib and PD325901 in GIST cell lines. (**A**-**C**) Immunoblots of GIST48 (**A**), GIST882 (**B**), and GIST-T1 (**C**) cells treated with vehicle, PD325901 (PD901, 100nM), or imatinib (IM, 1μM) at the indicated time points, demonstrating that imatinib and PD325901 have cell-line specific effects to suppress ERK phosphorylation and ETV1 protein level. (**D**-**F**) Scatter plots of transcriptome changes induced by 8 hours of treatment with PD325901 and imatinib in GIST48 (**D**), GIST882 (**E**) and GIST-T1 (**F**), using Illumina Bead Array microarray (HT-12). R: Correlation coefficient, P: Significance of correlation.



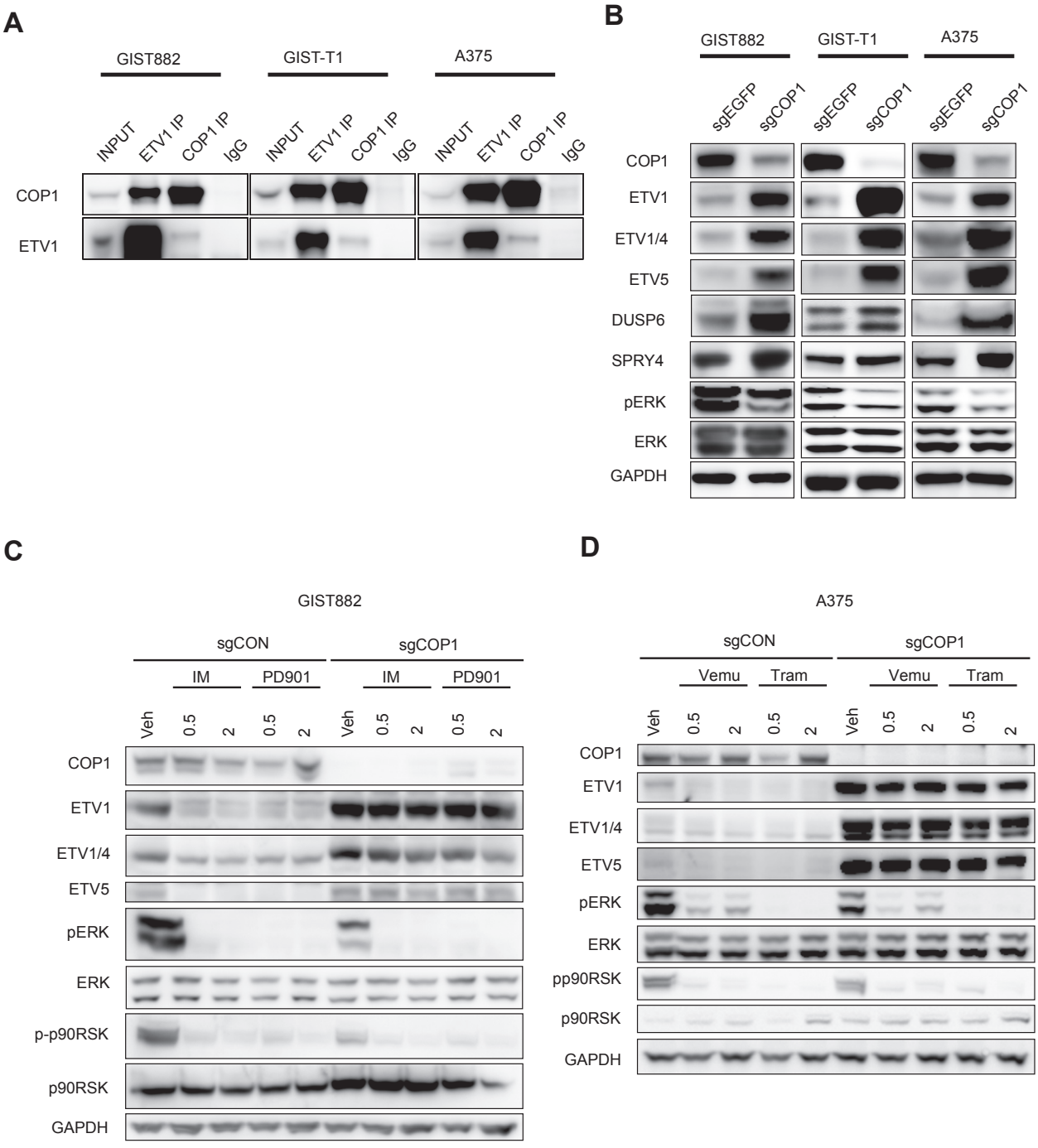
Supplemental Figure 2. Venn diagram of paired comparison of ETV1 enhancer binding sites in GIST and melanoma cell lines. P: Hypergeometric test of overlap assuming the total number of DNA accessible sites is 100,000.



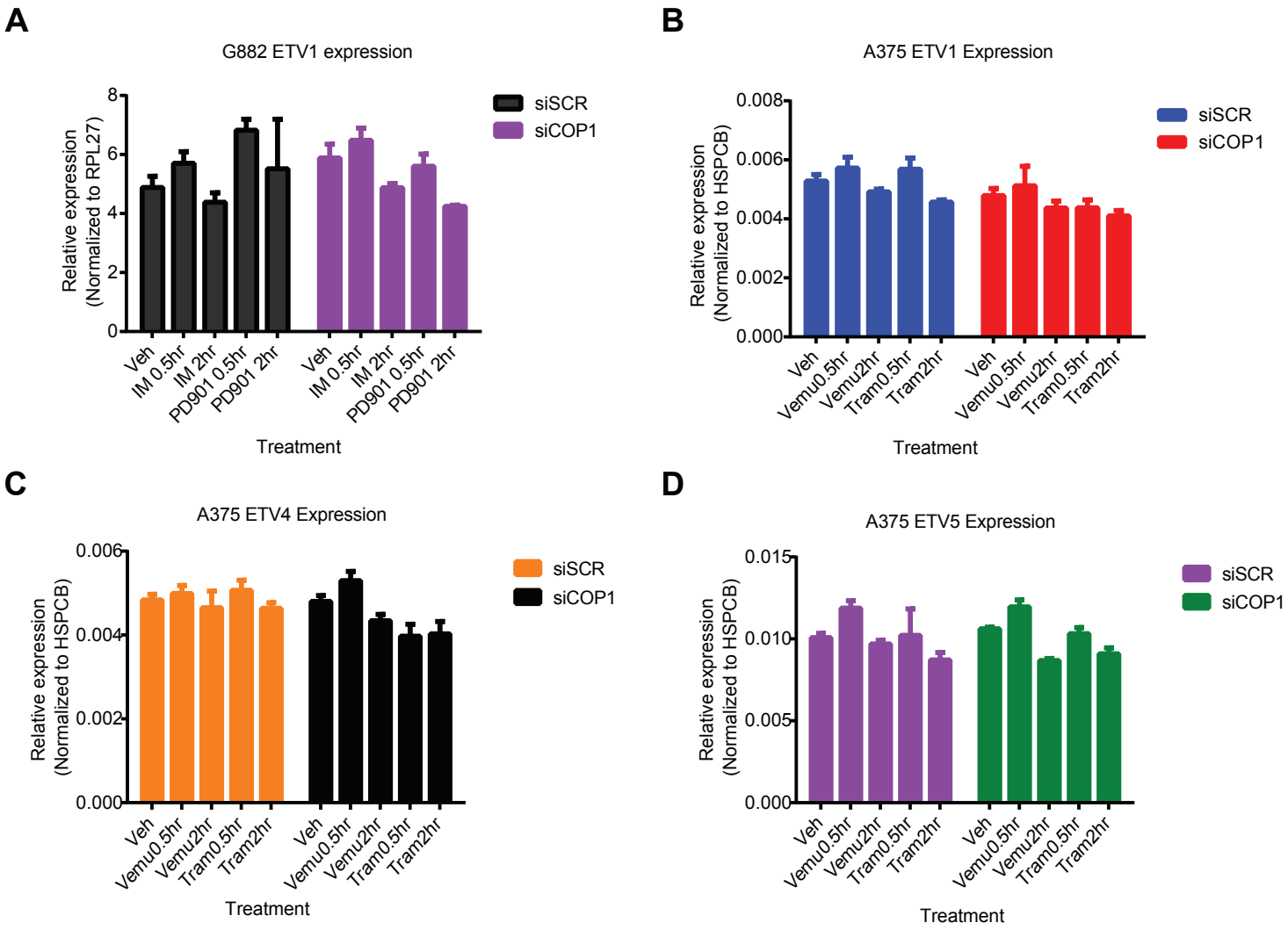
Supplemental Figure 3. Representative qRT-PCR of ETV1, ETV4 and ETV5 after siRNA-mediated knockdown in GIST882 cells. qRT-PCR quantification of ETV1, ETV4, and ETV5 transcripts normalized to the HSPCB housekeeping gene at the indicated knockdown conditions in GIST882 cells 48 hours after transfection.



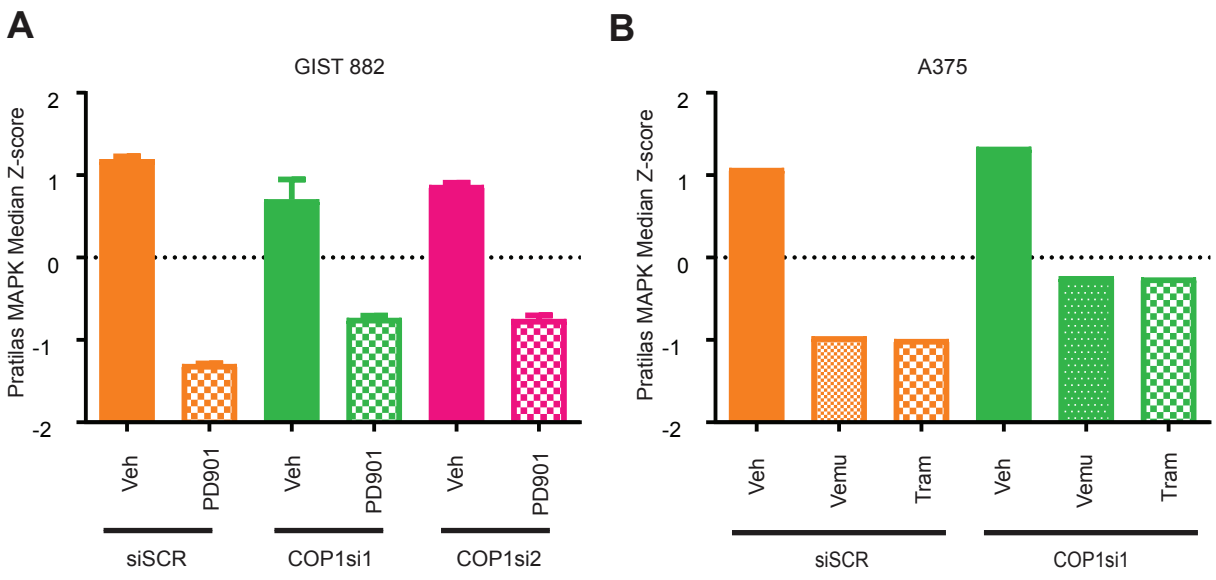
Supplemental Figure 4. Pooled shRNA screen for MAPK signaling-dependent regulators of ETV1 protein stability. (**A**) shRNA hairpin representation of cells FACS sorted for Low, Medium, and High EGFP/tdTomato (E/T) ratio after Sort 1 (FACS 1), Sort 2 (FACS2), and Sort 3 (FACS3). Hairpins are ordered from most to the least number of reads. Y-axis is Log scale of read number. This shows that the hairpin representation shifts over successive sorts for High and Low sorted cells but not for Middle sorted cells, indicating selection of specific hairpins that alter EGFP/tdTomato ratio. (**B**) Hairpins were ranked by ratio of reads between E/T-high to E/T-low population after Sort 3. For specific genes that were highly ranked by HiTSelect (COP1, DET1, DDB1, PSMD4, COPS2, UBE3C), the position of each individual hairpin targeting the gene is shown by red dot.



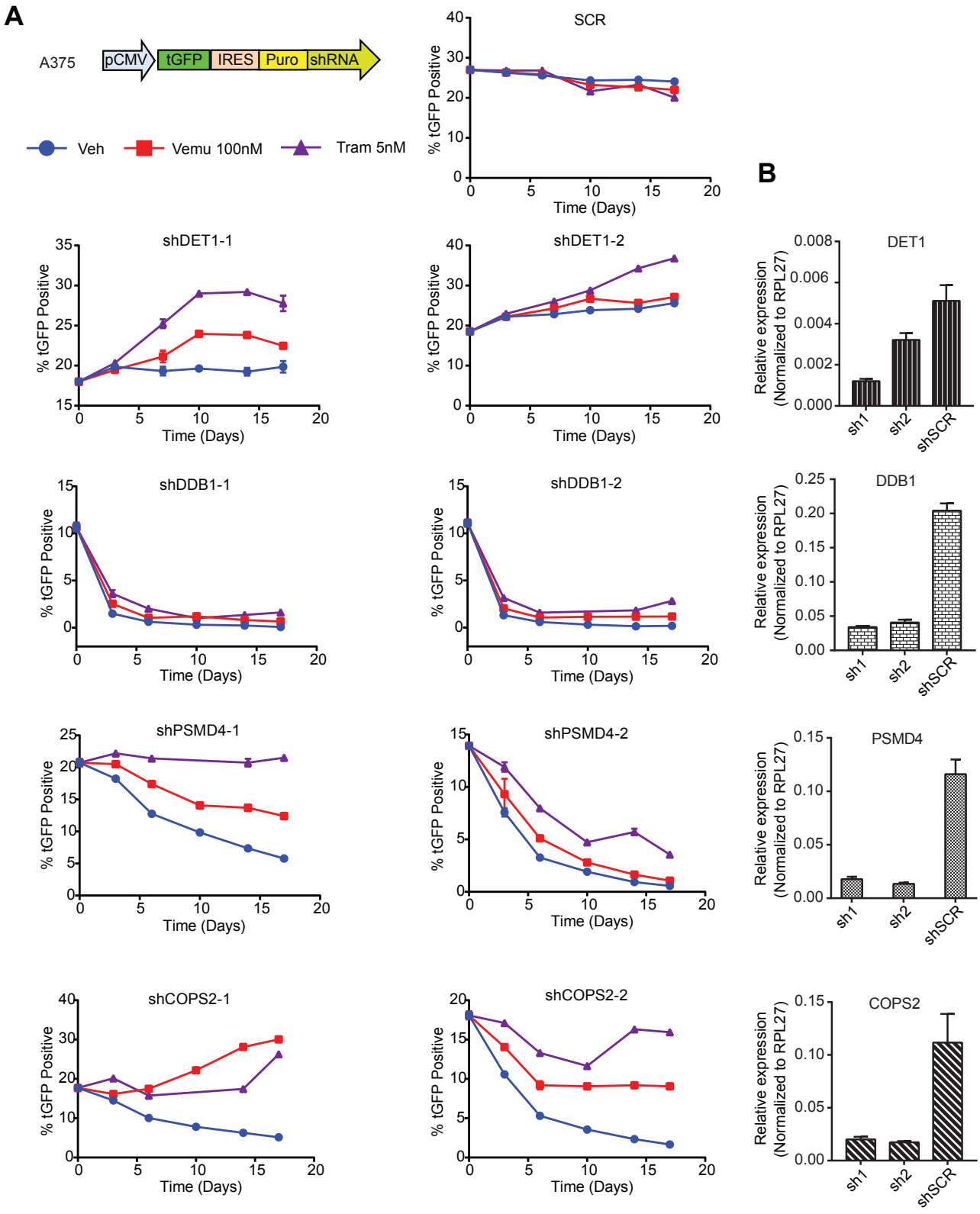
Supplemental Figure 5. Endogenous COP1 and PEA3 ETS interplay in GIST and melanoma cells. (**A**) Immunoblots of COP1 and ETV1 of input lysate, COP1 immunoprecipitant (IP), ETV1 IP, and control rabbit IgG IP from GIST882, GIST-T1, and A375 cells. (**B**) Immunoblots of the indicated proteins in GIST-T1, GIST882 and A375 cells with CRISPR/Cas9-mediated knockout of COP1 (sgCOP1) compared to control (sgEGFP). (**C**) Immunoblots of the indicated proteins in GIST882 cells with CRISPR/Cas9-mediated knockout of COP1 (sgCOP1) or control (sgCON), followed by treatment with vehicle (Veh), imatinib (IM) (1μM) or PD325901 (PD901, 100 nM) for 0.5 or 2 hrs. (**D**) Immunoblot of indicated proteins in A375 cells with CRISPR/Cas9-mediated knockout ofCOP1 (sgCOP1) or control(sgCON), followed by treatment with vehicle (Veh), or vemurafenib (Vemu, 1 μM) or trametinib (Tram, 100 nM) for 0.5 or 2 hrs.



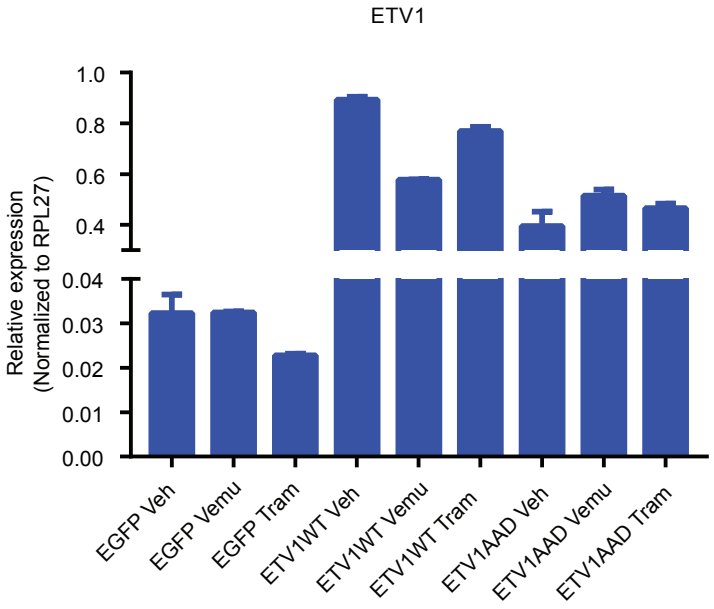
Supplemental Figure 6. Representative qRT-PCR of ETV1, ETV4 and ETV5 after COP1 knockdown and MAPK inhibition. (**A**-**D**) qRT-PCR quantification of ETV1 (**A**-**B**), ETV4 (**C**), and ETV5 (**D**) transcripts at the indicated conditions in GIST882 (**A**) and A375 cells (**B**-**D**). Cells were transfected by siRNA for 48 hours and then treated with drug of 0.5 or 2 hrs. Veh: vehicle; IM: imatinib (1μM); PD901: PD325901 (100 nM); Vemu: vemurafenib (1 μM); Tram: trametinib (100 nM). Error bars: mean ± SD.



Supplemental Figure 7. Effect of COP1 depletion on consensus MAPK dependent genes. (**A**) Pratilas MAPK median Z-score (15) in GIST882 cells transfected with scrambled siRNA (siSCR) or two siRNAs against COP1, and treated with vehicle (Veh) or PD901 (100 nM) for 8 hrs. n=2, Error bars: mean ± SD. (**B**) Pratilas MAPK median Z-score in A375 cells transfected with scrambled siRNA (siSCR) or COP1si1 and treated with vehicle (Veh), vemurafenib (Vem) or trametinib (Tram) for 8 hrs.



Supplemental Figure 8. Evaluation of other COP1 degradation pathway genes in the regulation of cell growth in response to MAPK pathway inhibition in A375 cells. (**A**) Competition growth assay between infected (tGFP positive) and uninfected (tGFP negative) A375 cells transduced with shRNA-mir vector with scrambled (shSCR) or two independent shRNA specific for DET1, DDB1, PSMD4 or COPS2. The cells were transduced with MOI ~10-30% and were treated 3 days after transduction with vehicle (Veh), vemurafenib (Vemu 100 nM), or trametinib (Tram 5 nM). TurboGFP (tGFP) fluorescence was quantified over time. n=3, Error bars: mean ± SD. (**B**) qRT-PCR quantification of DET1, DDB1, PSMD4 and COPS2 transcripts in A375 cells transduced with shRNA-mir vector with scrambled (shSCR) or two independent shRNA specific for DET1, DDB1, PSMD4 or COPS2. Error bars: mean ± SD.



Supplemental Figure 9. Total ETV1 RNA transcript levels of A375 cells expressing exogenous ETV1 under various treatment conditions. qRT-PCR quantification of ETV1 transcripts at the indicated conditions in A375 cells expressing exogenous ETV1WT, ETV1AAD or EGFP control proteins, and treated with vehicle (Veh), vemurafenib (Vemu, 1μM) or trametinib (Tram, 100nM) for 2 hrs. Error bars: mean ± SD.

Supplemental Table 1: Gene Sets Used for GSEA and to Calculate MAP kinase sum expression

Gene Set Name	Gene Set Description	Genes
CUSTOM_A375_ETV1sh1_DN	Genes downregulated in A375 cells by ETV1sh1. RNA-Seq, Expressed Genes (FKPM>1), > 2-fold down. GSE80352. This Paper.	ABAT, ABHD6, ACTN1, ACTR2, ACTR3B, ADAM10, ADAM23, ADORA2B, ADPRH, AFAP1L2, AIM1, AKAP1, ALAD, ALCAM, ALDOC, ALG6, AMOT, ANKH, AP3S1, API5, APIP, APOC1, APOD, APOE, APRT, ARFIP1, ARSJ, ART3, ASF1A, ASH2L, ATF3, ATP6V0A4, ATP6V1C1, AZGP1, B4GALT6, BAMBI, BCAS2, BECN1, BGN, BHLHE40, BIRC3, BIRC5, BMP7, BRI3BP, BST1, BTG2, BUB1, BUB3, C11orf49, C12orf66, C12orf75, C16orf87, C17orf96, C1QTNF1, C21orf91, C3, C4orf32, C6orf120, C7orf26, CADM1, CALB1, CAPS, CARD10, CCBL2, CCDC47, CCDC59, CCNB2, CD320, CDC20, CDCA3, CDCA8, CDKN1A, CDKN1C, CHRM3, CIITA, CITED1, CITED2, CKAP2L, CLCF1, CMTM7, CNBP, CNIH2, CNKSR3, COBL, COL11A2, COL6A1, COPS2, CPA4, CPT2, CRIPT, CRKL, CSRP2, CYFIP2, DAAM2, DAB2, DARS, DBI, DCUN1D1, DDIT3, DDIT4, DEPDC7, DHRS3, DHTKD1, DKK3, DLAT, DNAJB9, DNASE2, DUSP6, EBNA1BP2, ECHDC1, EDEM2, EEF1A2, EFNA3, EIF2B1, EIF4E, EIF4H, ELF1, EME1, EMILIN1, ENAH, ENOX2, ERBB3, ETV1, ETV5, EXOSC8, EXTL1, FAM188A, FAM91A1, FBXW8, FCRLA, FGF1, FGF13, FHL2, FKBP10, FLRT3, FLT1, FNDC3A, FOXD3, FRAT2, FST, FSTL1, FXYD3, G3BP2, GAA, GADD45B, GDF15, GDNF, GLB1L2, GMCL1, GNE, GORASP2, GPC6, GPD1L, GPT2, GTF3A, HADH, HAPLN1, HCFC1R1, HES1, HIGD1A, HIST1H2BC, HK2, HLA-DMA, HLA-DMB, HLA-DOA, HLA-DPA1, HLA-DQA1, HLA-DQA2, HLA-DRA, HLA-DRB1, HLA-DRB5, HMGA2, HMMR, HMOX1, HOTAIRM1, HOXB7, HSD17B3, HTR7, HYPK, IDH3A, IER2, IER5L, IGFBP5, IL12A, IL13RA2, IL1B, INPP5F, IRS2, ITGB3, ITGB4, KCNS3, KIF20A, KIF23, KISS1, KPNA3, KRT14, LAD1, LAMC1, LBR, LEMD1, LHFPL2, LIMA1, LIMCH1, LMNB1, LOXL4, LYNX1, LYRM1, MAD2L1, MAGED1, MAP3K4, MBNL2, MCM6, MEST, METTL3, MEX3A, MGAT5, MMP15, MMP16, MOSPD2, MRPS14, MRPS18B, MTHFD1, MTM1, MTX3, MYC, NACC1, NAT1, NDN, NES, NFATC2, NIP7, NIPBL, NKIRAS1, NOP56, NT5DC3, OAZ2, OBSL1, OTUD7B, OVOL1, OXSR1, PA2G4, PABPC1, PARK7, PARP1, PARVB, PCDH7, PCOLCE, PCOLCE2, PCYT2, PDCD11, PDGFA, PDIA3, PDIA4, PDK4, PDZRN3, PFDN4, PFKFB3, PGAM2, PHGDH, PHLDA3, PJA1, PLAT, PLD6, PLK1, PLK2, PLP1, PLTP, PMP22, PNO1, PNPO, POLH, POLR2C, PPP1CB, PRSS33, PSAT1, PSMA6, PTMA, PTPRE, PTRH1, PTS, PVT1, PXDN, PYGB, QPCT, QSER1, RAB10, RAB12, RAB21, RALGPS2, RBBP8, RCAN1, REEP5, RFT1, RPL23A, RRM2, RRM2B, RRN3, RSRC1, RWDD2B, S100A1, S100B, S1PR1, SAP18, SCARB1, SCCPDH, SDHB, SDHD, SEMA3B, SERPINA3, SERPINE2, SERPINF1, SERTAD4, SGK1, SHISA4, SIPA1L2, SKAP2, SLC16A4, SLC1A3, SLC1A4, SLC20A1, SLC25A10, SLC25A19, SLC25A30, SLC26A2, SLC2A1, SLC30A1, SLC35D2, SLC37A3, SLC39A10, SNHG12, SNRPC, SNX24, SOD3, SPON2, SPP1, SPRED1, SPRED2, SPRY2, SPRY4, SRGAP3, ST3GAL4, STAMBPL1, STC2, SURF4, TAC1, TCN1, TFAP2B, TFAP4, TFDP1, TGIF1, THADA, THAP5, THBS1, TIAM1, TIMP1, TIMP3, TIPARP, TLCD1, TLCD2, TMEM123, TMEM171, TMEM177, TMEM45A, TMEM50A, TMEM59L, TMEM70, TMEM9B, TMTC2, TNFRSF12A, TNFRSF19, TNFSF9, TNRC6A, TOMM22, TOP2A, TP53TG1, TPI1, TRAF1, TRAPPC6A, TRIB1, TRIB2, TRIM2, TSN, TSPAN11, TUBB6, TXNDC12, UBE2H, UBE2Q1, UBL3, UGT8, UHRF1, VEGFA, VWA5A, WDR75, WISP1, WNK4, YIPF4, YIPF6, ZCCHC9, ZDHHC20, ZFP42, ZNF138, ZNF146, ZNF33B, ZNF480, ZNF766, ZNF845,
CUSTOM_A375_ETV1sh2_DN	Genes downregulated in A375 cells by ETV1sh2. RNA-Seq, Expressed Genes (FKPM>1), > 2-fold down. GSE80352. This Paper.	A4GALT, AADAT, ABLIM3, ABTB2, ACTN1, ACTN4, ADAM19, ADAM23, ADARB1, ADSL, AFAP1L1, AFAP1L2, AGPS, AHNAK, AKAP1, ALDH1B1, ALKBH8, ALPL, AMACR, AMD1, AMIGO2, AMOT, AMOTL1, ANGPTL2, ANGPTL4, ANKRD1, ANLN, ANO10, ANP32B, ANXA2, APC, APLP1, APLP2, APOC1, ARC, ARFIP1, ARHGAP21, ARHGAP22, ARHGAP5, ARID5B, ARPP21, ARSJ, ART3, ASAP2, ASCC3, ASF1A, ASF1B, ASPH, ASPM, ATAD3B, ATF3, ATG5, ATP1A1, ATP1B1, ATP5D, ATP6V0A4, ATP6V1D, AURKA, AURKB, B3GNT7, BAMBI, BCAR3, BCCIP, BCL6, BCL9L, BFAR, BGN, BHLHE40, BIN3, BIRC2, BIRC3, BIRC5, BMP2, BMP7, BNIP2, BOLA3, BRCA1, BTBD7, BTG1, BUB1, BZW1, C10orf90, C12orf29, C15orf52, C19orf48, C1GALT1, C3AR1, C5orf22, C9orf91, CADM1, CADM4, CALB1, CAP2, CAPRIN1, CAPZA1, CAV1, CBX3, CCDC59, CCL2, CCNA2, CCNB1, CCNB2, CCND1, CCNE1, CD2AP, CDC20, CDC25A, CDC42EP1, CDC42EP2, CDC42EP3, CDC45, CDC6, CDCA2, CDCA3, CDCA5, CDCA8, CDH13, CDK1, CDK2, CDK5RAP2, CDKN1C, CDKN3, CENPA, CENPE, CENPF, CENPH, CENPK, CENPM, CEP135, CEP55, CHAF1A, CHST1, CHST11, CHSY1, CHTF18, CIITA, CIRH1A, CITED1, CITED4, CKAP2, CKAP2L, CLINT1, CLNS1A, CLSPN, CMTM7, CNN3, CNOT6, CNPY2, COBL, COL12A1, COL13A1, COL19A1, COL5A1, COL8A1, COPS2, COPS6, COX5A, CPA4, CREB5, CRIP2, CSAG1, CSE1L, CSPG4, CSTF2, CTBP2, CTGF, CTSC, CTXN1, CWC25, CXCL1, CYB5R2, DAAM2, DAZAP1, DCAF13, DCBLD2, DCUN1D5, DDHD1, DDI2, DDIT4, DDX18, DEK, DEPDC1B, DEPDC7, DFNA5, DHRS3, DKC1, DLEU1, DLG3, DLST, DMRT2, DNAH9, DNAJC16, DNAJC2, DNAL4, DOCK4, DOLPP1, DPP8, DPYSL3, DRAM1, DSCC1, DTL, DTYMK, DUSP4, DUSP6, DYNLT3, DZIP1, E2F1, EAF1, EBF3, EBNA1BP2, ECHDC1, EDEM1, EEF1A2, EFTUD2, EHBP1, EIF3B, EIF3J, EIF3L, EIF3M, EIF4EBP1, ELK3, EME1, ENC1, ENO1, EPB41L2, EPHA4, EPHA7, EPS8, ERBB3, ERF, ERI1, ESM1, ETS1, ETS2, ETV1, ETV4, ETV6, EWSR1, EXD3, EXO1, EXOSC2, EXTL1, EYA1, EYA4, F2R, F2RL2, FADS1, FAM20C, FAM46A, FAM78B, FAM83D, FAM84B, FANCD2, FANCI, FAT1, FCRLA, FEN1, FERMT1, FGD4, FGF1, FGF13, FHL2, FIGNL1, FJX1, FLRT3, FLT1, FMNL2, FN1, FNDC3A, FOXM1, FRMD4A, FRMD5, FRMD6, FST, FXYD3, FYN, FZD8, G3BP2, GADD45A, GADD45B, GALNT14, GBAS, GDF11, GDF15, GDNF, GGCT, GLB1L2, GLRX3, GMFB, GMNN, GNE, GOLIM4, GPATCH4, GPC6, GPRC5A, GRB10, GRIPAP1, GTF3A, GTF3C2, GTF3C6, GTPBP3, GULP1, HAPLN1, HAUS6, HDAC9, HDDC2, HEG1, HERC3, HES1, HIRA, HIVEP3, HJURP, HK2, HLA-DMA, HLA-DQA1, HLA-DQA2, HLA-DRA, HMCN1, HMGA2, HMGB2, HMMR, HNRNPH1, HOTAIRM1, HOXA3, HOXB8, HSD17B3, ICAM1, ICK, IER2, IER5L, IGBP1, IGF1R, IGFBP2, IGFBP5, IL11, IL12A, IL13RA2, IL1A, IL1B, IL1RAP, IL32, IL6R, IMP4, INCENP, INHBA, INPP4B, INPP5F, IPO5, IQCK, IRS2, ITGA1, ITGA4, ITGAV, ITGB3, ITGB8, ITIH5, JAG1, KALRN, KANK1, KCNMA1, KCNN4, KCTD10, KCTD15, KDELC1, KIAA0101, KIAA1211, KIF18B, KIF20A, KIF22, KIF23, KIF2C, KIF4A, KIF5B, KIFC1, KISS1, KLF3, KLF9, KLHL2, KPNA2, KRT14, KRT8, KRT81, LAMA4, LARS, LASP1, LDHA, LEF1, LEMD1, LIMA1, LIN28B, LITAF, LMCD1, LMNB1, LOXL4, LPXN, LRIG3, LSM10, LYAR, LYNX1, LYPD1, MAD2L1, MAD2L1BP, MAF, MAGEA2B, MAK16, MAP3K1, MAP3K14, MAP3K3, MAP4K5, MAPK14, MAPK6, MARCH7, MARK3, MBD2, MCAM, MCCC2,
CUSTOM_Colo800_ETV1sh1_DN	Genes downregulated in Colo800 cells by ETV1sh1. RNA-Seq, Expressed Genes (FKPM>1), > 2-fold down. GSE80352. This Paper.	ABHD2, ACTN1, ACTR2, ADAM10, ADARB1, ADD3, ADPRH, AGK, AKAP2, ALDH1A3, ALG6, ANKS1A, ANO6, ANXA1, ANXA5, AP3S1, API5, APIP, APOD, ARFIP1, ARL15, ARL6IP1, ARL8B, ARRDC4, ARSE, ARSJ, ASB9, ASCC1, ASH2L, ATF3, ATF6, ATP6V1C1, B4GALT6, BAALC, BAMBI, BCAS2, BCL2L11, BECN1, BHLHE40, BHLHE41, BICC1, BMPR1A, BNIP3, BRI3BP, BUB1B, C12orf75, C16orf72, C1orf21, C21orf91, C3orf58, C5orf24, CA8, CACHD1, CALD1, CAMK4, CASD1, CBFB, CCDC47, CCDC59, CCL2, CCNB2, CCND1, CCNE2, CD44, CDC42EP4, CDCA4, CDH2, CEBPD, CEP170, CHL1, CHPT1, CITED2, CKAP2L, CLDN1, CMTM7, CNBP, CNN3, CNTNAP3, COL15A1, COL16A1, COPS2, CPT2, CRIPT, CRISPLD1, CRKL, CSRP2, CST1, CTNNBIP1, CTNND1, CXXC5, CYGB, CYP7B1, CYR61, DAB2, DAG1, DARS, DBI, DCK, DCUN1D1, DDX6, DENND2A, DHRS7, DHTKD1, DLAT, DLC1, DNAJB1, DNAJB9, DPF2, DUSP6, EBF3, ECE1, ECHDC1, EDEM2, EFNA5, EGFL8, EIF1B, EIF2B1, EIF4H, ELF1, ELOVL5, EMILIN1, EMP1, ENAH, ENOX1, ENOX2, EPAS1, EPB41L3, EPDR1, EPHX1, ERGIC2, ETV1, ETV5, EYA1, FABP7, FAM111A, FAM111B, FAM46C, FAM47E, FAM84B, FAM91A1, FGF12, FGF13, FGFBP2, FGGY, FHL2, FLNB, FLRT3, FLT1, FMNL2, FRMD6, FSTL1, GDF15, GDNF, GHR, GINS4, GLDC, GMCL1, GNPTAB, GORASP2, GPAM, GPC4, GPM6B, GPRC5B, GRASP, GRIK3, GTF2E1, H19, HADH, HDAC11, HES1, HEY1, HEY2, HHIP, HIGD1A, HK2, HLA-DMA, HLA-DRA, HMCN1, HMGA2, HMGN1, HMGN2, HMMR, HMOX1, HPS5, HTR7, ICAM1, ICMT, ID1, ID2, IDH3A, IER2, INPP5A, IQGAP1, IRS1, ITGA2, ITGA6, ITGA9, ITPR1, KANK1, KCNS3, KDELC2, KLF4, KPNA3, LAMC1, LBH, LBR, LCLAT1, LEF1, LGI3, LHFPL2, LIFR, LIMA1, LIMCH1, LOXL3, LOXL4, LRRC58, LYRM1, LYST, MACF1, MAD2L1, MAPRE2, MARCKS, MATN2, MBNL1, MBNL2, MBP, MCC, MGAT5, MGP, MMD, MMP15, MMP16, MPHOSPH9, MPZ, MTHFD1, MTM1, MTPAP, MTPN, MTX3, MYH10, MYO5A, MYO6, NDN, NDRG1, NEK3, NELL1, NES, NIP7, NIPBL, NKIRAS1, NMNAT1, NPPC, NQO1, NR0B1, NRAS, NUP35, NUP54, NUPR1, OAZ2, OLFML2A, OLFML3, OTUD7B, OXSR1, P2RY1, PABPC1, PARK7, PARP1, PDGFA, PDIA3, PFDN4, PFKFB3, PGF, PHLDA3, PI15, PIGW, PIK3CG, PIK3R1, PJA1, PKNOX2, PLAT, PMP2, PMP22, PODXL, POU3F2, PPAT, PPP1CB, PRKD1, PRRX1, PSAT1, PTCH1, PTER, PTMA, PTN, PTPRJ, PTPRZ1, PTTG1IP, PTX3, QPCT, QSER1, R3HDM1, RAB10, RAB12, RAB14, RAB21, RAB23, RAB38, RALGPS2, RANBP9, RAP1GDS1, RBBP8, RBPJ, RDX, RELL1, RGS5, RNF13, RNF150, RNF217, ROPN1, RRM2, RRM2B, RSRC1, RTF1, RWDD2B, S100B, SAMD4A, SCCPDH, SDCBP, SDHB, SDHD, SEC14L2, SERPINE2, SERTAD2, SESN3, SGCD, SGK1, SKAP2, SLC1A4, SLC24A5, SLC25A30, SLC26A2, SLC2A1, SLC35A1, SLC35D2, SLC37A3, SNAI2, SNRK, SNRPC, SNTB1, SNX10, SNX18, SNX24, SOCS3, SPRED1, SPRED2, SPRY2, SPRY4, SPSB1, ST6GALNAC2, ST8SIA5, STAG2, STAMBPL1, SYNM, SYT6, TAPT1, TBX2, TCF12, TFAP4, TFDP1, TGFBR3, TGM2, THAP5, THBS1, TIAM1, TIMP3, TIPARP, TMEM123, TMEM45A, TMEM50A, TMEM9B, TMTC1, TMTC2, TNFRSF12A, TNPO3, TNRC6A, TOMM22, TOP2A, TPMT, TRIB1, TRPM8, TSN, TTC19, TUBB6, TWF1, TXNIP, TYMS, UBA6, UBE2H, UBE2Q1, UBL3, UHRF1, USP6NL, VWA1, WISP1, WNK4, XRCC4, YWHAH, ZCCHC9, ZDHHC20, ZNF146, ZNF292, ZNF33B, ZNF367, ZNF395, ZNF480, ZNF800, ZNF845, ZNF92

Supplemental Table 2: GSEA gene sets enriched in downregulated genes in GIST48 treated with PD325901

NAME	SIZE	ES	NES	NOM p-val	FDR q-val
CUSTOM_G48_siETV1_DN	205	-0.74	-2.86	0.000	0.000
NIELSEN_GIST	84	-0.77	-2.60	0.000	0.000
CUSTOM_G882_siCOP1_UP_IN_PD901	89	-0.74	-2.54	0.000	0.000
CUSTOM_EXPO-GIST-UP	56	-0.79	-2.53	0.000	0.000
CUSTOM_PRATALIS MAPK	29	-0.87	-2.44	0.000	0.000
CUSTOM_GIST48_ETV1SH1_DN	59	-0.74	-2.38	0.000	0.000
IL15_UP.V1_UP	84	-0.70	-2.37	0.000	0.000
IL2_UP.V1_UP	84	-0.67	-2.32	0.000	0.000
KRAS.600_UP.V1_UP	74	-0.69	-2.30	0.000	0.000
CUSTOM_GIST48_ETV1SH2_DN	81	-0.68	-2.29	0.000	0.000
MARZEC_IL2_SIGNALING_UP	68	-0.67	-2.22	0.000	0.000
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_1	20	-0.87	-2.22	0.000	0.000
WINZEN_DEGRADED_VIA_KHSRP	43	-0.74	-2.21	0.000	0.000
EGFR_UP.V1_UP	115	-0.61	-2.19	0.000	0.001
NAGASHIMA_NRG1_SIGNALING_UP	107	-0.62	-2.16	0.000	0.001
CUSTOM_GIST-T1_ETV1SH1_DN	167	-0.57	-2.15	0.000	0.002
KRAS.300_UP.V1_UP	41	-0.70	-2.15	0.000	0.002
SWEET_KRAS_TARGETS_DN	35	-0.75	-2.15	0.000	0.002
CUSTOM_SEGAL-GIST	15	-0.87	-2.14	0.000	0.002
NAGASHIMA_EGF_SIGNALING_UP	31	-0.76	-2.14	0.000	0.002
GSE15750_WT_VS_TRAF6KO_DAY10_EFF_CD8_TCELL_DN	60	-0.66	-2.14	0.000	0.002
SARTIPY_NORMAL_AT_INSULIN_RESISTANCE_UP	24	-0.78	-2.13	0.000	0.002
GROSS_HYPOXIA_VIA_ELK3_AND_HIF1A_UP	107	-0.59	-2.13	0.000	0.002
CSR_EARLY_UP.V1_UP	125	-0.58	-2.11	0.000	0.002
REACTOME_ERK_MAPK_TARGETS	20	-0.80	-2.10	0.000	0.003
HUNSBERGER_EXERCISE_REGULATED_GENES	16	-0.84	-2.08	0.000	0.004
BCAT.100_UP.V1_UP	22	-0.79	-2.08	0.000	0.003
REACTOME_GPCR_LIGAND_BINDING	48	-0.66	-2.08	0.000	0.004
CUSTOM_GIST882_ETV1SH2_DN	75	-0.63	-2.07	0.000	0.004
GSE17974_0H_VS_2H_IN_VITRO_ACT_CD4_TCELL_DN	131	-0.56	-2.07	0.000	0.004
REACTOME_NUCLEAR_EVENTS_KINASE_AND_TRANSCRIPTION_FACTOR_ACTIVATION	23	-0.77	-2.07	0.000	0.004
DEPHOSPHORYLATION	46	-0.65	-2.06	0.000	0.004
CUSTOM_ICC-MY_UP	24	-0.74	-2.05	0.000	0.005
DAVICIONI_TARGETS_OF_PAX_FOXO1_FUSIONS_DN	37	-0.70	-2.05	0.000	0.005
MAPKKK_CASCADE_GO_0000165	63	-0.61	-2.03	0.000	0.007
BOQUEST_STEM_CELL_DN	85	-0.58	-2.03	0.000	0.007
DELACROIX_RAR_TARGETS_UP	26	-0.75	-2.02	0.000	0.008
AMIT_EGF_RESPONSE_60_MCF10A	27	-0.73	-2.02	0.000	0.008
LU_IL4_SIGNALING	57	-0.63	-2.02	0.000	0.008
KIM_WT1_TARGETS_UP	148	-0.54	-2.01	0.000	0.009
AMIT_EGF_RESPONSE_120_MCF10A	27	-0.73	-2.00	0.000	0.011
GERHOLD_ADIPOGENESIS_DN	44	-0.64	-1.99	0.000	0.012
REGULATION_OF_MAP_KINASE_ACTIVITY	37	-0.67	-1.99	0.000	0.012
LIN_NPAS4_TARGETS_DN	34	-0.68	-1.98	0.000	0.013
AMIT_SERUM_RESPONSE_60_MCF10A	38	-0.66	-1.98	0.004	0.014
PROTEIN_AMINO_ACID_DEPHOSPHORYLATION	40	-0.66	-1.97	0.000	0.014
NEGATIVE_REGULATION_OF_TRANSFERASE_ACTIVITY	26	-0.72	-1.97	0.004	0.016
KIM_GLIS2_TARGETS_UP	32	-0.69	-1.97	0.000	0.016
ZWANG_CLASS_2_TRANSIENTLY_INDUCED_BY_EGF	25	-0.72	-1.97	0.000	0.015

SANA_TNF_SIGNALING_DN	54	-0.61	-1.96	0.000	0.016
PHONG_TNF_TARGETS_UP	32	-0.67	-1.96	0.002	0.016
GSE17974_0H_VS_1H_IN_VITRO_ACT_CD4_TCELL_DN	129	-0.54	-1.96	0.000	0.017
GSE9006_HEALTHY_VS_TYPE_1_DIABETES_PBMC_AT_DX_DN	109	-0.54	-1.94	0.000	0.020
ZHENG_FOXP3_TARGETS_UP	15	-0.78	-1.92	0.004	0.027
NIELSEN_GIST_VS_SYNOVIAL_SARCOMA_DN	16	-0.81	-1.92	0.000	0.026
PHOSPHOPROTEIN_PHOSPHATASE_ACTIVITY	52	-0.61	-1.92	0.000	0.027
CROONQUIST_NRAS_VS_STROMAL_STIMULATION_UP	21	-0.73	-1.92	0.000	0.027
PID_SYNDECAN_4_PATHWAY	19	-0.74	-1.91	0.002	0.028
NEGATIVE_REGULATION_OF_CATALYTIC_ACTIVITY	43	-0.63	-1.91	0.004	0.028
REACTOME_MAPK_TARGETS_NUCLEAR_EVENTS_MEDIATED_BY_MAP_KINASES	28	-0.68	-1.91	0.002	0.028
BURTON_ADIPOGENESIS_9	64	-0.59	-1.91	0.000	0.027
REACTOME_CLASS_B_2_SECRETIN_FAMILY_RECEPTORS	21	-0.73	-1.91	0.000	0.028
CUSTOM_GIST882_ETV1SH1_DN	180	-0.50	-1.90	0.000	0.030
SCHUETZ_BREAST_CANCER_DUCTAL_INVASIVE_UP	172	-0.50	-1.90	0.000	0.030
GSE2706_R848_VS_R848_AND_LPS_2H_STIM_DC_DN	79	-0.56	-1.90	0.000	0.031
LUI_THYROID_CANCER_CLUSTER_1	38	-0.63	-1.90	0.000	0.032
PHOSPHORIC_ESTER_HYDROLASE_ACTIVITY	93	-0.55	-1.89	0.002	0.032
BERENJENO_TRANSFORMED_BY_RHOA_REVERSIBLY_DN	18	-0.75	-1.89	0.004	0.032
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_GREY_DN	38	-0.64	-1.89	0.000	0.033
CORRE_MULTIPLE_MYELOMA_UP	24	-0.70	-1.89	0.002	0.033
CUSTOM_GIST-T1_ETV1SH2	50	-0.59	-1.89	0.002	0.032
LI_INDUCED_T_TO_NATURAL_KILLER_UP	158	-0.50	-1.89	0.000	0.032
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_GREEN_UP	19	-0.75	-1.89	0.002	0.033
KUNINGER_IGF1_VS_PDGFB_TARGETS_DN	28	-0.67	-1.88	0.004	0.033
WANG_METHYLATED_IN_BREAST_CANCER	19	-0.72	-1.88	0.004	0.033
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_24H_ACT_CD4_TCELL_UP	66	-0.58	-1.88	0.000	0.034
GSE2706_LPS_VS_R848_AND_LPS_2H_STIM_DC_DN	39	-0.63	-1.88	0.000	0.034
TRANSFORMING_GROWTH_FACTOR_BETA_RECEPTOR_SIGNALING_PATHWAY	22	-0.71	-1.87	0.002	0.036
RIGGI_EWING_SARCOMA_PROGENITOR_DN	86	-0.54	-1.87	0.002	0.040
MANTOVANI_NFKB_TARGETS_UP	24	-0.70	-1.86	0.002	0.042
MURAKAMI_UV_RESPONSE_6HR_UP	25	-0.69	-1.86	0.002	0.042
PROTEIN_SERINE_THREONINE_PHOSPHATASE_ACTIVITY	18	-0.74	-1.86	0.000	0.042
GSE14769_UNSTIM_VS_40MIN_LPS_BMDM_DN	135	-0.51	-1.86	0.000	0.042
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_2H_CD4_TCELL_DN	154	-0.49	-1.86	0.000	0.042
MORI_IMMATURE_B_LYMPHOCYTE_UP	28	-0.67	-1.85	0.009	0.043
KORKOLA_TERATOMA	25	-0.68	-1.85	0.000	0.046
GSE1460_CD4_THYMOCYTE_VS_NAIVE_CD4_TCELL_ADULT_BLOOD_UP	151	-0.49	-1.85	0.002	0.047
BMI1_DN_MEL18_DN.V1_UP	54	-0.58	-1.84	0.006	0.047
RASHI_RESPONSE_TO_IONIZING_RADIATION_2	90	-0.53	-1.84	0.000	0.050
SMID_BREAST_CANCER_LUMINAL_B_DN	180	-0.48	-1.84	0.000	0.050
GSE1460_CD4_THYMOCYTE_VS_NAIVE_CD4_TCELL_CORD_BLOOD_UP	174	-0.48	-1.83	0.000	0.052
IZADPANAH_STEM_CELL_ADIPOSE_VS_BONE_UP	80	-0.54	-1.83	0.000	0.052
KEGG_PATHOGENIC_ESCHERICHIA_COLI_INFECTION	34	-0.63	-1.83	0.002	0.053

JECHLINGER_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_DN	44	-0.61	-1.83	0.004	0.053
POSITIVE_REGULATION_OF_PROTEIN_MODIFICATION_PROCESS	15	-0.75	-1.83	0.004	0.053
GSE11057_PBMC_VS_MEM_CD4_TCELL_UP	71	-0.55	-1.83	0.000	0.054
PRC2_EZH2_UP.V1_DN	86	-0.52	-1.82	0.000	0.056
NOTCH_DN.V1_DN	56	-0.57	-1.82	0.002	0.055
PROTEIN_TYROSINE_PHOSPHATASE_ACTIVITY	34	-0.63	-1.82	0.006	0.058
SEKI_INFLAMMATORY_RESPONSE_LPS_UP	33	-0.63	-1.82	0.000	0.058
GSE9988_ANTI_TREM1_VS_CTRL_TREATED_MONOCYTES_UP	127	-0.50	-1.81	0.000	0.059
CHARAFE_BREAST_CANCER_LUMINAL_VS_MESENCHYMAL_DN	334	-0.44	-1.81	0.000	0.063
NAKAYAMA_SOFT_TISSUE_TUMORS_PCA1_UP	16	-0.73	-1.81	0.000	0.064
ELVIDGE_HIF1A_TARGETS_UP	61	-0.55	-1.81	0.006	0.063
SMID_BREAST_CANCER_NORMAL_LIKE_UP	147	-0.48	-1.80	0.000	0.064
AMIT_EGF_RESPONSE_120_HELA	42	-0.60	-1.80	0.004	0.064
WOUND_HEALING	18	-0.71	-1.80	0.010	0.068
SCHAEFFER_PROSTATE_DEVELOPMENT_12HR_DN	21	-0.69	-1.80	0.006	0.068
WATANABE_COLON_CANCER_MSI_VS_MSS_UP	15	-0.73	-1.79	0.008	0.069
REACTOME_ACTIVATED_TLR4_SIGNALLING	69	-0.54	-1.79	0.004	0.070
WIEDERSCHAIN_TARGETS_OF_BMI1_AND_PCGF2	30	-0.65	-1.79	0.000	0.069
REACTOME_POTASSIUM_CHANNELS	17	-0.72	-1.79	0.002	0.071
ONDER_CDH1_TARGETS_1_DN	101	-0.50	-1.79	0.002	0.070
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLACK_UP	30	-0.63	-1.79	0.004	0.070
PROTEIN_KINASE_CASCADE	200	-0.46	-1.79	0.000	0.070
GSE7460_TREG_VS_TCONV_ACT_UP	119	-0.49	-1.79	0.000	0.069
ATF2_S_UP.V1_DN	80	-0.53	-1.79	0.000	0.069
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_6H_CD4_TCELL_DN	124	-0.49	-1.79	0.000	0.070
ESC_J1_UP_EARLY.V1_DN	111	-0.50	-1.78	0.000	0.073
ELVIDGE_HYPOXIA_DN	126	-0.49	-1.78	0.000	0.076
DELYS_THYROID_CANCER_DN	112	-0.49	-1.78	0.000	0.076
KANG_IMMORTALIZED_BY_TERT_DN	44	-0.58	-1.77	0.002	0.076
LABBE_TARGETS_OF_TGFB1_AND_WNT3A_UP	55	-0.55	-1.77	0.002	0.076
VERHAAK_AML_WITH_NPM1_MUTATED_DN	122	-0.48	-1.77	0.000	0.076
CATION_CHANNEL_ACTIVITY	21	-0.68	-1.77	0.008	0.075
THEILGAARD_NEUTROPHIL_AT_SKIN_WOUND_UP	50	-0.57	-1.77	0.000	0.076
MONOVALENT_INORGANIC_CATION_TRANSPORT	18	-0.70	-1.77	0.012	0.075
KARLSSON_TGFB1_TARGETS_UP	102	-0.51	-1.77	0.000	0.075
FOURNIER_ACINAR_DEVELOPMENT_LATE_2	237	-0.45	-1.77	0.000	0.075
GROSS_HIF1A_TARGETS_DN	15	-0.74	-1.77	0.006	0.075
LINDGREN_BLADDER_CANCER_CLUSTER_2B	202	-0.46	-1.77	0.000	0.075
AMUNDSON_GENOTOXIC_SIGNATURE	74	-0.52	-1.77	0.002	0.077
GSE2706_R848_VS_LPS_2H_STIM_DC_DN	72	-0.53	-1.77	0.002	0.077
CUI_TCF21_TARGETS_DN	15	-0.73	-1.77	0.006	0.077
BIOCARTA_SPRY_PATHWAY	15	-0.72	-1.76	0.004	0.077
PHOSPHORIC_MONOESTER_HYDROLASE_ACTIVITY	73	-0.53	-1.76	0.000	0.077
ACEVEDO_FGFR1_TARGETS_IN_PROSTATE_CANCER_MODEL_UP	143	-0.47	-1.76	0.000	0.077
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_KRAS_UP	96	-0.50	-1.76	0.002	0.077
HALMOS_CEBPA_TARGETS_DN	24	-0.65	-1.76	0.012	0.077
REACTOME_TOLL_RECEPTOR_CASCADES	79	-0.51	-1.76	0.002	0.077

REACTOME_PEPTIDE_LIGAND_BINDING_RECEPTORS	16	-0.70	-1.76	0.010	0.078
NIKOLSKY_BREAST_CANCER_8P12_P11_AMPLICON	30	-0.62	-1.75	0.006	0.081
GSE17721_LPS_VS_CPG_2H_BMDM_UP	135	-0.48	-1.75	0.000	0.081
SKELETAL_DEVELOPMENT	45	-0.57	-1.75	0.006	0.083
REACTOME_MYD88_MAL_CASCADE_INITIATED_ON_PLASMA_MEMBRANE	63	-0.53	-1.75	0.004	0.085
DAWSON_METHYLATED_IN_LYMPHOMA_TCL1	28	-0.63	-1.75	0.010	0.087
KEGG_HEMATOPOIETIC_CELL_LINEAGE	22	-0.66	-1.74	0.010	0.087
NIELSEN_LEIOMYOSARCOMA_CNN1_DN	17	-0.69	-1.74	0.010	0.087
NAKAJIMA_MAST_CELL	24	-0.65	-1.74	0.015	0.088
ROSS_AML_WITH_CBFB_MYH11_FUSION	25	-0.64	-1.74	0.011	0.088
GSE12366_NAIVE_VS_MEMORY_BCELL_UP	91	-0.49	-1.74	0.000	0.090
METAL_ION_TRANSMEMBRANE_TRANSPORTER_ACTIVITY	36	-0.58	-1.74	0.013	0.090
GCNP_SHH_UP_EARLY.V1_DN	92	-0.50	-1.74	0.000	0.090
LEIN_CEREBELLUM_MARKERS	43	-0.58	-1.74	0.011	0.090
REACTOME_CLASS_A1_RHODOPSIN_LIKE_RECEPTORS	25	-0.64	-1.73	0.006	0.091
GU_PDEF_TARGETS_UP	52	-0.54	-1.73	0.013	0.092
PID_AMB2_NEUTROPHILS_PATHWAY	19	-0.67	-1.73	0.006	0.093
GSE3982_MEMORY_CD4_TCELL_VS_TH1_DN	158	-0.46	-1.73	0.000	0.093
MEISSNER_BRAIN_HCP_WITH_H3K4ME3_AND_H3K27ME3	381	-0.42	-1.73	0.000	0.093
LANDIS_ERBB2_BREAST_TUMORS_65_UP	17	-0.69	-1.73	0.008	0.094
SENESE_HDAC3_TARGETS_UP	342	-0.42	-1.73	0.000	0.094
ELVIDGE_HYPOXIA_BY_DMOG_DN	46	-0.56	-1.73	0.007	0.094
SUBSTRATE_SPECIFIC_CHANNEL_ACTIVITY	25	-0.62	-1.73	0.010	0.094
BMI1_DN.V1_UP	61	-0.53	-1.72	0.002	0.096
PID_FOXM1PATHWAY	33	-0.59	-1.72	0.009	0.095
REACTOME_NFKB_AND_MAP_KINASES_ACTIVATION_MEDIATED_BY_TLR4_SIGNALING_REPERTOIRE	58	-0.53	-1.72	0.002	0.095
MARTENS_TRETINOIN_RESPONSE_UP	166	-0.46	-1.72	0.000	0.094
TRANSMEMBRANE_RECEPTOR_PROTEIN_SERINE_THREONINE_KINASE_SIGNALING_PATHWAY	29	-0.60	-1.72	0.009	0.094
GSE20715_0H_VS_24H_OZONE_LUNG_DN	109	-0.49	-1.72	0.000	0.094
JIANG_AGING_CEREBRAL_CORTEX_DN	41	-0.56	-1.72	0.005	0.094
G_PROTEIN_COUPLED_RECEPTOR_PROTEIN_SIGNALING_PATHWAY	78	-0.51	-1.72	0.002	0.094
MIKKELSEN_ES_ICP_WITH_H3K4ME3_AND_H3K27ME3	21	-0.65	-1.72	0.015	0.095
IKEDA_MIR1_TARGETS_UP	49	-0.54	-1.72	0.005	0.095
GSE11057_CD4_CENT_MEM_VS_PBMC_DN	103	-0.49	-1.72	0.000	0.094
RAF_UP.V1_UP	124	-0.48	-1.72	0.000	0.095
GROSS_HYPOXIA_VIA_ELK3_DN	103	-0.48	-1.71	0.000	0.098
KOBAYASHI_EGFR_SIGNALING_24HR_DN	205	-0.44	-1.71	0.000	0.098

Supplemental Table 3: GSEA gene sets enriched in downregulated genes in GIST882 treated with PD325901

NAME	SIZE	ES	NES	NOM p-val	FDR q-val
CUSTOM_G882_siCOP1_UP_IN_PD901	147	-0.80	-2.89	0.000	0.000
NAGASHIMA_NRG1_SIGNALING_UP	110	-0.74	-2.55	0.000	0.000
CUSTOM_PRATALIS MAPK	32	-0.89	-2.55	0.000	0.000
WINZEN_DEGRADED_VIA_KHSRP	46	-0.82	-2.49	0.000	0.000
ZHOU_TNF_SIGNALING_30MIN	43	-0.82	-2.47	0.000	0.000
GROSS_HYPOXIA_VIA_ELK3_DN	105	-0.71	-2.47	0.000	0.000
GROSS_HYPOXIA_VIA_ELK3_AND_HIF1A_UP	107	-0.72	-2.46	0.000	0.000
BILD_HRAS_ONCOGENIC_SIGNATURE	142	-0.67	-2.46	0.000	0.000
KIM_WT1_TARGETS_UP	152	-0.68	-2.46	0.000	0.000
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_1	20	-0.94	-2.46	0.000	0.000
GSE9988_ANTI_TREM1_VS_CTRL_TREATED_MONOCYTES_UP	126	-0.69	-2.45	0.000	0.000
NAGASHIMA_EGF_SIGNALING_UP	33	-0.86	-2.45	0.000	0.000
GSE9006_HEALTHY_VS_TYPE_1_DIABETES_PBMC_AT_DX_DN	102	-0.71	-2.44	0.000	0.000
AMIT_EGF_RESPONSE_120_MCF10A	28	-0.88	-2.44	0.000	0.000
GSE14769_UNSTIM_VS_40MIN_LPS_BMDM_DN	140	-0.67	-2.43	0.000	0.000
GSE14769_UNSTIM_VS_60MIN_LPS_BMDM_DN	136	-0.66	-2.41	0.000	0.000
REGULATION_OF_MAP_KINASE_ACTIVITY	40	-0.81	-2.40	0.000	0.000
CUSTOM_G48_siETV1_DN	201	-0.62	-2.39	0.000	0.000
CUSTOM_GIST882_ETV1SH2_DN	88	-0.70	-2.37	0.000	0.000
GSE9988_LPS_VS_VEHICLE_TREATED_MONOCYTE_UP	89	-0.69	-2.36	0.000	0.000
AKL_HTLV1_INFECTION_DN	40	-0.79	-2.36	0.000	0.000
AMIT_SERUM_RESPONSE_60_MCF10A	38	-0.82	-2.35	0.000	0.000
KEGG_JAK_STAT_SIGNALING_PATHWAY	65	-0.72	-2.33	0.000	0.000
IL15_UP.V1_UP	84	-0.70	-2.33	0.000	0.000
GSE9988_ANTI_TREM1_AND_LPS_VS_CTRL_TREATED_MONOCYTES_UP	112	-0.66	-2.32	0.000	0.000
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_16D_UP	76	-0.70	-2.31	0.000	0.000
AMIT_EGF_RESPONSE_60_MCF10A	28	-0.84	-2.31	0.000	0.000
CHEN_HOXA5_TARGETS_9HR_UP	172	-0.62	-2.30	0.000	0.000
IL2_UP.V1_UP	80	-0.69	-2.30	0.000	0.000
CUSTOM_GIST882_ETV1SH1_DN	212	-0.60	-2.30	0.000	0.000
GSE9988_ANTI_TREM1_AND_LPS_VS_VEHICLE_TREATED_MONOCYTES_UP	98	-0.66	-2.29	0.000	0.000
PLASARI_TGFB1_TARGETS_10HR_UP	86	-0.69	-2.29	0.000	0.000
AMIT_EGF_RESPONSE_40_HELA	28	-0.84	-2.29	0.000	0.000
ZWANG_CLASS_2_TRANSIENTLY_INDUCED_BY_EGF	23	-0.87	-2.29	0.000	0.000
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED_IN_MONOCYTE_UP	16	-0.92	-2.29	0.000	0.000
KRAS.600_UP.V1_UP	76	-0.70	-2.28	0.000	0.001
PROTEIN_AMINO_ACID_DEPHOSPHORYLATION	39	-0.78	-2.28	0.000	0.001
GSE18791_UNSTIM_VS_NEWCATSLE_VIRUS_DC_10H_DN	120	-0.64	-2.28	0.000	0.001
GSE9988_LOW_LPS_VS_CTRL_TREATED_MONOCYTE_UP	92	-0.67	-2.27	0.000	0.001
GSE9988_LPS_VS_CTRL_TREATED_MONOCYTE_UP	91	-0.67	-2.27	0.000	0.001
GSE17974_0H_VS_1H_IN_VITRO_ACT_CD4_TCELL_DN	130	-0.63	-2.27	0.000	0.001
GSE9988_LOW_LPS_VS_VEHICLE_TREATED_MONOCYTE_UP	92	-0.67	-2.26	0.000	0.001
CUSTOM_A375_siCOP1_UP_IN_VEMU	74	-0.68	-2.25	0.000	0.001

TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_10D_UP	94	-0.66	-2.24	0.000	0.001
SARTIPY_NORMAL_AT_INSULIN_RESISTANCE_UP	25	-0.81	-2.24	0.000	0.001
ZHU_CMV_8_HR_UP	34	-0.78	-2.24	0.000	0.001
CSR_EARLY_UP.V1_UP	127	-0.62	-2.24	0.000	0.001
RASHI_RESPONSE_TO_IONIZING_RADIATION_2	89	-0.67	-2.24	0.000	0.001
AMIT_EGF_RESPONSE_120_HELA	48	-0.73	-2.24	0.000	0.001
DEPHOSPHORYLATION	45	-0.74	-2.24	0.000	0.001
PHONG_TNF_TARGETS_UP	34	-0.78	-2.23	0.000	0.001
GSE16755_CTRL_VS_IFNA_TREATED_MAC_DN	135	-0.62	-2.23	0.000	0.001
GSE14769_UNSTIM_VS_80MIN_LPS_BMDM_DN	122	-0.62	-2.23	0.000	0.001
ZHU_CMV_ALL_UP	97	-0.65	-2.21	0.000	0.001
HECKER_IFNB1_TARGETS	51	-0.72	-2.21	0.000	0.001
ZWANG_CLASS_1_TRANSIENTLY_INDUCED_BY_EGF	297	-0.57	-2.21	0.000	0.001
ZWANG_CLASS_3_TRANSIENTLY_INDUCED_BY_EGF	128	-0.61	-2.21	0.000	0.001
EGFR_UP.V1_UP	114	-0.63	-2.20	0.000	0.001
NEGATIVE_REGULATION_OF_TRANSFERASE_ACTIVITY	24	-0.80	-2.20	0.000	0.001
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_0.5H_CD4_TCELL_DN	109	-0.63	-2.20	0.000	0.001
GSE7852_TREG_VS_TCONV_THYMUS_DN	104	-0.63	-2.20	0.000	0.001
TSAI_RESPONSE_TO_IONIZING_RADIATION	99	-0.63	-2.19	0.000	0.002
DIRMEIER_LMP1_RESPONSE_EARLY	42	-0.73	-2.19	0.000	0.002
BERENJENO_TRANSFORMED_BY_RHOA_REVERSIBLY_DN	21	-0.85	-2.19	0.000	0.002
AZARE_NEOPLASTIC_TRANSFORMATION_BY_STAT3_DN	71	-0.68	-2.19	0.000	0.002
REACTOME_ERK_MAPK_TARGETS	20	-0.83	-2.18	0.000	0.002
DORN_ADENOVIRUS_INFECTION_48HR_DN	24	-0.81	-2.17	0.000	0.002
LUI_THYROID_CANCER_CLUSTER_1	35	-0.75	-2.17	0.000	0.002
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_TURQUOISE_UP	63	-0.69	-2.17	0.000	0.002
NEMETH_INFLAMMATORY_RESPONSE_LPS_UP	63	-0.68	-2.17	0.000	0.002
GSE9988_ANTI_TREM1_VS_VEHICLE_TREATED_MONOCYTES_UP	120	-0.61	-2.17	0.000	0.002
GSE9988_ANTI_TREM1_VS_ANTI_TREM1_AND_LPS_MONOCYTE_DN	93	-0.64	-2.17	0.000	0.002
GSE2706_UNSTIM_VS_2H_R848_DC_DN	96	-0.63	-2.17	0.000	0.002
GSE2706_R848_VS_R848_AND_LPS_2H_STIM_DC_DN	82	-0.65	-2.16	0.000	0.002
CUSTOM_EXPO-GIST	63	-0.67	-2.16	0.000	0.003
REACTOME_INTERFERON_ALPHA_BETA_SIGNALING	42	-0.72	-2.16	0.000	0.003
CUSTOM_GIST48_ETV1SH1_DN	65	-0.67	-2.16	0.000	0.003
AMUNDSON_GENOTOXIC_SIGNATURE	74	-0.65	-2.15	0.000	0.003
BURTON_ADIPOGENESIS_9	68	-0.67	-2.15	0.000	0.003
SEKI_INFLAMMATORY_RESPONSE_LPS_UP	42	-0.71	-2.14	0.000	0.003
KUNINGER_IGF1_VS_PDGFB_TARGETS_DN	25	-0.80	-2.14	0.000	0.003
JEPSEN_SMRT_TARGETS	24	-0.81	-2.14	0.000	0.003
RASHI_RESPONSE_TO_IONIZING_RADIATION_1	29	-0.78	-2.14	0.000	0.003
REACTOME_NUCLEAR_EVENTS_KINASE_AND_TRANSCRIPTION_FACTOR_ACTIVATION	23	-0.81	-2.14	0.000	0.003
SWEET_KRAS_TARGETS_DN	37	-0.73	-2.14	0.000	0.003
DORN_ADENOVIRUS_INFECTION_32HR_DN	25	-0.80	-2.13	0.000	0.004
HUNSBERGER_EXERCISE_REGULATED_GENES	16	-0.88	-2.13	0.000	0.004
JECHLINGER_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_DN	42	-0.72	-2.13	0.000	0.004

PID_NFAT_TFPATHWAY	20	-0.83	-2.12	0.000	0.004
CUSTOM_GIST48_ETV1SH2_DN	91	-0.62	-2.12	0.000	0.004
LEE_NEURAL_CREST_STEM_CELL_DN	52	-0.68	-2.12	0.000	0.004
REACTOME_INTERFERON_SIGNALING	116	-0.60	-2.12	0.000	0.005
ONDER_CDH1_TARGETS_1_DN	102	-0.61	-2.12	0.000	0.005
CROONQUIST_NRAS_VS_STROMAL_STIMULATION_UP	21	-0.81	-2.11	0.000	0.005
BROWNE_HCMV_INFECTION_2HR_DN	30	-0.75	-2.11	0.000	0.005
DELACROIX_RAR_TARGETS_UP	30	-0.76	-2.11	0.000	0.005
FOURNIER_ACINAR_DEVELOPMENT_EARLY_UP	17	-0.83	-2.11	0.000	0.005
BROWNE_INTERFERON_RESPONSIVE_GENES	58	-0.68	-2.10	0.000	0.005
DAUER_STAT3_TARGETS_UP	30	-0.76	-2.10	0.002	0.005
ESC_J1_UP_EARLY.V1_DN	112	-0.60	-2.10	0.000	0.006
GSE13484_3H_UNSTIM_VS_YF17D_VACCINE_STIM_PBMC_DN	121	-0.59	-2.10	0.000	0.006
BIOCARTA_SPRY_PATHWAY	15	-0.86	-2.09	0.002	0.007
REACTOME_MAPK_TARGETS_NUCLEAR_EVENTS_MEDIATED_BY_MAP_KINASES	28	-0.76	-2.09	0.000	0.007
KRAS.300_UP.V1_UP	40	-0.71	-2.09	0.000	0.007
GSE14769_UNSTIM_VS_120MIN_LPS_BMDM_DN	133	-0.59	-2.08	0.000	0.007
MANTOVANI_NFKB_TARGETS_UP	21	-0.80	-2.08	0.000	0.007
GSE22886_NEUTROPHIL_VS_DC_UP	59	-0.65	-2.08	0.000	0.007
SPIRA_SMOKERS_LUNG_CANCER_UP	27	-0.76	-2.08	0.004	0.007
PHOSPHOPROTEIN_PHOSPHATASE_ACTIVITY	50	-0.67	-2.08	0.002	0.008
UZONYI_RESPONSE_TO_LEUKOTRIENE_AND_THROMBIN	16	-0.85	-2.08	0.002	0.008
MARZEC_IL2_SIGNALING_UP	68	-0.65	-2.08	0.000	0.008
GSE2706_UNSTIM_VS_8H_R848_DC_DN	99	-0.60	-2.07	0.000	0.008
THEILGAARD_NEUTROPHIL_AT_SKIN_WOUND_UP	52	-0.67	-2.07	0.002	0.009
DORN_ADENOVIRUS_INFECTION_24HR_DN	29	-0.75	-2.07	0.002	0.009
BROWNE_HCMV_INFECTION_2HR_UP	20	-0.78	-2.07	0.000	0.009
OSWALD_HEMATOPOIETIC_STEM_CELL_IN_COLLAGEN_GEL_UP	138	-0.57	-2.06	0.000	0.009
DAVICIONI_TARGETS_OF_PAX_FOXO1_FUSIONS_DN	33	-0.74	-2.06	0.004	0.009
CHARAFE_BREAST_CANCER_LUMINAL_VS_BASAL_DN	293	-0.53	-2.06	0.000	0.009
BOQUEST_STEM_CELL_DN	106	-0.59	-2.06	0.000	0.009
GSE7460_TREG_VS_TCONV_ACT_UP	130	-0.58	-2.06	0.000	0.009
LI_INDUCED_T_TO_NATURAL_KILLER_UP	164	-0.57	-2.06	0.000	0.009
HOELZEL_NF1_TARGETS_UP	64	-0.64	-2.06	0.000	0.009
DER_IFN_GAMMA_RESPONSE_UP	66	-0.64	-2.06	0.000	0.009
MAPKKK_CASCADE_GO_0000165	63	-0.64	-2.06	0.000	0.009
STK33_UP	163	-0.56	-2.06	0.000	0.009
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_GREEN_UP	17	-0.83	-2.06	0.000	0.009
GSE17974_0H_VS_0.5H_IN_VITRO_ACT_CD4_TCELL_DN	90	-0.61	-2.06	0.000	0.009
PROTEIN_TYROSINE_PHOSPHATASE_ACTIVITY	32	-0.73	-2.05	0.000	0.010
GSE18791_UNSTIM_VS_NEWCATSLE_VIRUS_DC_18H_DN	90	-0.60	-2.05	0.000	0.010
TSAI_RESPONSE_TO_RADIATION_THERAPY	22	-0.79	-2.05	0.002	0.010
GSE2706_R848_VS_LPS_2H_STIM_DC_DN	74	-0.61	-2.05	0.000	0.010
NEGATIVE_REGULATION_OF_CATALYTIC_ACTIVITY	40	-0.71	-2.05	0.002	0.011
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_8H_DN	123	-0.57	-2.04	0.000	0.011
GSE1460_INTRATHYMIC_T_PROGENITOR_VS_DP_THYMOCYTE_DN	112	-0.58	-2.04	0.000	0.011
DAZARD_UV_RESPONSE_CLUSTER_G2	17	-0.82	-2.04	0.006	0.011

WANG_METHYLATED_IN_BREAST_CANCER	23	-0.76	-2.04	0.002	0.012
SANSOM_WNT_PATHWAY_REQUIRE_MYC	36	-0.70	-2.03	0.002	0.013
ZHU_CMV_24_HR_UP	80	-0.61	-2.03	0.000	0.013
NIELSEN_GIST	86	-0.61	-2.03	0.000	0.013
STK33_SKM_UP	144	-0.57	-2.03	0.000	0.013
GSE17974_0H_VS_2H_IN_VITRO_ACT_CD4_TCELL_DN	131	-0.56	-2.03	0.000	0.013
LIU_SMARCA4_TARGETS	29	-0.73	-2.02	0.004	0.014
CUSTOM_ICC-MY UP	28	-0.73	-2.02	0.004	0.014
PID_TCRCALCIUMPATHWAY	15	-0.83	-2.02	0.002	0.014
FOSTER_TOLERANT_MACROPHAGE_DN	279	-0.52	-2.02	0.000	0.014
GSE14769_UNSTIM_VS_20MIN_LPS_BMDM_DN	123	-0.58	-2.02	0.000	0.014
STK33_NOMO_UP	165	-0.55	-2.02	0.000	0.014
MCCLUNG_COCAIN_REWARD_4WK	41	-0.66	-2.02	0.002	0.014
GSE2706_UNSTIM_VS_8H_LPS_AND_R848_DC_DN	104	-0.59	-2.01	0.000	0.014
GSE39820_IL1B_IL6_VS_IL1B_IL6_IL23A_TREATED_CD4_TCELL_DN	107	-0.58	-2.01	0.000	0.014
HESS_TARGETS_OF_HOXA9_AND_MEIS1_DN	31	-0.70	-2.01	0.002	0.015
GSE9988_ANTI_TREM1_VS_LOW_LPS_MONOCYTE_DN	103	-0.58	-2.01	0.000	0.015
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_1H_CD4_TCELL_DN	125	-0.56	-2.01	0.000	0.015
AMIT_DELAYED_EARLY_GENES	16	-0.81	-2.01	0.004	0.016
LIANG_SILENCED_BY_METHYLATION_2	28	-0.72	-2.00	0.006	0.016
GSE3982_MEMORY_CD4_TCELL_VS_TH2_DN	163	-0.55	-2.00	0.000	0.016
MCLACHLAN_DENTAL_CARIES_UP	80	-0.60	-2.00	0.000	0.016
GALINDO_IMMUNE_RESPONSE_TO_ENTEROTOXIN	54	-0.65	-2.00	0.002	0.017
GSE17721_CTRL_VS_GARDIQUIMOD_1H_BMDM_DN	117	-0.56	-2.00	0.000	0.017
GSE9988_ANTI_TREM1_VS_LPS_MONOCYTE_DN	105	-0.58	-2.00	0.000	0.017
DEBIASI_APOPTOSIS_BY_REOVIRUS_INFECTION_UP	257	-0.51	-1.99	0.000	0.018
CHANG_IMMORTALIZED_BY_HPV31_DN	29	-0.71	-1.99	0.000	0.018
LIN_SILENCED_BY_TUMOR_MICROENVIRONMENT	37	-0.68	-1.99	0.002	0.018
GSE29618_MONOCYTE_VS_MDC_UP	113	-0.57	-1.99	0.000	0.018
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLACK_UP	29	-0.72	-1.99	0.000	0.018
GSE1460_INTRATHYMIC_T_PROGENITOR_VS_CD4_THYMOCYTE_DN	111	-0.57	-1.99	0.000	0.018
PID_CD8TCRDOWNSTREAMPATHWAY	28	-0.72	-1.99	0.000	0.018
GSE2706_UNSTIM_VS_2H_LPS_AND_R848_DC_DN	94	-0.59	-1.99	0.000	0.018
PID_REG_GR_PATHWAY	50	-0.64	-1.98	0.000	0.019
PDGF_UP.V1_UP	108	-0.57	-1.98	0.000	0.020
PID_ERBB1_DOWNSTREAM_PATHWAY	95	-0.58	-1.98	0.000	0.020
ST_ERK1_ERK2_MAPK_PATHWAY	29	-0.72	-1.98	0.000	0.021
MOSERLE_IFNA_RESPONSE	30	-0.71	-1.98	0.004	0.021
BROCKE_APOPTOSIS_REVERSED_BY_IL6	106	-0.57	-1.98	0.000	0.021
SMID_BREAST_CANCER_RELAPSE_IN_BONE_UP	31	-0.70	-1.97	0.002	0.021
DELPUECH_FOXO3_TARGETS_UP	44	-0.65	-1.97	0.002	0.021
GSE17974_0H_VS_72H_IN_VITRO_ACT_CD4_TCELL_UP	114	-0.56	-1.97	0.000	0.021
GSE3982_NEUTROPHIL_VS_BASOPHIL_UP	119	-0.56	-1.97	0.000	0.021
GSE1432_CTRL_VS_IFNG_6H_MICROGLIA_DN	150	-0.54	-1.96	0.000	0.024
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_16H_DN	103	-0.58	-1.96	0.000	0.024
PID_PI3KPLCTRKPATHWAY	28	-0.71	-1.96	0.002	0.024
TIAN_TNF_SIGNALING_VIA_NFKB	16	-0.80	-1.96	0.004	0.025
SENESE_HDAC1_TARGETS_UP	321	-0.50	-1.95	0.000	0.026
COULOUARN_TEMPORAL_TGFB1_SIGNATURE_UP	83	-0.59	-1.95	0.000	0.026
REGULATION_OF_PROTEIN_KINASE_ACTIVITY	99	-0.56	-1.95	0.002	0.026

UROSEVIC_RESPONSE_TO_IMIQUIMOD	16	-0.78	-1.95	0.002	0.027
RIGGI_EWING_SARCOMA_PROGENITOR_DN	91	-0.57	-1.95	0.000	0.027
LU_IL4_SIGNALING	55	-0.61	-1.95	0.000	0.027
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_18H_DN	97	-0.57	-1.95	0.000	0.027
GSE11864_CSF1_IFNG_VS_CSF1_PAM3CYS_IN_MAC_DN	127	-0.54	-1.95	0.000	0.027
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_10H_DN	127	-0.56	-1.95	0.002	0.027
PROTEIN_KINASE_CASCADE	205	-0.52	-1.95	0.000	0.027
ACEVEDO_FGFR1_TARGETS_IN_PROSTATE_CANCER_MODEL_UP	143	-0.53	-1.94	0.000	0.027
HAHTOLA_MYCOSIS_FUNGOIDES_CD4_UP	36	-0.67	-1.94	0.002	0.028
BORLAK_LIVER_CANCER_EGF_UP	34	-0.68	-1.94	0.002	0.028
REGULATION_OF_KINASE_ACTIVITY	101	-0.56	-1.94	0.000	0.028
KHETCHOUMIAN_TRIM24_TARGETS_UP	25	-0.70	-1.94	0.000	0.028
KIM_GLIS2_TARGETS_UP	43	-0.64	-1.94	0.000	0.029
GSE9037_CTRL_VS_LPS_1H_STIM_IRAK4_KO_BMDM_DN	127	-0.55	-1.94	0.002	0.029
TURASHVILI_BREAST_DUCTAL_CARCINOMA_VS_DUCTAL_NORMAL_DN	70	-0.59	-1.94	0.000	0.029
AMIT_EGF_RESPONSE_40_MCF10A	15	-0.81	-1.94	0.000	0.029
GSE2197_IMMUNOSUPPRESSIVE_DNA_VS_UNTREATED_IN_DC_UP	130	-0.54	-1.93	0.000	0.030
GROSS_HYPOXIA_VIA_HIF1A_DN	79	-0.58	-1.93	0.002	0.030
GSE360_T_GONDII_VS_M_TUBERCULOSIS_MAC_DN	113	-0.55	-1.93	0.000	0.030
PID_ATF2_PATHWAY	34	-0.66	-1.93	0.002	0.030
ZHANG_RESPONSE_TO_IKK_INHIBITOR_AND_TNF_UP	125	-0.54	-1.93	0.000	0.030
LEIN_NEURON_MARKERS	30	-0.69	-1.93	0.002	0.030
KEGG_PRION_DISEASES	19	-0.75	-1.93	0.006	0.030
LIN_NPAS4_TARGETS_DN	31	-0.69	-1.93	0.006	0.031
PHOSPHORIC_MONOESTER_HYDROLASE_ACTIVITY	72	-0.59	-1.92	0.002	0.032
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_4H_DN	125	-0.55	-1.92	0.002	0.032
SHEPARD_CRUSH_AND_BURN_MUTANT_UP	139	-0.53	-1.92	0.000	0.032
CHIANG_LIVER_CANCER_SUBCLASS_UNANNOTATED_UP	37	-0.67	-1.92	0.004	0.032
PHOSPHORIC_ESTER_HYDROLASE_ACTIVITY	93	-0.57	-1.92	0.003	0.033
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_24H_ACT_CD4_TCELL_DN	69	-0.59	-1.92	0.002	0.033
DAZARD_RESPONSE_TO_UV_NHEK_UP	152	-0.53	-1.91	0.000	0.034
GSE36392_EOSINOPHIL_VS_MAC_IL25_TREATED_LUNG_UP	68	-0.61	-1.91	0.002	0.034
LANDIS_ERBB2_BREAST_TUMORS_65_UP	17	-0.78	-1.91	0.006	0.035
GSE17974_2.5H_VS_72H_IL4_AND_ANTI_IL12_ACT_CD4_TCELL_UP	150	-0.53	-1.91	0.000	0.035
REGULATION_OF_TRANSFERASE_ACTIVITY	104	-0.55	-1.91	0.000	0.036
WOOD_EBV_EBNA1_TARGETS_DN	36	-0.66	-1.91	0.003	0.036
MCLACHLAN_DENTAL_CARIES_DN	82	-0.57	-1.91	0.002	0.036
STOSSI_RESPONSE_TO_ESTRADIOL	19	-0.75	-1.91	0.012	0.036
AMIT_SERUM_RESPONSE_40_MCF10A	19	-0.76	-1.91	0.004	0.036
GSE9006_HEALTHY_VS_TYPE_2_DIABETES_PBMC_AT_DX_DN	127	-0.55	-1.90	0.000	0.037
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_MAGENTA_UP	23	-0.73	-1.90	0.008	0.037
DER_IFN_BETA_RESPONSE_UP	96	-0.56	-1.90	0.000	0.037
RIGGI_EWING_SARCOMA_PROGENITOR_UP	181	-0.52	-1.90	0.000	0.037
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_3D_UP	106	-0.54	-1.90	0.000	0.039

GSE36392_TYPE_2_MYELOID_VS_MAC_IL25_TREATED_LUNG_UP	64	-0.59	-1.89	0.005	0.039
REACTOME_SMAD2_SMAD3_SMAD4_HETEROTRIMER_REGULATES_TRANSCRIPTION	23	-0.71	-1.89	0.007	0.040
TRANSFORMING_GROWTH_FACTOR_BETA_RECEPTOR_SIGNALING_PATHWAY	25	-0.69	-1.89	0.005	0.041
BARIS_THYROID_CANCER_DN	41	-0.64	-1.89	0.005	0.041
PID_AP1_PATHWAY	41	-0.66	-1.89	0.005	0.041
GHANDHI_BYSTANDER_IRRADIATION_UP	38	-0.64	-1.89	0.002	0.041
WNT_UP.V1_DN	79	-0.57	-1.89	0.000	0.041
DURAND_STROMA_MAX_DN	87	-0.56	-1.89	0.002	0.041
GSE14000_UNSTIM_VS_4H_LPS_DC_DN	127	-0.53	-1.89	0.000	0.041
ZHANG_INTERFERON_RESPONSE	19	-0.74	-1.89	0.010	0.041
ZHOU_INFLAMMATORY_RESPONSE_LPS_UP	172	-0.51	-1.88	0.000	0.042
SUNG_METASTASIS_STROMA_UP	82	-0.56	-1.88	0.002	0.042
AMIT_SERUM_RESPONSE_20_MCF10A	17	-0.73	-1.88	0.004	0.042
GSE13484_UNSTIM_VS_YF17D_VACCINE_STIM_PBMC_DN	135	-0.53	-1.88	0.000	0.042
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_6H_DN	149	-0.52	-1.88	0.000	0.043
GHANDHI_DIRECT_IRRADIATION_UP	45	-0.62	-1.88	0.004	0.043
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_6H_ACT_CD4_TCELL_DN	109	-0.54	-1.88	0.000	0.043
PHONG_TNF_RESPONSE_VIA_P38_COMPLETE	182	-0.50	-1.88	0.000	0.044
ST_DIFFERENTIATION_PATHWAY_IN_PC12_CELLS	33	-0.65	-1.88	0.007	0.043
BERENJENO_ROCK_SIGNALING_NOT_VIA_RHOA_DN	34	-0.67	-1.88	0.009	0.044
AMIT_SERUM_RESPONSE_120_MCF10A	41	-0.64	-1.88	0.007	0.044
REACTOME_INTERFERON_GAMMA_SIGNALING	39	-0.63	-1.88	0.004	0.043
SESTO_RESPONSE_TO_UV_C1	53	-0.60	-1.87	0.004	0.044
GSE360_L_DONOVANI_VS_M_TUBERCULOSIS_MAC_DN	113	-0.53	-1.87	0.002	0.045
GILDEA_METASTASIS	19	-0.75	-1.87	0.006	0.045
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_14H_DN	84	-0.56	-1.87	0.002	0.046
RAS_GTPASE_ACTIVATOR_ACTIVITY	21	-0.73	-1.87	0.008	0.046
GSE29617_CTRL_VS_TIV_FLU_VACCINE_PBMC_2008_UP	100	-0.55	-1.87	0.000	0.046
BERENJENO_TRANSFORMED_BY_RHOA_FOREVER_DN	21	-0.71	-1.87	0.013	0.046
PID_PRLSIGNALINGEVENTSPATHWAY	22	-0.71	-1.87	0.011	0.046
GSE10325_CD4_TCELL_VS_LUPUS_CD4_TCELL_DN	135	-0.52	-1.87	0.000	0.045
NIELSEN_LEIOMYOSARCOMA_CNN1_DN	15	-0.76	-1.87	0.004	0.045
HENDRICKS_SMARCA4_TARGETS_DN	27	-0.68	-1.86	0.013	0.046
GSE13485_DAY1_VS_DAY7_YF17D_VACCINE_PBMC_DN	158	-0.51	-1.86	0.002	0.046
KIM_WT1_TARGETS_8HR_UP	121	-0.53	-1.86	0.000	0.046
GSE14000_UNSTIM_VS_4H_LPS_DC_TRANSLATED_RNA_DN	110	-0.54	-1.86	0.000	0.046
SMIRNOV_RESPONSE_TO_IR_6HR_DN	69	-0.58	-1.86	0.000	0.047
JACKSON_DNMT1_TARGETS_UP	60	-0.59	-1.86	0.007	0.047
ROSS_AML_WITH_CBFB_MYH11_FUSION	29	-0.68	-1.86	0.013	0.047
REGULATION_OF_CATALYTIC_ACTIVITY	159	-0.51	-1.86	0.000	0.047
ABE_VEGFA_TARGETS_2HR	17	-0.73	-1.86	0.022	0.047
FOURNIER_ACINAR_DEVELOPMENT_LATE_DN	18	-0.75	-1.86	0.007	0.047
LOCOMOTORY_BEHAVIOR	22	-0.72	-1.86	0.015	0.047
REACTOME_IMMUNOREGULATORY_INTERACTIONS_BETWEEN_A_LYMPHOID_AND_A_NON_LYMPHOID_CELL	17	-0.75	-1.86	0.009	0.047
MITSIADES_RESPONSE_TO_APLIDIN_UP	314	-0.46	-1.86	0.000	0.047
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLUE_UP	98	-0.55	-1.85	0.002	0.048

GSE17974_0H_VS_48H_IN_VITRO_ACT_CD4_TCELL_UP	102	-0.54	-1.85	0.000	0.048
MAHADEVAN_IMATINIB_RESISTANCE_DN	18	-0.72	-1.85	0.006	0.048
GSE18791_UNSTIM_VS_NEWCATSLE_VIRUS_DC_6H_DN	133	-0.52	-1.85	0.003	0.048
SENESE_HDAC1_AND_HDAC2_TARGETS_UP	138	-0.52	-1.85	0.000	0.049
GSE22886_DAY1_VS_DAY7_MONOCYTE_IN_CULTURE_UP	118	-0.53	-1.85	0.000	0.049
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_2H_DN	87	-0.55	-1.85	0.000	0.049
RIZ_ERYTHROID_DIFFERENTIATION_12HR	24	-0.68	-1.85	0.017	0.049
RELA_DN.V1_UP	65	-0.58	-1.85	0.002	0.049
MORI_IMMATURE_B_LYMPHOCYTE_UP	26	-0.68	-1.85	0.007	0.049
PDGF_ERK_DN.V1_DN	109	-0.53	-1.85	0.002	0.049
ZHAN_MULTIPLE_MYELOMA_LB_DN	30	-0.66	-1.85	0.009	0.050
GSE11057_EFF_MEM_VS_CENT_MEM_CD4_TCELL_UP	109	-0.53	-1.85	0.003	0.050
ONDER_CDH1_TARGETS_2_DN	160	-0.50	-1.84	0.000	0.051
GSE1432_CTRL_VS_IFNG_24H_MICROGLIA_DN	144	-0.50	-1.84	0.003	0.051
CHARAFE_BREAST_CANCER_LUMINAL_VS_MESENCHYMAL_DN	344	-0.46	-1.84	0.000	0.051
KONDO_EZH2_TARGETS	122	-0.51	-1.84	0.000	0.052
LIM_MAMMARY_STEM_CELL_UP	248	-0.48	-1.84	0.000	0.052
KRASNOSELSKAYA_ILF3_TARGETS_UP	29	-0.66	-1.84	0.006	0.052
REACTOME_NGF_SIGNALLING_VIA_TRKA_FROM_THE_PLASMA_MEMBRANE	108	-0.52	-1.84	0.002	0.053
GSE14769_UNSTIM_VS_240MIN_LPS_BMDM_DN	148	-0.50	-1.84	0.000	0.053
REACTOME_EGFR_DOWNREGULATION	22	-0.70	-1.84	0.010	0.053
PAPASPYRIDONOS_UNSTABLE_ATEROSCLEROTIC_PLAQUE_UP	38	-0.64	-1.83	0.002	0.053
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_2H_CD4_TCELL_DN	156	-0.50	-1.83	0.000	0.053
DORN_ADENOVIRUS_INFECTION_12HR_UP	17	-0.73	-1.83	0.021	0.053
GROSS_ELK3_TARGETS_DN	20	-0.71	-1.83	0.014	0.053
GSE3982_NEUTROPHIL_VS_BCELL_UP	111	-0.53	-1.83	0.000	0.053
SESTO_RESPONSE_TO_UV_C2	43	-0.60	-1.83	0.007	0.054
VANHARANTA_UTERINE_FIBROID_DN	35	-0.63	-1.83	0.011	0.054
GSE29617_CTRL_VS_DAY7_TIV_FLU_VACCINE_PBMC_2008_UP	106	-0.52	-1.83	0.002	0.054
GRAESSMANN_APOPTOSIS_BY_SERUM_DEPRIVATION_UP	360	-0.46	-1.83	0.000	0.054
BROWNE_HCMV_INFECTION_4HR_UP	32	-0.64	-1.83	0.002	0.054
CHIN_BREAST_CANCER_COPY_NUMBER_UP	17	-0.73	-1.83	0.014	0.055
FULCHER_INFLAMMATORY_RESPONSE_LECTIN_VS_LPS_DN	292	-0.46	-1.82	0.000	0.056
GSE8384_CTRL_VS_B_ABORTUS_4H_MAC_CELL_LINE_DN	141	-0.50	-1.82	0.003	0.056
DOANE_BREAST_CANCER_ESR1_UP	39	-0.61	-1.82	0.007	0.056
BENNETT_SYSTEMIC_LUPUS_ERYTHEMATOSUS	22	-0.70	-1.82	0.011	0.056
KRAS.LUNG.BREAST_UP.V1_UP	31	-0.63	-1.82	0.007	0.056
GSE29618_BCELL_VS_PDC_UP	112	-0.52	-1.81	0.005	0.059
IZADPANAH_STEM_CELL_ADIPOSE_VS_BONE_UP	84	-0.55	-1.81	0.002	0.059
TIEN_INTESTINE_PROBIOTICS_2HR_DN	71	-0.56	-1.81	0.002	0.059
VERHAAK_AML_WITH_NPM1_MUTATED_UP	87	-0.54	-1.81	0.000	0.059
GSE11057_CD4_CENT_MEM_VS_PBMC_DN	104	-0.52	-1.81	0.003	0.060
REACTOME_CYTOKINE_SIGNALING_IN_IMMUNE_SYSTEM	185	-0.49	-1.81	0.000	0.060
BOQUEST_STEM_CELL_CULTURED_VS_FRESH_UP	248	-0.47	-1.81	0.000	0.060

GSE20715_0H_VS_6H_OZONE_LUNG_DN	131	-0.51	-1.81	0.000	0.060
DORN_ADENOVIRUS_INFECTION_12HR_DN	22	-0.69	-1.81	0.008	0.060
GSE22886_NAIVE_CD4_TCELL_VS_NEUTROPHIL_DN	79	-0.55	-1.81	0.002	0.061
ABBUD_LIF_SIGNALING_1_UP	26	-0.67	-1.81	0.018	0.061
RODRIGUES_NTN1_TARGETS_DN	83	-0.55	-1.81	0.005	0.061
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_2H_ACT_CD4_TCELL_DN	65	-0.57	-1.81	0.009	0.061
LABBE_TGFB1_TARGETS_UP	56	-0.58	-1.80	0.007	0.061
PICCALUGA_ANGIOIMMUNOBLASTIC_LYMPHOMA_DN	103	-0.52	-1.80	0.000	0.061
RODRIGUES_NTN1_AND_DCC_TARGETS	22	-0.69	-1.80	0.011	0.061
GSE1460_CD4_THYMOCYTE_VS_NAIVE_CD4_TCELL_ADULT_BLOOD_UP	149	-0.50	-1.80	0.002	0.061
FOURNIER_ACINAR_DEVELOPMENT_LATE_2	241	-0.47	-1.80	0.000	0.061
GOZGIT_ESR1_TARGETS_DN	378	-0.44	-1.80	0.000	0.061
GSE17721_CTRL_VS_CPG_2H_BMDM_DN	107	-0.52	-1.80	0.002	0.061
MISSIAGLIA_REGULATED_BY_METHYLATION_UP	84	-0.55	-1.80	0.002	0.061
CERVERA_SDHB_TARGETS_2	43	-0.60	-1.80	0.007	0.061
KORKOLA_TERATOMA	25	-0.67	-1.80	0.011	0.061
KEGG_ALDOSTERONE_REGULATED_SODIUM_REABSORPTION	19	-0.71	-1.80	0.014	0.062
GSE17721_CTRL_VS_POLYIC_1H_BMDM_DN	117	-0.51	-1.80	0.000	0.062
GSE3982_NEUTROPHIL_VS_TH1_UP	113	-0.51	-1.80	0.002	0.062
GSE360_T_GONDII_VS_M_TUBERCULOSIS_DC_DN	111	-0.51	-1.80	0.002	0.062
DUTERTRE_ESTRADIOL_RESPONSE_24HR_DN	348	-0.45	-1.80	0.000	0.062
NING_CHRONIC_OBSTRUCTIVE_PULMONARY_DISEASE_UP	111	-0.52	-1.80	0.000	0.062
CROONQUIST_NRAS_SIGNALING_UP	15	-0.73	-1.80	0.012	0.062
MCBRYAN_PUBERTAL_BREAST_3_4WK_UP	109	-0.52	-1.79	0.003	0.064
RHEIN_ALL_GLUCOCORTICOID_THERAPY_UP	40	-0.61	-1.79	0.013	0.064
REACTOME_MAP_KINASE_ACTIVATION_IN_TLR_CASCADE	44	-0.59	-1.79	0.009	0.064
GSE2706_2H_VS_8H_R848_STIM_DC_DN	104	-0.52	-1.79	0.003	0.065
BURTON_ADIPOGENESIS_PEAK_AT_2HR	32	-0.64	-1.79	0.017	0.065
AMIT_EGF_RESPONSE_60_HELA	34	-0.63	-1.79	0.013	0.065
GSE29617_CTRL_VS_DAY3_TIV_FLU_VACCINE_PBMC_2008_UP	114	-0.51	-1.79	0.000	0.065
GSE2706_UNSTIM_VS_8H_LPS_DC_DN	110	-0.51	-1.79	0.000	0.065
BECKER_TAMOXIFEN_RESISTANCE_DN	30	-0.64	-1.79	0.013	0.065
KEGG_ARACHIDONIC_ACID_METABOLISM	20	-0.69	-1.79	0.013	0.065
KAECH_DAY8_EFF_VS_MEMORY_CD8_TCELL_DN	152	-0.49	-1.78	0.000	0.066
REACTOME_CLASS_A1_RHODOPSIN_LIKE_RECEPTORS	29	-0.64	-1.78	0.015	0.066
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_6H_CD4_TCELL_DN	126	-0.51	-1.78	0.002	0.065
GSE24634_IL4_VS_CTRL_TREATED_NAIVE_CD4_TCELL_DAY3_DN	125	-0.50	-1.78	0.002	0.066
GCNP_SHH_UP_EARLY.V1_DN	93	-0.52	-1.78	0.000	0.066
NOTCH_DN.V1_DN	58	-0.56	-1.78	0.007	0.066
SWEET_KRAS_ONCOGENIC_SIGNATURE	68	-0.56	-1.78	0.010	0.066
RELA_DN.V1_DN	32	-0.61	-1.78	0.011	0.066
HOQUE_METHYLATED_IN_CANCER	29	-0.65	-1.78	0.013	0.066
SMIRNOV_RESPONSE_TO_IR_2HR_UP	39	-0.60	-1.78	0.016	0.067
GSE360_HIGH_DOSE_B_MALAYI_VS_M_TUBERCULOSIS_DC_DN	112	-0.51	-1.78	0.000	0.068
REGULATION_OF_MOLECULAR_FUNCTION	193	-0.47	-1.78	0.000	0.068

ENK_UV_RESPONSE_EPIDERMIS_DN	333	-0.45	-1.77	0.000	0.068
ERB2_UP.V1_UP	111	-0.52	-1.77	0.003	0.068
GSE20366_TREG_VS_NAIVE_CD4_TCELL_UP	141	-0.49	-1.77	0.000	0.069
GSE17721_CTRL_VS_CPG_1H_BMDM_DN	99	-0.52	-1.77	0.005	0.069
GSE7460_TCONV_VS_TREG_THYMUS_UP	126	-0.50	-1.77	0.000	0.069
GSE22886_DC_VS_MONOCYTE_DN	122	-0.50	-1.77	0.000	0.069
AMIT_SERUM_RESPONSE_240_MCF10A	29	-0.64	-1.77	0.020	0.069
GSE360_L_MAJOR_VS_B_MALAYI_HIGH_DOSE_MAC_UP	94	-0.52	-1.77	0.002	0.069
GSE15750_WT_VS_TRAF6KO_DAY10_EFF_CD8_TCELL_DN	65	-0.54	-1.77	0.008	0.069
GSE3982_MEMORY_CD4_TCELL_VS_TH1_DN	166	-0.49	-1.77	0.003	0.069
KEGG_CYTOKINE_CYTOKINE_RECEPTOR_INTERACTION	63	-0.57	-1.77	0.003	0.069
SANSOM_APC_TARGETS_UP	79	-0.54	-1.76	0.003	0.071
GSE20715_0H_VS_24H_OZONE_LUNG_DN	114	-0.50	-1.76	0.002	0.071
SMITH_TERT_TARGETS_UP	122	-0.50	-1.76	0.000	0.071
WENG_POR_TARGETS_GLOBAL_DN	16	-0.71	-1.76	0.017	0.072
GSE9006_TYPE_1_DIABETES_AT_DX_VS_4MONTH_POST_DX_PBMC_UP	150	-0.48	-1.76	0.000	0.072
PID_IL6_7PATHWAY	35	-0.61	-1.76	0.011	0.073
NAKAMURA_ADIPOGENESIS_EARLY_DN	24	-0.66	-1.76	0.019	0.073
SARTIPY_BLUNTED_BY_INSULIN_RESISTANCE_UP	16	-0.73	-1.76	0.011	0.073
GSE17721_POLYIC_VS_PAM3CSK4_2H_BMDM_DN	114	-0.50	-1.76	0.002	0.073
GSE2706_LPS_VS_R848_AND_LPS_2H_STIM_DC_DN	35	-0.60	-1.76	0.015	0.073
SCHUETZ_BREAST_CANCER_DUCTAL_INVASIVE_DN	48	-0.58	-1.76	0.013	0.074
BURTON_ADIPOGENESIS_1	23	-0.66	-1.76	0.015	0.074
FARMER_BREAST_CANCER_CLUSTER_1	17	-0.71	-1.76	0.020	0.074
DELACROIX_RARG_BOUND_MEF	248	-0.46	-1.75	0.000	0.074
GSE9037_WT_VS_IRAK4_KO_LPS_1H_STIM_BMDM_UP	144	-0.48	-1.75	0.002	0.074
SMALL_GTPASE_REGULATOR_ACTIVITY	50	-0.57	-1.75	0.005	0.074
CELL_SURFACE_RECEPTOR_LINKED_SIGNAL_TRANSDUCTION_GO_0007166	221	-0.46	-1.75	0.000	0.074
CRX_NRL_DN.V1_DN	67	-0.54	-1.75	0.008	0.075
ALTEMEIER_RESPONSE_TO_LPS_WITH_MECHANICAL_VENTILATION	57	-0.56	-1.75	0.013	0.075
EINAV_INTERFERON_SIGNATURE_IN_CANCER	26	-0.64	-1.75	0.016	0.075
SAGIV_CD24_TARGETS_DN	31	-0.62	-1.75	0.015	0.076
ONO_AML1_TARGETS_DN	17	-0.70	-1.75	0.027	0.076
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED_IN_ERYTHROCYTE_UP	31	-0.63	-1.75	0.006	0.076
ESC_J1_UP_LATE.V1_DN	111	-0.50	-1.75	0.005	0.076
CHUANG_OXIDATIVE_STRESS_RESPONSE_UP	20	-0.68	-1.75	0.018	0.076
CYTOKINE_ACTIVITY	26	-0.64	-1.75	0.009	0.076
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_24H_CD4_TCELL_UP	113	-0.50	-1.75	0.002	0.075
PID_MAPKTRKPATHWAY	29	-0.63	-1.75	0.018	0.076
APPIERTO_RESPONSE_TO_FENRETINIDE_UP	31	-0.63	-1.75	0.011	0.076
YAN_ESCAPE_FROM_ANOIKIS	16	-0.71	-1.74	0.019	0.076
LINDGREN_BLADDER_CANCER_CLUSTER_2B	215	-0.46	-1.74	0.000	0.077
LENAOUR_DENDRITIC_CELL_MATURATION_DN	63	-0.54	-1.74	0.009	0.076
SESTO_RESPONSE_TO_UV_C5	41	-0.59	-1.74	0.013	0.077
LI_PROSTATE_CANCER_EPIGENETIC	15	-0.71	-1.74	0.015	0.077
REACTOME_TRAF6_MEDIATED_INDUCTION_OF_NFKB_AND_MAP_KINASES_UPON_TLR7_8_OR_9_ACTIVATION	61	-0.54	-1.74	0.009	0.077

RUTELLA_RESPONSE_TO_HGF_DN	144	-0.48	-1.74	0.006	0.077
GSE22886_CTRL_VS_LPS_24H_DC_DN	151	-0.48	-1.74	0.000	0.077
GSE3982_EOSINOPHIL_VS_BASOPHIL_UP	114	-0.50	-1.74	0.008	0.077
RUTELLA_RESPONSE_TO_CSF2RB_AND_IL4_DN	197	-0.47	-1.74	0.000	0.077
GTPASE_REGULATOR_ACTIVITY	88	-0.52	-1.74	0.007	0.077
KOBAYASHI_EGFR_SIGNALING_24HR_DN	211	-0.46	-1.74	0.001	0.077
TRANSMEMBRANE_RECEPTOR_PROTEIN_SERINE_THREONINE _KINASE_SIGNALING_PATHWAY	32	-0.62	-1.74	0.025	0.077
ZHENG_BOUND_BY_FOXP3	310	-0.44	-1.74	0.000	0.077
POSITIVE_REGULATION_OF_SIGNAL_TRANSDUCTION	93	-0.51	-1.74	0.005	0.077
MIYAGAWA_TARGETS_OF_EWSR1_ETS_FUSIONS_UP	160	-0.47	-1.74	0.003	0.077
ZHOU_INFLAMMATORY_RESPONSE_LIVE_UP	223	-0.45	-1.74	0.000	0.077
BASAKI_YBX1_TARGETS_DN	254	-0.46	-1.74	0.000	0.078
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_2H_UP	112	-0.50	-1.73	0.002	0.078
GSE30962_ACUTE_VS_CHRONIC_LCMV_SECONDARY_INF_CD 8_TCELL_DN	139	-0.48	-1.73	0.002	0.078
ZHENG_GLIOBLASTOMA_PLASTICITY_UP	166	-0.47	-1.73	0.000	0.079
PHONG_TNF_RESPONSE_VIA_P38_PARTIAL	102	-0.50	-1.73	0.006	0.078
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_8D_UP	79	-0.52	-1.73	0.003	0.078
SASSON_RESPONSE_TO_FORSKOLIN_DN	64	-0.54	-1.73	0.009	0.079
VART_KSHV_INFECTION_ANGIOGENIC_MARKERS_UP	62	-0.54	-1.73	0.007	0.081
GSE17721_PAM3CSK4_VS_GADIQUIMOD_1H_BMDM_UP	102	-0.50	-1.73	0.010	0.081
TGFB_UP.V1_DN	105	-0.50	-1.73	0.003	0.081
REACTOME_TRIF_MEDIATED_TLR3_SIGNALING	61	-0.54	-1.72	0.024	0.082
GSE24634_IL4_VS_CTRL_TREATED_NAIVE_CD4_TCELL_DAY7_ DN	134	-0.48	-1.72	0.000	0.082
MARSON_FOXP3_TARGETS_DN	35	-0.61	-1.72	0.018	0.082
PUIFFE_INVASION_INHIBITED_BY_ASCITES_DN	123	-0.49	-1.72	0.000	0.082
SCHAEFFER_PROSTATE_DEVELOPMENT_AND_CANCER_BOX4 _DN	31	-0.60	-1.72	0.019	0.083
MCBRYAN_PUBERTAL_BREAST_4_5WK_UP	117	-0.49	-1.72	0.002	0.083
GSE17721_LPS_VS_POLYIC_2H_BMDM_UP	136	-0.47	-1.72	0.002	0.083
LIU_SOX4_TARGETS_UP	104	-0.49	-1.72	0.008	0.084
GRAHAM_CML_QUIESCENT_VS_NORMAL_QUIESCENT_DN	22	-0.66	-1.72	0.015	0.084
GSE1448_CTRL_VS_ANTI_VBETA5_DP_THYMOCYTE_DN	138	-0.48	-1.72	0.003	0.085
GSE3982_MAST_CELL_VS_NEUTROPHIL_DN	118	-0.48	-1.72	0.005	0.085
ACEVEDO_LIVER_CANCER_WITH_H3K27ME3_UP	93	-0.50	-1.71	0.002	0.085
REACTOME_TRANSCRIPTIONAL_ACTIVITY_OF_SMAD2_SMAD 3_SMAD4_HETEROTRIMER	34	-0.61	-1.71	0.018	0.085
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_HSC_UP	122	-0.49	-1.71	0.005	0.085
GSE29618_MONOCYTE_VS_PDC_DAY7_FLU_VACCINE_UP	123	-0.49	-1.71	0.005	0.086
WALLACE_PROSTATE_CANCER_UP	16	-0.70	-1.71	0.021	0.086
GSE360_CTRL_VS_M_TUBERCULOSIS_DC_DN	114	-0.48	-1.71	0.005	0.086
PLASARI_TGFB1_TARGETS_1HR_UP	17	-0.69	-1.71	0.025	0.086
BLUM_RESPONSE_TO_SALIRASIB_UP	211	-0.45	-1.71	0.002	0.086
SENESE_HDAC3_TARGETS_UP	336	-0.43	-1.71	0.000	0.087
BROWN_MYELOID_CELL_DEVELOPMENT_UP	79	-0.52	-1.71	0.007	0.086
GSE17721_PAM3CSK4_VS_CPG_12H_BMDM_DN	139	-0.47	-1.71	0.002	0.086
REGULATION_OF_SIGNAL_TRANSDUCTION	154	-0.46	-1.71	0.002	0.087

PROTEIN_SERINE_THREONINE_PHOSPHATASE_ACTIVITY	18	-0.67	-1.71	0.030	0.088
PID_S1P_S1P1_PATHWAY	15	-0.71	-1.70	0.019	0.088
BEHAVIOR	34	-0.60	-1.70	0.015	0.089
GSE17721_CTRL_VS_PAM3CSK4_4H_BMDM_DN	115	-0.49	-1.70	0.003	0.088
WANG_SMARCE1_TARGETS_DN	262	-0.44	-1.70	0.000	0.089
GSE17974_2H_VS_72H_UNTREATED_IN_VITRO_CD4_TCELL_UP	133	-0.47	-1.70	0.003	0.088
SOLUBLE_FRACTION	77	-0.51	-1.70	0.012	0.089
BOWIE_RESPONSE_TO_TAMOXIFEN	16	-0.71	-1.70	0.027	0.088
POSITIVE_REGULATION_OF_MAP_KINASE_ACTIVITY	24	-0.65	-1.70	0.033	0.088
GSE22886_NAIVE_CD4_TCELL_VS_MONOCYTE_DN	129	-0.47	-1.70	0.002	0.089
GSE360_L_MAJOR_VS_M_TUBERCULOSIS_DC_DN	119	-0.48	-1.70	0.000	0.089
GSE17721_CTRL_VS_LPS_2H_BMDM_DN	114	-0.49	-1.70	0.005	0.089
GSE3982_CENT_MEMORY_CD4_TCELL_VS_TH2_DN	162	-0.46	-1.70	0.003	0.090
SASSON_RESPONSE_TO_GONADOTROPHINS_DN	64	-0.53	-1.70	0.012	0.090
ACTIN_POLYMERIZATION_AND_OR_DEPOLYMERIZATION	16	-0.68	-1.70	0.018	0.089
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_MONOCYTE_UP	162	-0.46	-1.70	0.001	0.089
CORRE_MULTIPLE_MYELOMA_UP	25	-0.63	-1.70	0.024	0.090
LINDSTEDT_DENDRITIC_CELL_MATURATION_A	30	-0.60	-1.70	0.037	0.089
REACTOME_MYD88_MAL_CASCADE_INITIATED_ON_PLASMA_MEMBRANE	66	-0.52	-1.70	0.012	0.090
KIM_WT1_TARGETS_12HR_DN	150	-0.47	-1.70	0.004	0.090
VESICULAR_FRACTION	25	-0.62	-1.69	0.015	0.092
POST_TRANSLATIONAL_PROTEIN_MODIFICATION	320	-0.43	-1.69	0.000	0.093
DELYS_THYROID_CANCER_DN	110	-0.49	-1.69	0.008	0.092
REACTOME_TOLL_RECEPTOR_CASCADES	89	-0.49	-1.69	0.008	0.093
REACTOME_DESTABILIZATION_OF_MRNA_BY_TRISTETRAPROLIN_TTP	17	-0.69	-1.69	0.025	0.093
MICROSOME	24	-0.63	-1.69	0.028	0.093
GSE17721_CTRL_VS_CPG_4H_BMDM_DN	129	-0.47	-1.69	0.003	0.093
HEIDENBLAD_AMPLICON_12P11_12_UP	25	-0.64	-1.69	0.031	0.094
SANA_RESPONSE_TO_IFNG_UP	51	-0.54	-1.69	0.024	0.094
GENTILE_UV_RESPONSE_CLUSTER_D4	51	-0.55	-1.69	0.015	0.094
PID_CMYB_PATHWAY	51	-0.54	-1.68	0.017	0.094
CRX_DN.V1_DN	68	-0.52	-1.68	0.009	0.095
BCAT.100_UP.V1_UP	19	-0.66	-1.68	0.024	0.095
LTE2_UP.V1_DN	135	-0.47	-1.68	0.002	0.095
GSE17721_CTRL_VS_LPS_1H_BMDM_DN	103	-0.48	-1.68	0.009	0.095
ZHAN_MULTIPLE_MYELOMA_CD1_DN	25	-0.63	-1.68	0.026	0.094
NAKAYAMA_FRA2_TARGETS	31	-0.58	-1.68	0.031	0.095
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_72H_ACT_CD4_TCELL_DN	117	-0.47	-1.68	0.003	0.095
POSITIVE_REGULATION_OF_I_KAPPAB_KINASE_NF_KAPPAB_CASCADE	75	-0.50	-1.68	0.008	0.096
GSE3982_NEUTROPHIL_VS_NKCELL_UP	133	-0.47	-1.68	0.002	0.096
GSE360_T_GONDII_VS_B_MALAYI_HIGH_DOSE_DC_UP	104	-0.48	-1.68	0.002	0.096
REACTOME_SIGNALLING_BY_NGF	165	-0.45	-1.68	0.006	0.097
YIH_RESPONSE_TO_ARSENITE_C2	15	-0.70	-1.68	0.021	0.097
GSE20715_0H_VS_6H_OZONE_TLR4_KO_LUNG_DN	138	-0.46	-1.68	0.003	0.097
GSE13485_CTRL_VS_DAY7_YF17D_VACCINE_PBMC_DN	138	-0.47	-1.68	0.002	0.097
INTRACELLULAR_SIGNALING_CASCADE	396	-0.42	-1.68	0.000	0.098

VILIMAS_NOTCH1_TARGETS_UP	15	-0.69	-1.68	0.023	0.097
SCHOEN_NFKB_SIGNALING	15	-0.69	-1.67	0.027	0.097
SENESE_HDAC2_TARGETS_UP	83	-0.50	-1.67	0.010	0.097
BOHN_PRIMARY_IMMUNODEFICIENCY_SYNDROM_DN	23	-0.61	-1.67	0.015	0.097
REACTOME_ACTIVATED_TLR4_SIGNALLING	76	-0.50	-1.67	0.017	0.097
GSE2706_2H_VS_8H_LPS_STIM_DC_DN	115	-0.48	-1.67	0.005	0.098
RESPONSE_TO_OTHER_ORGANISM	29	-0.60	-1.67	0.026	0.098
GSE29618_BCELL_VS_PDC_DAY7_FLU_VACCINE_UP	115	-0.47	-1.67	0.002	0.098
GSE3982_MEMORY_CD4_TCELL_VS_BCELL_UP	88	-0.50	-1.67	0.013	0.099
PASINI_SUZ12_TARGETS_DN	217	-0.44	-1.67	0.000	0.099

Supplemental Table 4: GSEA gene sets enriched in downregulated genes in GIST-T1 treated with Imatinib

NAME	SIZE	ES	NES	NOM p-val	FDR q-val
CUSTOM_GIST-T1_ETV1SH2_DN	69	-0.77	-2.97	0.000	0.000
CUSTOM_GIST-T1_ETV1SH1_DN	229	-0.60	-2.78	0.000	0.000
MARZEC_IL2_SIGNALING_UP	64	-0.72	-2.77	0.000	0.000
ELVIDGE_HYPOXIA_DN	114	-0.67	-2.76	0.000	0.000
PENG_GLUTAMINE_DEPRIVATION_DN	291	-0.58	-2.74	0.000	0.000
CUSTOM_PRATALIS MAPK	29	-0.85	-2.72	0.000	0.000
MANALO_HYPOXIA_DN	240	-0.58	-2.69	0.000	0.000
NAGASHIMA_NRG1_SIGNALING_UP	105	-0.65	-2.67	0.000	0.000
PENG_RAPAMYCIN_RESPONSE_DN	218	-0.59	-2.67	0.000	0.000
SCHUHMACHER_MYC_TARGETS_UP	67	-0.69	-2.66	0.000	0.000
BHAT_ESR1_TARGETS_VIA_AKT1_UP	167	-0.59	-2.63	0.000	0.000
SARTIPY_NORMAL_AT_INSULIN_RESISTANCE_UP	23	-0.88	-2.62	0.000	0.000
KARLSSON_TGFB1_TARGETS_UP	97	-0.64	-2.61	0.000	0.000
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_4H_CD4_TCELL_DN	129	-0.61	-2.58	0.000	0.000
ELVIDGE_HIF1A_TARGETS_UP	55	-0.71	-2.58	0.000	0.000
NAGASHIMA_EGF_SIGNALING_UP	31	-0.80	-2.58	0.000	0.000
GSE22886_UNSTIM_VS_IL2_STIM_NKCELL_DN	172	-0.57	-2.58	0.000	0.000
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_11	81	-0.65	-2.58	0.000	0.000
ONDER_CDH1_TARGETS_1_DN	89	-0.62	-2.52	0.000	0.000
SCHLOSSER_MYC_TARGETS_AND_SERUM_RESPONSE_DN	40	-0.72	-2.52	0.000	0.000
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_12H_CD4_TCELL_DN	139	-0.58	-2.51	0.000	0.000
GHANDHI_BYSTANDER_IRRADIATION_UP	31	-0.76	-2.51	0.000	0.000
PENG_LEUCINE_DEPRIVATION_DN	167	-0.57	-2.50	0.000	0.000
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_2H_CD4_TCELL_DN	136	-0.58	-2.49	0.000	0.000
GSE39820_CTRL_VS_TGFBETA3_IL6_CD4_TCELL_UP	134	-0.58	-2.48	0.000	0.000
GARY_CD5_TARGETS_DN	351	-0.52	-2.47	0.000	0.000
IL15_UP.V1_UP	81	-0.62	-2.47	0.000	0.000
WANG_METHYLATED_IN_BREAST_CANCER	22	-0.80	-2.44	0.000	0.000
CUSTOM_GIST882_ETV1SH2_DN	94	-0.60	-2.41	0.000	0.000
GSE17974_0H_VS_4H_IN_VITRO_ACT_CD4_TCELL_DN	122	-0.57	-2.41	0.000	0.000
CUSTOM_G882_siCOP1_UP_IN_PD901	94	-0.59	-2.40	0.000	0.000
IL2_UP.V1_UP	76	-0.61	-2.40	0.000	0.000
CUSTOM_GIST48_ETV1SH2_DN	92	-0.60	-2.39	0.000	0.000
GSE24634_TREG_VS_TCONV_POST_DAY5_IL4_CONVERSION_UP	158	-0.54	-2.39	0.000	0.000
GSE36476_CTRL_VS_TSST_ACT_16H_MEMORY_CD4_TCELL_YOUNG_DN	144	-0.55	-2.38	0.000	0.000
ZHU_CMV_ALL_UP	88	-0.59	-2.37	0.000	0.000
BURTON_ADIPOGENESIS_PEAK_AT_2HR	34	-0.72	-2.37	0.000	0.000
GSE17974_0H_VS_1H_IN_VITRO_ACT_CD4_TCELL_DN	116	-0.56	-2.37	0.000	0.000
ESC_J1_UP_EARLY.V1_DN	101	-0.57	-2.34	0.000	0.000
AMIT_EGF_RESPONSE_60_MCF10A	23	-0.77	-2.33	0.000	0.000
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_6H_CD4_TCELL_DN	112	-0.56	-2.33	0.000	0.000
GSE36476_CTRL_VS_TSST_ACT_16H_MEMORY_CD4_TCELL_OLD_DN	156	-0.53	-2.33	0.000	0.000

PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_1	20	-0.80	-2.33	0.000	0.000
CSR_EARLY_UP.V1_UP	117	-0.55	-2.32	0.000	0.000
GSE17974_0H_VS_6H_IN_VITRO_ACT_CD4_TCELL_DN	139	-0.54	-2.31	0.000	0.000
GSE9988_ANTI_TREM1_VS_CTRL_TREATED_MONOCYTES_UP	120	-0.54	-2.31	0.000	0.000
GSE17974_0H_VS_2H_IN_VITRO_ACT_CD4_TCELL_DN	116	-0.55	-2.30	0.000	0.000
GHANDHI_DIRECT_IRRADIATION_UP	39	-0.66	-2.29	0.000	0.000
BHAT_ESR1_TARGETS_NOT_VIA_AKT1_UP	118	-0.55	-2.29	0.000	0.000
CUSTOM_G48_siETV1_DN	184	-0.50	-2.29	0.000	0.000
GSE13738_RESTING_VS_BYSTANDER_ACTIVATED_CD4_TCELL_DN	131	-0.53	-2.29	0.000	0.000
MYC_UP.V1_UP	103	-0.56	-2.29	0.000	0.000
EGFR_UP.V1_UP	119	-0.54	-2.28	0.000	0.000
GSE17974_0H_VS_24H_IN_VITRO_ACT_CD4_TCELL_DN	134	-0.53	-2.28	0.000	0.000
GSE30083_SP1_VS_SP3_THYMOCYTE_UP	129	-0.53	-2.27	0.000	0.000
NUCLEOLUS	91	-0.56	-2.27	0.000	0.000
WINZEN_DEGRADED_VIA_KHSRP	47	-0.64	-2.26	0.000	0.000
GSE22886_UNSTIM_VS_IL15_STIM_NKCELL_DN	176	-0.51	-2.26	0.000	0.000
ELVIDGE_HIF1A_AND_HIF2A_TARGETS_UP	33	-0.67	-2.25	0.000	0.000
AMIT_SERUM_RESPONSE_60_MCF10A	35	-0.67	-2.24	0.000	0.000
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_MONOCYTE_UP	150	-0.51	-2.24	0.000	0.000
UZONYI_RESPONSE_TO_LEUKOTRIENE_AND_THROMBIN	19	-0.77	-2.23	0.000	0.000
TRNA_METABOLIC_PROCESS	18	-0.78	-2.23	0.000	0.000
SCHLOSSER_MYC_TARGETS_AND_SERUM_RESPONSE_UP	42	-0.65	-2.23	0.000	0.000
ZHU_CMV_24_HR_UP	72	-0.56	-2.22	0.000	0.000
GSE24634_NAIVE_CD4_TCELL_VS_DAY5_IL4_CONV_TREG_DN	177	-0.50	-2.21	0.000	0.000
ZHU_CMV_8_HR_UP	29	-0.71	-2.21	0.000	0.000
HELLER_HDAC_TARGETS_DN	176	-0.50	-2.20	0.000	0.000
KIM_WT1_TARGETS_12HR_DN	150	-0.50	-2.19	0.000	0.000
CHANG_CORE_SERUM_RESPONSE_UP	165	-0.49	-2.18	0.000	0.000
AMIT_EGF_RESPONSE_40_HELA	33	-0.66	-2.17	0.000	0.000
BURTON_ADIPOGENESIS_1	18	-0.77	-2.16	0.000	0.000
WANG_RESPONSE_TO_GSK3_INHIBITOR_SB216763_DN	259	-0.47	-2.16	0.000	0.000
BERENJENO_TRANSFORMED_BY_RHOA_UP	422	-0.44	-2.16	0.000	0.000
DUTERTRE_ESTRADIOL_RESPONSE_6HR_UP	146	-0.49	-2.16	0.000	0.000
PLASARI_TGFB1_TARGETS_10HR_UP	89	-0.54	-2.15	0.000	0.000
CUSTOM_GIST48_ETV1SH1_DN	76	-0.54	-2.15	0.000	0.001
ELVIDGE_HYPOXIA_BY_DMOG_DN	40	-0.63	-2.15	0.000	0.001
GERHOLD_ADIPOGENESIS_DN	44	-0.60	-2.13	0.000	0.001
GROSS_HYPOXIA_VIA_HIF1A_UP	65	-0.57	-2.13	0.000	0.001
FOURNIER_ACINAR_DEVELOPMENT_LATE_2	230	-0.46	-2.13	0.000	0.001
KRAS.LUNG.BREAST_UP.V1_UP	32	-0.64	-2.12	0.000	0.001
AMIT_EGF_RESPONSE_120_MCF10A	29	-0.66	-2.12	0.000	0.001
KIM_WT1_TARGETS_UP	134	-0.49	-2.12	0.000	0.001
SWEET_KRAS_TARGETS_DN	35	-0.63	-2.12	0.000	0.001
NUCLEOLAR_PART	16	-0.75	-2.11	0.000	0.001
CSR_LATE_UP.V1_UP	119	-0.50	-2.11	0.000	0.001
SCHLOSSER_MYC_TARGETS_REPRESSED_BY_SERUM	139	-0.49	-2.11	0.000	0.001
SHEPARD_CRUSH_AND_BURN_MUTANT_UP	134	-0.49	-2.10	0.000	0.001
GSE22886_UNSTIM_VS_STIM_MEMORY_TCELL_DN	162	-0.48	-2.10	0.000	0.001

NEMETH_INFLAMMATORY_RESPONSE_LPS_UP	60	-0.56	-2.10	0.000	0.001
SENESE_HDAC1_TARGETS_UP	282	-0.45	-2.10	0.000	0.001
BILD_MYC_ONCOGENIC_SIGNATURE	136	-0.49	-2.09	0.000	0.001
GSE2706_UNSTIM_VS_2H_R848_DC_DN	96	-0.51	-2.08	0.000	0.001
GSE9988_LOW_LPS_VS_CTRL_TREATED_MONOCYTE_UP	94	-0.51	-2.08	0.000	0.001
GSE24102_GRANULOCYSTIC_MDSC_VS_NEUTROPHIL_DN	130	-0.49	-2.08	0.000	0.001
GSE9988_ANTI_TREM1_VS_VEHICLE_TREATED_MONOCYTES_UP	115	-0.50	-2.07	0.000	0.002
GSE17721_CTRL_VS_PAM3CSK4_6H_BMDM_DN	127	-0.49	-2.07	0.000	0.002
VEGF_A_UP.V1_DN	136	-0.48	-2.07	0.000	0.002
HAHTOLA_MYCOSIS_FUNGOIDES_CD4_UP	34	-0.63	-2.07	0.000	0.002
GSE3982_MEMORY_CD4_TCELL_VS_TH2_DN	155	-0.48	-2.06	0.000	0.002
PID_ATF2_PATHWAY	33	-0.61	-2.06	0.000	0.002
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_GREEN_UP	15	-0.76	-2.06	0.000	0.002
REACTOME_FORMATION_OF_TUBULIN_FOLDING_INTERMEDIATES_BY_CCT_TRIC	19	-0.71	-2.06	0.000	0.002
GSE9988_LPS_VS_VEHICLE_TREATED_MONOCYTE_UP	86	-0.52	-2.06	0.000	0.002
GSE11864_CSF1_VS_CSF1_IFNG_IN_MAC_DN	118	-0.49	-2.05	0.000	0.002
NAKAMURA_TUMOR_ZONE_PERIPHERAL_VS_CENTRAL_UP	206	-0.44	-2.05	0.000	0.002
GSE14769_UNSTIM_VS_40MIN_LPS_BMDM_DN	124	-0.49	-2.05	0.000	0.002
GSE10325_CD4_TCELL_VS_LUPUS_CD4_TCELL_DN	117	-0.49	-2.05	0.000	0.002
ZWANG_CLASS_3_TRANSIENTLY_INDUCED_BY_EGF	121	-0.49	-2.04	0.000	0.002
PID_AP1_PATHWAY	40	-0.59	-2.04	0.000	0.002
REACTOME_METABOLISM_OF_NON_CODING_RNA	42	-0.58	-2.04	0.000	0.002
GROSS_HYPOXIA_VIA_ELK3_AND_HIF1A_UP	98	-0.49	-2.04	0.000	0.002
GROSS_ELK3_TARGETS_DN	19	-0.70	-2.03	0.000	0.002
GROSS_HYPOXIA_VIA_ELK3_DN	101	-0.50	-2.03	0.000	0.003
BIOCARTA_CHEMICAL_PATHWAY	19	-0.71	-2.03	0.000	0.002
BOQUEST_STEM_CELL_DN	99	-0.50	-2.03	0.000	0.003
MONNIER_POSTRADIATION_TUMOR_ESCAPE_UP	280	-0.42	-2.02	0.000	0.003
HOFMANN_MYELODYSPLASTIC_SYNDROM_LOW_RISK_DN	17	-0.72	-2.02	0.000	0.003
LABBE_TARGETS_OF_TGFB1_AND_WNT3A_UP	58	-0.54	-2.02	0.000	0.003
MTOR_UP.N4.V1_UP	137	-0.47	-2.02	0.000	0.003
BOYAULT_LIVER_CANCER_SUBCLASS_G3_UP	169	-0.46	-2.02	0.000	0.003
COLLER_MYC_TARGETS_UP	21	-0.67	-2.01	0.000	0.003
BROWN_MYELOID_CELL_DEVELOPMENT_DN	79	-0.51	-2.01	0.000	0.003
MITOCHONDRIAL_TRANSPORT	20	-0.69	-2.01	0.000	0.003
LEE_NEURAL_CREST_STEM_CELL_DN	53	-0.54	-2.01	0.000	0.004
BURTON_ADIPOGENESIS_2	49	-0.56	-2.00	0.000	0.004
TSUNODA_CISPLATIN_RESISTANCE_DN	27	-0.64	-2.00	0.002	0.004
KOBAYASHI_EGFR_SIGNALING_24HR_DN	202	-0.44	-2.00	0.000	0.004
GSE22886_NAIVE_CD4_TCELL_VS_12H_ACT_TH1_DN	160	-0.46	-1.99	0.000	0.004
DELACROIX_RAR_TARGETS_UP	29	-0.62	-1.99	0.000	0.004
ZWANG_CLASS_2_TRANSIENTLY_INDUCED_BY_EGF	24	-0.63	-1.99	0.000	0.004
REACTOME_GASTRIN_CREB_SIGNALLING_PATHWAY_VIA_PKC_AND_MAPK	61	-0.53	-1.99	0.000	0.004
GSE24634_TEFF_VS_TCONV_DAY3_IN_CULTURE_UP	155	-0.46	-1.99	0.000	0.004
GSE9988_ANTI_TREM1_AND_LPS_VS_CTRL_TREATED_MONOCYTES_UP	108	-0.48	-1.99	0.000	0.004
BASSO_B_LYMPHOCYTE_NETWORK	113	-0.48	-1.99	0.000	0.004

MULLIGAN_NTF3_SIGNALING_VIA_INSR_AND_IGF1R_UP	20	-0.69	-1.99	0.004	0.004
TARTE_PLASMA_CELL_VS_PLASMABLAST_DN	264	-0.42	-1.98	0.000	0.004
DANG_REGULATED_BY_MYC_UP	56	-0.53	-1.98	0.000	0.005
SCHOEN_NFKB_SIGNALING	18	-0.69	-1.98	0.000	0.005
JECHLINGER_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_D N	45	-0.58	-1.98	0.000	0.005
GSE17721_CTRL_VS_CPG_6H_BMDM_DN	128	-0.46	-1.98	0.000	0.005
PHONG_TNF_TARGETS_UP	34	-0.60	-1.97	0.002	0.005
ZHAN_MULTIPLE_MYELOMA_CD1_VS_CD2_UP	29	-0.61	-1.97	0.000	0.005
REACTOME_MITOCHONDRIAL_PROTEIN_IMPORT	42	-0.58	-1.97	0.000	0.005
DIRMEIER_LMP1_RESPONSE_LATE_UP	44	-0.57	-1.97	0.000	0.005
GSE10856_CTRL_VS_TNFRSF6B_IN_MACROPHAGE_DN	119	-0.46	-1.97	0.000	0.005
GSE9988_LOW_LPS_VS_VEHICLE_TREATED_MONOCYTE_UP	91	-0.49	-1.97	0.000	0.005
KRAS.300_UP.V1_UP	42	-0.56	-1.97	0.000	0.005
GSE39820_CTRL_VS_TGFBETA1_IL6_CD4_TCELL_UP	119	-0.47	-1.97	0.000	0.005
GSE17721_LPS_VS_CPG_6H_BMDM_DN	123	-0.47	-1.97	0.000	0.005
GSE3982_CENT_MEMORY_CD4_TCELL_VS_TH2_DN	152	-0.45	-1.96	0.000	0.006
SPIRA_SMOKERS_LUNG_CANCER_UP	23	-0.64	-1.96	0.000	0.005
SEKI_INFLAMMATORY_RESPONSE_LPS_UP	34	-0.60	-1.96	0.000	0.006
SHAFFER_IRF4_TARGETS_IN_ACTIVATED_B_LYMPHOCYTE	65	-0.52	-1.96	0.000	0.006
MITOCHONDRION_ORGANIZATION_AND_BIOGENESIS	42	-0.57	-1.96	0.000	0.006
BIOCARTA_SPRY_PATHWAY	15	-0.72	-1.96	0.000	0.006
GSE24634_NAIVE_CD4_TCELL_VS_DAY3_IL4_CONV_TREG_DN	161	-0.44	-1.96	0.000	0.006
PID_PRLSIGNALINGEVENTSPATHWAY	19	-0.69	-1.95	0.002	0.006
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLA CK_UP	26	-0.64	-1.95	0.002	0.006
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_6HR_DN	16	-0.72	-1.95	0.002	0.006
PLASARI_TGFB1_TARGETS_1HR_UP	19	-0.67	-1.95	0.000	0.006
AMIT_EGF_RESPONSE_60_HELA	32	-0.60	-1.95	0.002	0.006
GARCIA_TARGETS_OF_FLI1_AND_DAX1_DN	113	-0.46	-1.95	0.000	0.006
CYTOKINE_ACTIVITY	26	-0.62	-1.95	0.000	0.006
GSE3982_EFF_MEMORY_CD4_TCELL_VS_TH2_DN	155	-0.44	-1.94	0.000	0.007
RNA_HELICASE_ACTIVITY	20	-0.67	-1.94	0.004	0.006
GSE9988_LPS_VS_CTRL_TREATED_MONOCYTE_UP	95	-0.48	-1.94	0.000	0.007
GSE24634_TREG_VS_TCONV_POST_DAY3_IL4_CONVERSION_ UP	154	-0.44	-1.93	0.000	0.007
OSWALD_HEMATOPOIETIC_STEM_CELL_IN_COLLAGEN_GEL_ UP	129	-0.46	-1.93	0.000	0.007
GSE17974_2H_VS_72H_UNTREATED_IN_VITRO_CD4_TCELL_ UP	124	-0.46	-1.93	0.000	0.007
WANG_SMARCE1_TARGETS_DN	248	-0.42	-1.93	0.000	0.007
AMIT_EGF_RESPONSE_240_HELA	38	-0.58	-1.93	0.002	0.007
BROWNE_HCMV_INFECTION_14HR_UP	111	-0.46	-1.92	0.000	0.008
REACTOME_GLUCOSE_TRANSPORT	29	-0.61	-1.92	0.000	0.008
GRAHAM_CML_QUIESCENT_VS_NORMAL_DIVIDING_UP	24	-0.63	-1.92	0.002	0.008
GSE22886_DAY0_VS_DAY1_MONOCYTE_IN_CULTURE_DN	123	-0.45	-1.92	0.000	0.008
REACTOME_SIGNALING_BY_GPCR	159	-0.43	-1.91	0.000	0.009

RNA_PROCESSING	153	-0.44	-1.91	0.000	0.009
DAUER_STAT3_TARGETS_UP	30	-0.60	-1.91	0.000	0.009
RNA_DEPENDENT_ATPASE_ACTIVITY	15	-0.70	-1.91	0.004	0.009
GSE15930_NAIVE_VS_24H_IN_VITRO_STIM_IL12_CD8_TCELL_DN	163	-0.43	-1.91	0.000	0.009
ZHANG_RESPONSE_TO_CANTHARIDIN_DN	63	-0.50	-1.91	0.000	0.009
ALTEMEIER_RESPONSE_TO_LPS_WITH_MECHANICAL_VENTILATION	56	-0.52	-1.91	0.002	0.009
GSE17721_CTRL_VS_GARDIQUIMOD_24H_BMDM_DN	134	-0.45	-1.90	0.000	0.009
RASHI_RESPONSE_TO_IONIZING_RADIATION_1	29	-0.59	-1.90	0.002	0.009
BENPORATH_ES_1	258	-0.41	-1.90	0.000	0.009
REGULATION_OF_MAP_KINASE_ACTIVITY	34	-0.57	-1.90	0.000	0.009
GSE17974_2.5H_VS_72H_IL4_AND_ANTI_IL12_ACT_CD4_TCELL_UP	142	-0.44	-1.90	0.000	0.009
DAVICIONI_PAX_FOXO1_SIGNATURE_IN_ARMS_UP	32	-0.57	-1.90	0.000	0.009
FOSTER_TOLERANT_MACROPHAGE_DN	256	-0.41	-1.90	0.000	0.009
GSE16755_CTRL_VS_IFNA_TREATED_MAC_DN	117	-0.45	-1.90	0.000	0.009
LOCOMOTORY_BEHAVIOR	22	-0.64	-1.90	0.004	0.009
FOSTER_TOLERANT_MACROPHAGE_UP	71	-0.49	-1.90	0.000	0.009
RODRIGUES_THYROID_CARCINOMA_POORLY_DIFFERENTIATED_UP	499	-0.38	-1.90	0.000	0.009
MENSSEN_MYC_TARGETS	45	-0.54	-1.90	0.002	0.009
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_14	113	-0.45	-1.90	0.000	0.009
GSE8515_IL1_VS_IL6_4H_STIM_)MAC_UP	106	-0.46	-1.90	0.000	0.009
VANTVEER_BREAST_CANCER_BRCA1_UP	19	-0.64	-1.90	0.006	0.009
MTOR_UP.V1_UP	86	-0.48	-1.90	0.000	0.009
JEPSEN_SMRT_TARGETS	18	-0.66	-1.89	0.000	0.010
KRAS.600_UP.V1_UP	80	-0.48	-1.89	0.000	0.010
CAIRO_LIVER_DEVELOPMENT_UP	104	-0.45	-1.89	0.000	0.010
GSE11864_CSF1_IFNG_VS_CSF1_PAM3CYS_IN_MAC_DN	107	-0.45	-1.89	0.000	0.010
GSE20715_0H_VS_24H_OZONE_TLR4_KO_LUNG_DN	114	-0.46	-1.88	0.000	0.010
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_7	59	-0.50	-1.88	0.000	0.010
SCHLOSSER_MYC_AND_SERUM_RESPONSE_SYNERGY	25	-0.60	-1.88	0.002	0.010
GSE20715_0H_VS_48H_OZONE_TLR4_KO_LUNG_DN	145	-0.44	-1.88	0.000	0.011
FULCHER_INFLAMMATORY_RESPONSE_LECTIN_VS_LPS_UP	342	-0.39	-1.88	0.000	0.010
ZHOU_TNF_SIGNALING_30MIN	44	-0.54	-1.88	0.000	0.011
GSE17974_1H_VS_72H_UNTREATED_IN_VITRO_CD4_TCELL_UP	129	-0.44	-1.87	0.000	0.011
BOSCO_TH1_CYTOTOXIC_MODULE	35	-0.56	-1.87	0.002	0.011
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_24H_ACT_CD4_TCELL_UP	56	-0.51	-1.87	0.002	0.011
GSE27786_CD4_VS_CD8_TCELL_DN	123	-0.44	-1.87	0.000	0.011
GSE3982_NKCELL_VS_TH2_DN	149	-0.43	-1.87	0.000	0.012
GSE1460_NAIVE_CD4_TCELL_ADULT_BLOOD_VS_THYMIC_STROMAL_CELL_DN	140	-0.43	-1.86	0.000	0.012
REACTOME_PREFOLDIN_MEDIATED_TRANSFER_OF_SUBSTRATE_TO_CCT_TRIC	23	-0.64	-1.86	0.000	0.012
GSE10239_KLRG1INT_VS_KLRG1HIGH_EFF_CD8_TCELL_UP	119	-0.44	-1.86	0.000	0.013
BERTUCCI_MEDULLARY_VS_DUCTAL_BREAST_CANCER_UP	125	-0.44	-1.86	0.000	0.013

LI_INDUCED_T_TO_NATURAL_KILLER_UP	156	-0.43	-1.86	0.000	0.013
BCAT_GDS748_UP	31	-0.58	-1.86	0.000	0.013
REACTOME_G_ALPHA_Q_SIGNALLING_EVENTS	41	-0.54	-1.86	0.000	0.013
GSE9988_ANTI_TREM1_AND_LPS_VS_VEHICLE_TREATED_MONOCYTES_UP	97	-0.46	-1.86	0.000	0.013
PHONG_TNF_RESPONSE_VIA_P38_PARTIAL	102	-0.45	-1.86	0.000	0.013
REACTOME_CLEAVAGE_OF_GROWING_TRANSCRIPT_IN_THE_TERMINATION_REGION_	38	-0.55	-1.85	0.000	0.013
BROWNE_HCMV_INFECTION_20HR_UP	149	-0.42	-1.85	0.000	0.014
PUIFFE_INVASION_INHIBITED_BY_ASCITES_DN	113	-0.44	-1.84	0.000	0.015
KEGG_PATHOGENIC_ESCHERICHIA_COLI_INFECTION	44	-0.53	-1.84	0.004	0.015
REACTOME_CLASS_A1_RHODOPSIN_LIKE_RECEPTORS	33	-0.56	-1.84	0.004	0.015
GSE15930_NAIVE_VS_24H_IN_VITRO_STIM_INFAB_CD8_TCELL_DN	163	-0.42	-1.84	0.000	0.015
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLUE_UP	86	-0.47	-1.84	0.000	0.015
REACTOME_TRANSPORT_OF_MATURE_TRANSCRIPT_TO_CYTOPLASM	49	-0.52	-1.84	0.000	0.015
DAZARD_RESPONSE_TO_UV_NHEK_UP	137	-0.43	-1.84	0.000	0.015
GSE2706_UNSTIM_VS_8H_R848_DC_DN	89	-0.46	-1.84	0.000	0.015
RIBOSOME_BIOGENESIS_AND_ASSEMBLY	15	-0.68	-1.84	0.010	0.016
GSE17721_12H_VS_24H_PAM3CSK4_BMDM_UP	128	-0.44	-1.83	0.000	0.017
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_6H_ACT_CD4_TCELL_DN	100	-0.44	-1.83	0.000	0.017
PASINI_SUZ12_TARGETS_DN	224	-0.41	-1.83	0.000	0.017
HINATA_NFKB_TARGETS_FIBROBLAST_UP	49	-0.50	-1.82	0.004	0.018
HAN_JNK_SINGALING_UP	24	-0.58	-1.82	0.004	0.018
BILD_HRAS_ONCOGENIC_SIGNATURE	136	-0.42	-1.82	0.000	0.018
JUBAN_TARGETS_OF_SPI1_AND_FLI1_DN	66	-0.49	-1.82	0.000	0.018
PDGF_ERK_DN.V1_DN	100	-0.44	-1.82	0.000	0.019
MOREIRA_RESPONSE_TO_TSA_UP	21	-0.62	-1.82	0.002	0.019
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_CDC25_UP	70	-0.47	-1.82	0.000	0.019
GSE360_HIGH_DOSE_B_MALAYI_VS_M_TUBERCULOSIS_DC_DN	113	-0.43	-1.82	0.000	0.019
POTTI_TOPOTECAN_SENSITIVITY	91	-0.46	-1.81	0.000	0.019
GSE2706_UNSTIM_VS_2H_LPS_AND_R848_DC_DN	89	-0.45	-1.81	0.002	0.019
BEHAVIOR	33	-0.56	-1.81	0.004	0.019
RUIZ_TNC_TARGETS_DN	116	-0.43	-1.81	0.000	0.019
GSE7400_CTRL_VS_CSF3_IN_VIVO_TREATED_PBMC_UP	148	-0.42	-1.81	0.000	0.019
HINATA_NFKB_TARGETS_KERATINOCYTE_UP	46	-0.51	-1.81	0.000	0.019
GSE11864_CSF1_VS_CSF1_PAM3CYS_IN_MAC_DN	109	-0.44	-1.81	0.000	0.019
RELA_DN.V1_UP	60	-0.48	-1.81	0.000	0.019
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_6H_UP	137	-0.42	-1.81	0.000	0.019
SARTIPY_BLUNTED_BY_INSULIN_RESISTANCE_UP	15	-0.68	-1.81	0.002	0.019
REACTOME_PROTEIN_FOLDING	42	-0.52	-1.81	0.002	0.020
DANG_MYC_TARGETS_UP	119	-0.43	-1.81	0.000	0.020
GSE29618_PDC_VS_MDC_DN	115	-0.43	-1.81	0.000	0.020
REACTOME_CYTOSOLIC_TRNA_AMINOACYLATION	23	-0.59	-1.80	0.006	0.021
REACTOME_MRNA_3_END_PROCESSING	30	-0.55	-1.80	0.002	0.022
GSE3982_BASOPHIL_VS_TH1_DN	149	-0.42	-1.80	0.000	0.022
CORDENONSI_YAP_CONSERVED_SIGNATURE	42	-0.51	-1.80	0.000	0.022
KIM_MYC_AMPLIFICATION_TARGETS_UP	135	-0.42	-1.79	0.000	0.022

GSE360_LOW_DOSE_B_MALAYI_VS_M_TUBERCULOSIS_DC_DN	114	-0.43	-1.79	0.000	0.023
GSE3982_DC_VS_TH1_DN	133	-0.42	-1.79	0.000	0.023
KIM_WT1_TARGETS_8HR_UP	110	-0.42	-1.79	0.002	0.023
PIONTEK_PKD1_TARGETS_UP	17	-0.63	-1.79	0.008	0.024
SMID_BREAST_CANCER_LUMINAL_B_DN	207	-0.39	-1.79	0.000	0.024
XU_HGF_SIGNALING_NOT_VIA_AKT1_48HR_UP	26	-0.56	-1.79	0.004	0.024
LINDSTEDT_DENDRITIC_CELL_MATURATION_A	33	-0.56	-1.79	0.000	0.024
REACTOME_TRANSPORT_OF_RIBONUCLEOPROTEINS_INTO_THE_HOST_NUCLEUS	25	-0.57	-1.79	0.006	0.024
AMUNDSON_GENOTOXIC_SIGNATURE	68	-0.46	-1.79	0.000	0.024
KRAS.600.LUNG.BREAST_UP.V1_UP	63	-0.48	-1.79	0.000	0.024
GSE24634_TEFF_VS_TCONV_DAY5_IN_CULTURE_UP	157	-0.41	-1.78	0.000	0.024
REACTOME_PEPTIDE_LIGAND_BINDING_RECEPTORS	23	-0.60	-1.78	0.004	0.024
PETROVA_PROX1_TARGETS_DN	37	-0.53	-1.78	0.006	0.024
BURTON_ADIPOGENESIS_PEAK_AT_8HR	27	-0.57	-1.78	0.010	0.024
GENTILE_UV_RESPONSE_CLUSTER_D5	30	-0.55	-1.78	0.000	0.025
NIELSEN_GIST	72	-0.46	-1.78	0.000	0.025
GSE3982_BASOPHIL_VS_TH2_DN	143	-0.41	-1.78	0.002	0.025
GSE13738_RESTING_VS_TCR_ACTIVATED_CD4_TCELL_DN	134	-0.42	-1.78	0.000	0.025
REACTOME_PROCESSING_OF_CAPPED_INTRONLESS_PRE_MRNA	20	-0.62	-1.78	0.013	0.025
GSE3982_EOSINOPHIL_VS_TH1_DN	155	-0.41	-1.77	0.000	0.026
MUELLER_PLURINET	241	-0.38	-1.77	0.000	0.026
VANDESLUIS_COMMD1_TARGETS_GROUP_3_DN	16	-0.65	-1.77	0.012	0.026
BOSCO_ALLERGEN_INDUCED_TH2_ASSOCIATED_MODULE	71	-0.46	-1.77	0.000	0.027
TSENG_IRS1_TARGETS_UP	74	-0.46	-1.77	0.002	0.027
MALONEY_RESPONSE_TO_17AAG_DN	68	-0.47	-1.77	0.000	0.027
GSE31082_DN_VS_CD8_SP_THYMOCYTE_UP	153	-0.40	-1.77	0.000	0.027
SENESE_HDAC1_AND_HDAC2_TARGETS_UP	124	-0.42	-1.76	0.002	0.028
GSE15930_NAIVE_VS_48H_IN_VITRO_STIM_IFNAB_CD8_TCELL_DN	168	-0.40	-1.76	0.000	0.027
BROWNE_HCMV_INFECTION_24HR_UP	94	-0.44	-1.76	0.002	0.027
SHIN_B_CELL_LYMPHOMA_CLUSTER_2	19	-0.60	-1.76	0.004	0.028
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_8H_UP	140	-0.41	-1.76	0.000	0.027
GSE8515_CTRL_VS_IL1_4H_STIM_MAC_DN	112	-0.42	-1.76	0.000	0.027
WINTER_HYPOXIA_UP	68	-0.46	-1.76	0.002	0.028
GSE11864_CSF1_PAM3CYS_VS_CSF1_IFNG_PAM3CYS_IN_MAC_UP	114	-0.43	-1.76	0.000	0.028
GSE17721_LPS_VS_POLYIC_12H_BMDM_UP	142	-0.41	-1.76	0.000	0.029
REACTOME_POST_CHAPERONIN_TUBULIN_FOLDING_PATHWAY	15	-0.66	-1.76	0.012	0.029
GSE17721_POLYIC_VS_CPG_12H_BMDM_DN	133	-0.41	-1.76	0.000	0.029
ROSS_AML_WITH_CBFB_MYH11_FUSION	25	-0.57	-1.76	0.006	0.029
ADDYA_ERYTHROID_DIFFERENTIATION_BY_HEMIN	47	-0.50	-1.75	0.000	0.030
VART_KSHV_INFECTION_ANGIOGENIC_MARKERS_UP	66	-0.46	-1.75	0.004	0.030
LIN_SILENCED_BY_TUMOR_MICROENVIRONMENT	28	-0.56	-1.75	0.008	0.030
BENPORATH_ES_2	18	-0.62	-1.75	0.008	0.031
RIBONUCLEOPROTEIN_COMPLEX	125	-0.42	-1.75	0.000	0.031
GSE3982_MEMORY_CD4_TCELL_VS_TH1_DN	157	-0.40	-1.75	0.000	0.031
WELCSH_BRCA1_TARGETS_DN	124	-0.41	-1.75	0.000	0.031
MANTOVANI_NFKB_TARGETS_UP	18	-0.61	-1.75	0.013	0.031

CERVERA_SDHB_TARGETS_2	47	-0.50	-1.75	0.006	0.031
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_10H_UP	141	-0.40	-1.75	0.000	0.031
ESC_J1_UP_LATE.V1_DN	105	-0.42	-1.74	0.000	0.031
GSE17721_LPS_VS_PAM3CSK4_6H_BMDM_DN	145	-0.40	-1.74	0.000	0.031
REACTOME_PERK_REGULATED_GENE_EXPRESSION	22	-0.58	-1.74	0.006	0.031
TIEN_INTESTINE_PROBIOTICS_24HR_UP	468	-0.35	-1.74	0.000	0.031
GSE14769_UNSTIM_VS_80MIN_LPS_BMDM_DN	109	-0.42	-1.74	0.000	0.032
GSE18791_UNSTIM_VS_NEWCATSLE_VIRUS_DC_18H_DN	69	-0.46	-1.74	0.000	0.031
GALLUZZI_PREVENT_MITOCHONDIAL_PERMEABILIZATION	16	-0.65	-1.74	0.017	0.032
GSE11864_CSF1_VS_CSF1_IFNG_PAM3CYS_IN_MAC_DN	112	-0.42	-1.74	0.002	0.033
TAVOR_CEBPA_TARGETS_UP	29	-0.54	-1.74	0.011	0.033
BOQUEST_STEM_CELL_CULTURED_VS_FRESH_UP	235	-0.38	-1.74	0.000	0.033
GSE13485_DAY1_VS_DAY3_YF17D_VACCINE_PBMC_DN	136	-0.41	-1.73	0.000	0.034
REACTOME_TRANSPORT_OF_MATURE_MRNA_DERIVED_FROM_AN_INTRONLESS_TRANSCRIPT	30	-0.55	-1.73	0.004	0.034
AMIT_EGF_RESPONSE_40_MCF10A	17	-0.62	-1.73	0.002	0.034
MIYAGAWA_TARGETS_OF_EWSR1_ETS_FUSIONS_DN	110	-0.42	-1.73	0.000	0.034
BURTON_ADIPOGENESIS_9	63	-0.47	-1.73	0.004	0.034
REACTOME_GPCR_LIGAND_BINDING	61	-0.46	-1.73	0.002	0.034
GSE17974_0H_VS_12H_IN_VITRO_ACT_CD4_TCELL_DN	148	-0.40	-1.73	0.000	0.034
NUCLEOTIDYLTRANSFERASE_ACTIVITY	37	-0.51	-1.73	0.004	0.034
HOLLEMAN_VINCRISTINE_RESISTANCE_B_ALL_UP	27	-0.56	-1.73	0.004	0.035
BMI1_DN_MEL18_DN.V1_UP	62	-0.46	-1.73	0.002	0.035
CHIN_BREAST_CANCER_COPY_NUMBER_UP	16	-0.62	-1.73	0.008	0.036
GSE360_T_GONDII_VS_M_TUBERCULOSIS_MAC_DN	94	-0.42	-1.72	0.000	0.036
GSE30962_ACUTE_VS_CHRONIC_LCMV_SECONDARY_INF_CD8_TCELL_DN	130	-0.40	-1.72	0.002	0.036
GSE15930_NAIVE_VS_24H_IN_VITRO_STIM_CD8_TCELL_DN	164	-0.39	-1.72	0.000	0.036
GSE9006_HEALTHY_VS_TYPE_1_DIABETES_PBMC_AT_DX_DN	97	-0.43	-1.72	0.000	0.036
REACTOME_TRANSPORT_OF_INORGANIC_CATIONS_ANIONS_AND_AMINO_ACIDS_OLIGOPEPTIDES	29	-0.54	-1.72	0.006	0.036
SANSOM_WNT_PATHWAY_REQUIRE_MYC	35	-0.52	-1.72	0.004	0.036
GHO_ATF5_TARGETS_DN	16	-0.63	-1.72	0.002	0.036
LANDIS_BREAST_CANCER_PROGRESSION_UP	29	-0.54	-1.72	0.006	0.036
ZHAN_MULTIPLE_MYELOMA_CD2_DN	32	-0.53	-1.72	0.012	0.036
REACTOME_REGULATION_OF_GLUCOKINASE_BY_GLUCOKINASE_REGULATORY_PROTEIN	23	-0.57	-1.71	0.006	0.038
GSE360_T_GONDII_VS_M_TUBERCULOSIS_DC_DN	97	-0.43	-1.71	0.004	0.038
KORKOLA_TERATOMA	27	-0.54	-1.71	0.014	0.038
DURAND_STROMA_MAX_DN	74	-0.44	-1.71	0.000	0.038
GSE18791_UNSTIM_VS_NEWCATSLE_VIRUS_DC_10H_DN	92	-0.43	-1.71	0.000	0.039
MAHAJAN_RESPONSE_TO_IL1A_UP	33	-0.52	-1.71	0.008	0.040
GSE17721_POLYIC_VS_PAM3CSK4_6H_BMDM_DN	141	-0.39	-1.71	0.000	0.041
GSE17721_POLYIC_VS_GARDIQUIMOD_1H_BMDM_DN	132	-0.40	-1.71	0.000	0.041
CHEN_HOXA5_TARGETS_9HR_UP	151	-0.39	-1.70	0.002	0.041
DORN_ADENOVIRUS_INFECTION_48HR_DN	28	-0.54	-1.70	0.008	0.042
INTERCELLULAR_JUNCTION	22	-0.57	-1.70	0.013	0.043
BERENJENO_ROCK_SIGNALING_NOT_VIA_RHOA_DN	32	-0.53	-1.70	0.014	0.043
PID_SYNDECAN_4_PATHWAY	18	-0.61	-1.70	0.019	0.043

HELLER_HDAC_TARGETS_SILENCED_BY_METHYLATION_DN	175	-0.38	-1.70	0.000	0.043
SMITH_TERT_TARGETS_UP	116	-0.40	-1.70	0.000	0.044
GSE3982_EOSINOPHIL_VS_TH2_DN	154	-0.39	-1.70	0.000	0.044
HU_GENOTOXIC_DAMAGE_24HR	26	-0.55	-1.70	0.008	0.044
PROTEIN_TYROSINE_PHOSPHATASE_ACTIVITY	24	-0.56	-1.69	0.010	0.044
JACKSON_DNMT1_TARGETS_UP	53	-0.46	-1.69	0.002	0.044
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_12H_UP	142	-0.39	-1.69	0.000	0.044
GSE3982_CENT_MEMORY_CD4_TCELL_VS_TH1_DN	159	-0.39	-1.69	0.000	0.044
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_TURQUOISE_UP	54	-0.46	-1.69	0.002	0.044
BROWNE_HCMV_INFECTION_8HR_UP	60	-0.45	-1.69	0.002	0.045
BCAT.100_UP.V1_UP	25	-0.55	-1.69	0.016	0.045
GSE3982_BCELL_VS_TH1_DN	124	-0.40	-1.69	0.000	0.045
PID_THROMBIN_PAR1_PATHWAY	25	-0.54	-1.69	0.011	0.045
GSE7764_IL15_TREATED_VS_CTRL_NK_CELL_24H_UP	151	-0.39	-1.69	0.000	0.045
CHEN_LUNG_CANCER_SURVIVAL	15	-0.63	-1.69	0.014	0.045
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_8	30	-0.53	-1.69	0.010	0.045
ALK_DN.V1_UP	37	-0.49	-1.69	0.011	0.045
GSE22886_NAIVE_CD4_TCELL_VS_12H_ACT_TH2_DN	164	-0.38	-1.69	0.000	0.045
WINTER_HYPOXIA_METAGENE	149	-0.39	-1.69	0.000	0.045
CHUANG_OXIDATIVE_STRESS_RESPONSE_UP	18	-0.59	-1.69	0.010	0.045
CHEN_NEUROBLASTOMA_COPY_NUMBER_GAINS	30	-0.53	-1.69	0.014	0.045
GSE9988_ANTI_TREM1_VS_LPS_MONOCYTE_DN	98	-0.42	-1.69	0.000	0.045
TOOKER_GEMCITABINE_RESISTANCE_DN	99	-0.41	-1.69	0.002	0.045
GSE14769_UNSTIM_VS_60MIN_LPS_BMDM_DN	123	-0.40	-1.69	0.000	0.045
GSE3982_DC_VS_NEUTROPHIL_UP	150	-0.39	-1.69	0.000	0.045
REACTOME_NEP_NS2_INTERACTS_WITH_THE_CELLULAR_EXPORT_MACHINERY	24	-0.56	-1.69	0.015	0.045
MOHANKUMAR_TLX1_TARGETS_UP	308	-0.35	-1.68	0.000	0.045
PID_CD8TCRDOWNSTREAMPATHWAY	25	-0.55	-1.68	0.016	0.046
GSE9988_ANTI_TREM1_VS_LOW_LPS_MONOCYTE_DN	96	-0.41	-1.68	0.002	0.046
REACTOME_INTERACTIONS_OF_VPR_WITH_HOST_CELLULAR_PROTEINS	29	-0.52	-1.68	0.012	0.046
REACTOME_TRNA_AMINOACYLATION	39	-0.49	-1.68	0.004	0.046
GALLUZZI_PERMEABILIZE_MITOCHONDRIA	29	-0.53	-1.68	0.011	0.046
HUNSBERGER_EXERCISE_REGULATED_GENES	16	-0.60	-1.68	0.021	0.046
KEGG_VEGF_SIGNALING_PATHWAY	43	-0.48	-1.68	0.009	0.047
GSE2706_UNSTIM_VS_2H_LPS_DC_DN	94	-0.41	-1.68	0.002	0.047
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_KRAS_UP	84	-0.42	-1.68	0.002	0.048
GSE2706_UNSTIM_VS_8H_LPS_DC_DN	107	-0.40	-1.68	0.000	0.048
ORGANELLAR_RIBOSOME	22	-0.57	-1.68	0.015	0.048
SIMBULAN_UV_RESPONSE_IMMORTALIZED_DN	21	-0.57	-1.68	0.008	0.048
WILLERT_WNT_SIGNALING	16	-0.63	-1.67	0.008	0.048
REACTOME_GPCR_DOWNSTREAM_SIGNALING	110	-0.40	-1.67	0.000	0.048
GENTILE_UV_HIGH_DOSE_DN	242	-0.36	-1.67	0.000	0.048
RECEPTOR_BINDING	140	-0.39	-1.67	0.000	0.049
QI_PLASMACYTOMA_UP	124	-0.40	-1.67	0.002	0.049
BIOCARTA_FCER1_PATHWAY	27	-0.54	-1.67	0.013	0.049
STK33_UP	157	-0.38	-1.67	0.000	0.049
TIAN_TNF_SIGNALING_VIA_NFKB	15	-0.62	-1.67	0.013	0.051
NEGATIVE_REGULATION_OF_TRANSFERASE_ACTIVITY	19	-0.59	-1.67	0.022	0.051

ACEVEDO_FGFR1_TARGETS_IN_PROSTATE_CANCER_MODEL_UP	125	-0.39	-1.66	0.002	0.052
GSE11924_TFH_VS_TH17_CD4_TCELL_DN	126	-0.39	-1.66	0.002	0.052
PID_NFAT_TFPATHWAY	16	-0.60	-1.66	0.012	0.052
BASSO_CD40_SIGNALING_DN	26	-0.54	-1.66	0.013	0.052
WATTEL_AUTONOMOUS_THYROID_ADENOMA_DN	25	-0.54	-1.66	0.013	0.052
GSE17721_POLYIC_VS_GARDIQUIMOD_12H_BMDM_DN	129	-0.39	-1.66	0.000	0.052
CUSTOM_ICC-MY_UP	25	-0.54	-1.66	0.011	0.053
BIOCARTA_GPCR_PATHWAY	25	-0.54	-1.66	0.010	0.053
PID_AMB2_NEUTROPHILS_PATHWAY	24	-0.55	-1.66	0.021	0.053
GSE17721_CTRL_VS_LPS_24H_BMDM_DN	146	-0.39	-1.66	0.002	0.054
ZWANG_CLASS_1_TRANSIENTLY_INDUCED_BY_EGF	261	-0.35	-1.66	0.000	0.054
GRADE_COLON_AND_RECTAL_CANCER_UP	232	-0.36	-1.66	0.000	0.054
GSE17974_0H_VS_0.5H_IN_VITRO_ACT_CD4_TCELL_DN	77	-0.42	-1.66	0.002	0.054
CUSTOM_Colo800_ETV1SH2_DN	120	-0.40	-1.66	0.002	0.054
GSE360_L_DONOVANI_VS_B_MALAYI_HIGH_DOSE_DC_UP	103	-0.41	-1.66	0.004	0.054
AMIT_EGF_RESPONSE_120_HELA	40	-0.48	-1.65	0.004	0.054
GSE13484_3H_UNSTIM_VS_YF17D_VACCINE_STIM_PBMC_DN	104	-0.40	-1.65	0.002	0.054
DORN_ADENOVIRUS_INFECTION_32HR_DN	27	-0.54	-1.65	0.010	0.054
STAMBOLSKY_TARGETS_OF_MUTATED_TP53_UP	30	-0.52	-1.65	0.020	0.055
DEBIASI_APOPTOSIS_BY_REOVIRUS_INFECTION_UP	226	-0.36	-1.65	0.000	0.055
GSE360_L_DONOVANI_VS_M_TUBERCULOSIS_MAC_DN	105	-0.40	-1.65	0.000	0.055
RAO_BOUND_BY_SALL4	131	-0.38	-1.65	0.000	0.055
GSE17721_POLYIC_VS_PAM3CSK4_1H_BMDM_DN	111	-0.40	-1.65	0.000	0.055
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_0.5H_CD4_TCELL_DN	97	-0.40	-1.65	0.006	0.055
GSE3982_NEUTROPHIL_VS_TH1_DN	158	-0.37	-1.65	0.002	0.055
PID_INTEGRIN3_PATHWAY	23	-0.55	-1.65	0.010	0.056
LEE_TARGETS_OF_PTCH1_AND_SUFU_UP	35	-0.50	-1.65	0.004	0.056
ST_ERK1_ERK2_MAPK_PATHWAY	26	-0.53	-1.64	0.010	0.058
WEINMANN_ADAPTATION_TO_HYPOXIA_DN	23	-0.54	-1.64	0.019	0.058
THEILGAARD_NEUTROPHIL_AT_SKIN_WOUND_UP	51	-0.45	-1.64	0.013	0.058
REACTOME_SLC_MEDIATED_TRANSMEMBRANE_TRANSPORT	100	-0.40	-1.64	0.000	0.058
GSE15750_WT_VS_TRAF6KO_DAY10_EFF_CD8_TCELL_UP	124	-0.39	-1.64	0.004	0.059
CELL_JUNCTION	32	-0.50	-1.64	0.010	0.059
BUYTAERT_PHOTODYNAMIC_THERAPY_STRESS_DN	457	-0.33	-1.64	0.000	0.059
GSE13485_CTRL_VS_DAY1_YF17D_VACCINE_PBMC_UP	143	-0.38	-1.64	0.002	0.060
KEGG_JAK_STAT_SIGNALING_PATHWAY	64	-0.43	-1.64	0.006	0.060
GSE17721_CTRL_VS_LPS_6H_BMDM_DN	118	-0.39	-1.64	0.000	0.061
BERENJENO_TRANSFORMED_BY_RHOA_REVERSIBLY_DN	22	-0.55	-1.64	0.021	0.061
GSE14000_TRANSLATED_RNA_VS_MRNA_DC_UP	164	-0.37	-1.63	0.000	0.061
HALMOS_CEBPA_TARGETS_UP	27	-0.52	-1.63	0.011	0.061
BIOCARTA_VEGF_PATHWAY	20	-0.56	-1.63	0.029	0.061
CUSTOM_EXPO-GIST	58	-0.44	-1.63	0.009	0.061
GSE17721_CTRL_VS_GARDIQUIMOD_12H_BMDM_DN	125	-0.38	-1.63	0.004	0.061
DAVICIONI_RHABDOMYOSARCOMA_PAX_FOXO1_FUSION_UP	33	-0.49	-1.63	0.014	0.061
PID_CMYB_PATHWAY	58	-0.44	-1.63	0.006	0.061

SHAFFER_IRF4_TARGETS_IN_PLASMA_CELL_VS_MATURE_B_LYMPHOCYTE	50	-0.46	-1.63	0.007	0.061
GERY_CEBP_TARGETS	74	-0.42	-1.63	0.011	0.061
ZHANG_TLX_TARGETS_60HR_DN	219	-0.36	-1.63	0.002	0.061
ALFANO_MYC_TARGETS	161	-0.37	-1.63	0.004	0.062
MITOCHONDRIAL_RIBOSOME	22	-0.57	-1.63	0.025	0.062
GSE9988_ANTI_TREM1_VS_ANTI_TREM1_AND_LPS_MONOCYTE_DN	95	-0.40	-1.63	0.002	0.063
GSE1432_1H_VS_6H_IFNG_MICROGLIA_DN	142	-0.37	-1.63	0.000	0.063
DIRMEIER_LMP1_RESPONSE_EARLY	41	-0.47	-1.63	0.012	0.063
RESPONSE_TO_EXTERNAL_STIMULUS	90	-0.40	-1.63	0.002	0.063
GSE22886_NEUTROPHIL_VS_DC_UP	54	-0.44	-1.63	0.006	0.064
GSE3982_MAC_VS_BASOPHIL_UP	131	-0.38	-1.62	0.006	0.065
WALLACE_PROSTATE_CANCER_RACE_UP	105	-0.39	-1.62	0.000	0.066
GSE3982_EOSINOPHIL_VS_BASOPHIL_UP	100	-0.40	-1.62	0.008	0.066
RAMALHO_STEMNESS_UP	166	-0.37	-1.62	0.002	0.066
GSE24142_DN2_VS_DN3_THYMOCYTE_ADULT_DN	121	-0.38	-1.62	0.000	0.066
MCLACHLAN_DENTAL_CARIES_UP	84	-0.41	-1.62	0.002	0.066
AMIT_SERUM_RESPONSE_20_MCF10A	16	-0.58	-1.62	0.031	0.067
GSE24142_ADULT_VS_FETAL_DN2_THYMOCYTE_DN	115	-0.38	-1.62	0.000	0.066
GSE19825_CD24LOW_VS_IL2RA_HIGH_DAY3_EFF_CD8_TCELL_DN	150	-0.38	-1.62	0.002	0.067
SESTO_RESPONSE_TO_UV_C1	51	-0.45	-1.62	0.011	0.067
KEGG_PRION_DISEASES	18	-0.56	-1.62	0.027	0.067
MA_MYELOID_DIFFERENTIATION_DN	21	-0.55	-1.62	0.021	0.067
HOFMANN_MYELODYSPLASTIC_SYNDROM_RISK_UP	15	-0.60	-1.62	0.022	0.068
COULOUARN_TEMPORAL_TGFB1_SIGNATURE_DN	83	-0.40	-1.61	0.000	0.068
SASSON_RESPONSE_TO_FORSKOLIN_UP	59	-0.43	-1.61	0.015	0.068
PID_REG_GR_PATHWAY	42	-0.45	-1.61	0.012	0.069
GSE26669_CTRL_VS_COSTIM_BLOCK_MLR_CD8_TCELL_UP	149	-0.37	-1.61	0.000	0.069
NAKAYAMA_SOFT_TISSUE_TUMORS_PCA1_UP	21	-0.54	-1.61	0.013	0.069
VALK_AML_CLUSTER_4	18	-0.56	-1.61	0.024	0.069
OUILLETTE_CLL_13Q14_DELETION_DN	29	-0.51	-1.61	0.014	0.070
DEPHOSPHORYLATION	33	-0.49	-1.61	0.026	0.070
BOYLAN_MULTIPLE_MYELOMA_D_CLUSTER_DN	25	-0.52	-1.61	0.028	0.071
PAPASPYRIDONOS_UNSTABLE_ATEROSCLEROTIC_PLAQUE_UP	30	-0.50	-1.61	0.018	0.071
ESC_V6.5_UP_LATE.V1_DN	94	-0.40	-1.61	0.002	0.071
BROCKE_APOPTOSIS_REVERSED_BY_IL6	100	-0.39	-1.61	0.002	0.071
GSE11924_TFH_VS_TH1_CD4_TCELL_DN	109	-0.39	-1.61	0.000	0.072
KEGG_HEMATOPOIETIC_CELL_LINEAGE	16	-0.58	-1.60	0.029	0.072
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_18H_UP	146	-0.37	-1.60	0.002	0.072
GSE31082_DP_VS_CD4_SP_THYMOCYTE_DN	128	-0.38	-1.60	0.004	0.072
KEGG_AMINOACYL_TRNA_BIOSYNTHESIS	38	-0.47	-1.60	0.013	0.072
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_8D_DN	72	-0.42	-1.60	0.006	0.072
GSE15930_NAIVE_VS_48H_IN_VITRO_STIM_IL12_CD8_TCELL_DN	164	-0.36	-1.60	0.004	0.072
GSE2706_UNSTIM_VS_8H_LPS_AND_R848_DC_DN	99	-0.39	-1.60	0.000	0.072
GSE14769_UNSTIM_VS_120MIN_LPS_BMDM_DN	122	-0.38	-1.60	0.004	0.072
GSE8384_CTRL_VS_B_ABORTUS_4H_MAC_CELL_LINE_DN	129	-0.37	-1.60	0.004	0.072
RNA_SPLICING	81	-0.41	-1.60	0.005	0.073
COLDREN_GEFITINIB_RESISTANCE_UP	56	-0.44	-1.60	0.018	0.073

GSE17721_LPS_VS_PAM3CSK4_2H_BMDM_UP	114	-0.38	-1.60	0.007	0.073
NOUSHMEHR_GBM_SILENCED_BY_METHYLATION	18	-0.56	-1.60	0.027	0.074
ABE_VEGFA_TARGETS_2HR	18	-0.56	-1.60	0.025	0.075
AMIT_SERUM_RESPONSE_40_MCF10A	19	-0.56	-1.60	0.022	0.075
GSE360_DC_VS_MAC_M_TUBERCULOSIS_UP	103	-0.38	-1.60	0.000	0.075
ZHAN_MULTIPLE_MYELOMA_MF_UP	20	-0.54	-1.60	0.032	0.075
GSE14769_UNSTIM_VS_20MIN_LPS_BMDM_DN	115	-0.38	-1.60	0.007	0.075
GSE37416_CTRL_VS_0H_F_TULARENSIS_LVS_NEUTROPHIL_DN	45	-0.46	-1.60	0.016	0.075
GSE36392_MAC_VS_NEUTROPHIL_IL25_TREATED_LUNG_DN	78	-0.41	-1.60	0.008	0.075
BERENJENO_TRANSFORMED_BY_RHOA_FOREVER_DN	20	-0.56	-1.60	0.028	0.075
PRC2_EZH2_UP.V1_DN	82	-0.41	-1.59	0.010	0.075
BROWNE_HCMV_INFECTION_4HR_UP	28	-0.50	-1.59	0.031	0.075
E2F1_UP.V1_UP	141	-0.38	-1.59	0.002	0.075
GSE17721_LPS_VS_POLYIC_8H_BMDM_UP	136	-0.37	-1.59	0.004	0.075
SARRIO_EPITHELIAL_MESENCHYMAL_TRANSITION_UP	133	-0.38	-1.59	0.006	0.075
EIF4E_UP	60	-0.43	-1.59	0.009	0.076
CHIANG_LIVER_CANCER_SUBCLASS_UNANNOTATED_UP	33	-0.49	-1.59	0.018	0.076
KRAS.BREAST_UP.V1_UP	30	-0.50	-1.59	0.018	0.076
GSE25087_FETAL_VS_ADULT_TCONV_UP	129	-0.37	-1.59	0.011	0.076
HESS_TARGETS_OF_HOXA9_AND_MEIS1_UP	50	-0.44	-1.59	0.008	0.076
LEE_METASTASIS_AND_RNA_PROCESSING_UP	16	-0.57	-1.59	0.021	0.076
GAURNIER_PSMD4_TARGETS	19	-0.55	-1.59	0.031	0.076
GSE13484_12H_UNSTIM_VS_YF17D_VACCINE_STIM_PBMC_DN	107	-0.38	-1.59	0.004	0.076
PDGF_UP.V1_UP	101	-0.39	-1.59	0.006	0.076
PENG_GLUCOSE_DEPRIVATION_UP	30	-0.50	-1.59	0.027	0.077
WU_CELL_MIGRATION	91	-0.39	-1.59	0.000	0.077
WONG_EMBRYONIC_STEM_CELL_CORE	297	-0.34	-1.59	0.000	0.078
RORIE_TARGETS_OF_EWSR1_FLI1_FUSION_DN	15	-0.59	-1.59	0.041	0.078
VERHAAK_AML_WITH_NPM1_MUTATED_UP	84	-0.40	-1.59	0.010	0.078
MEK_UP.V1_UP	117	-0.38	-1.58	0.004	0.078
PROTEIN_FOLDING	46	-0.46	-1.58	0.015	0.078
HECKER_IFNB1_TARGETS	41	-0.46	-1.58	0.028	0.078
PHONG_TNF_RESPONSE_VIA_P38_COMPLETE	164	-0.36	-1.58	0.002	0.078
HOXA9_DN.V1_DN	135	-0.37	-1.58	0.002	0.078
GSE17721_LPS_VS_CPG_1H_BMDM_UP	137	-0.37	-1.58	0.000	0.078
PODAR_RESPONSE_TO_ADAPHOSTIN_DN	15	-0.60	-1.58	0.033	0.078
LU_IL4_SIGNALING	53	-0.44	-1.58	0.015	0.078
WNT_UP.V1_DN	72	-0.40	-1.58	0.014	0.078
GSE20715_0H_VS_48H_OZONE_LUNG_DN	146	-0.36	-1.58	0.004	0.079
GSE18791_UNSTIM_VS_NEWCATSLE_VIRUS_DC_10H_UP	143	-0.37	-1.58	0.004	0.079
BAKKER_FOXO3_TARGETS_DN	117	-0.38	-1.58	0.004	0.079
BIOCARTA_BAD_PATHWAY	17	-0.56	-1.58	0.031	0.079
GENTILE_UV_RESPONSE_CLUSTER_D4	47	-0.44	-1.58	0.021	0.079
BROWNE_HCMV_INFECTION_12HR_UP	65	-0.42	-1.58	0.013	0.079
GSE17721_LPS_VS_GARDIQUIMOD_8H_BMDM_DN	130	-0.37	-1.58	0.000	0.079
LAU_APOPTOSIS_CDKN2A_UP	44	-0.45	-1.58	0.009	0.079
APRELIKOVA_BRCA1_TARGETS	37	-0.47	-1.58	0.024	0.079
IKEDA_MIR30_TARGETS_UP	90	-0.39	-1.58	0.006	0.079
GSE7460_WT_VS_FOXP3_HET_ACT_TCONV_DN	125	-0.37	-1.58	0.000	0.080

GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_4H_UP	134	-0.36	-1.58	0.003	0.080
REACTOME_ACTIVATION_OF_GENES_BY_ATF4	19	-0.54	-1.58	0.033	0.080
MARTINEZ_RESPONSE_TO_TRABECTEDIN_DN	220	-0.34	-1.58	0.000	0.080
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_HSC_DN	77	-0.41	-1.58	0.007	0.080
LEE_LIVER_CANCER_MYC_TGFA_DN	24	-0.51	-1.58	0.022	0.080
SMIRNOV_RESPONSE_TO_IR_2HR_UP	30	-0.49	-1.58	0.026	0.080
PID_MYC_ACTIVPATHWAY	61	-0.42	-1.58	0.009	0.080
TAKAO_RESPONSE_TO_UVB_RADIATION_DN	80	-0.40	-1.58	0.004	0.080
GSE13493_DP_VS_CD4INTCD8POS_THYMOCYTE_DN	127	-0.37	-1.57	0.002	0.081
VANHARANTA_UTERINE_FIBROID_WITH_7Q_DELETION_UP	57	-0.43	-1.57	0.014	0.081
GSE17721_POLYIC_VS_CPG_6H_BMDM_DN	127	-0.37	-1.57	0.000	0.082
GSE31082_DN_VS_DP_THYMOCYTE_UP	156	-0.36	-1.57	0.002	0.082
SMID_BREAST_CANCER_BASAL_UP	332	-0.33	-1.57	0.002	0.082
GSE360_L_DONOVANI_VS_M_TUBERCULOSIS_DC_DN	109	-0.38	-1.57	0.009	0.082
TSENG_ADIPOGENIC_POTENTIAL_UP	18	-0.54	-1.57	0.045	0.083
GOLDRATH_NAIVE_VS_MEMORY_CD8_TCELL_UP	144	-0.36	-1.57	0.002	0.083
CROMER_METASTASIS_DN	46	-0.45	-1.57	0.023	0.083
BERNARD_PPAPDC1B_TARGETS_DN	36	-0.46	-1.57	0.014	0.083
AMIT_EGF_RESPONSE_480_HELA	118	-0.37	-1.57	0.004	0.083
GSE30083_SP1_VS_SP4_THYMOCYTE_UP	122	-0.37	-1.57	0.004	0.083
HESS_TARGETS_OF_HOXA9_AND_MEIS1_DN	35	-0.48	-1.57	0.023	0.083
GSE7460_TREG_VS_TCONV_ACT_UP	108	-0.38	-1.57	0.002	0.083
GSE9650_GP33_VS_GP276_LCMV_SPECIFIC_EXHAUSTED_CD8_TCELL_DN	159	-0.36	-1.57	0.000	0.083
GSE2197_IMMUNOSUPPRESSIVE_DNA_VS_UNTREATED_IN_DC_UP	118	-0.38	-1.57	0.009	0.084
GSE3982_CTRL_VS_IGE_STIM_MAST_CELL_DN	123	-0.37	-1.57	0.005	0.083
MODY_HIPPOCAMPUS_NEONATAL	27	-0.51	-1.57	0.038	0.084
GSE1460_CD4_THYMOCYTE_VS_NAIVE_CD4_TCELL_CORD_BLOOD_UP	165	-0.36	-1.57	0.000	0.084
SAGIV_CD24_TARGETS_DN	22	-0.53	-1.57	0.031	0.084
KIM_MYCN_AMPLIFICATION_TARGETS_UP	43	-0.45	-1.57	0.010	0.084
GSE20366_CD103_KLRG1_DP_VS_DN_TREG_UP	107	-0.38	-1.57	0.004	0.084
NGUYEN_NOTCH1_TARGETS_DN	65	-0.41	-1.57	0.015	0.084
CHARAFE_BREAST_CANCER_LUMINAL_VS_MESENCHYMAL_DN	312	-0.33	-1.56	0.000	0.084
OHGUCHI_LIVER_HNF4A_TARGETS_DN	39	-0.46	-1.56	0.027	0.084
PKCA_DN.V1_DN	75	-0.41	-1.56	0.007	0.085
REACTOME_ASSOCIATION_OF_TRIC_CCT_WITH_TARGET_PROTEINS_DURING_BIOSYNTHESIS	22	-0.52	-1.56	0.033	0.085
ENGELMANN_CANCER_PROGENITORS_UP	31	-0.48	-1.56	0.022	0.085
STANELLE_E2F1_TARGETS	19	-0.54	-1.56	0.030	0.085
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_24H_CD4_TCELL_DN	153	-0.36	-1.56	0.000	0.085
PENG_GLUCOSE_DEPRIVATION_DN	120	-0.37	-1.56	0.004	0.085
GSE39820_CTRL_VS_IL1B_IL6_CD4_TCELL_UP	124	-0.37	-1.56	0.004	0.086
CHARAFE_BREAST_CANCER_LUMINAL_VS_BASAL_DN	281	-0.33	-1.56	0.000	0.088
GSE1460_INTRATHYMIC_T_PROGENITOR_VS_THYMIC_STROMAL_CELL_DN	134	-0.37	-1.56	0.007	0.088
GSE17721_CTRL_VS_PAM3CSK4_12H_BMDM_DN	125	-0.37	-1.56	0.004	0.089
REACTOME_PROCESSING_OF_CAPPED_INTRON_CONTAINING_PRE_MRNA	124	-0.37	-1.56	0.002	0.088

DOANE_BREAST_CANCER_ESR1_UP	35	-0.47	-1.56	0.035	0.088
ORGANELLE_LUMEN	352	-0.32	-1.56	0.000	0.088
WAMUNYOKOLI_OVARIAN_CANCER_GRADES_1_2_UP	90	-0.39	-1.56	0.009	0.088
MEMBRANE_ENCLOSED_LUMEN	352	-0.32	-1.55	0.000	0.089
MORI_SMALL_PRE_BII_LYMPHOCYTE_DN	58	-0.42	-1.55	0.024	0.088
BIOCARTA_MITOCHONDRIA_PATHWAY	17	-0.55	-1.55	0.047	0.089
GSE9037_CTRL_VS_LPS_4H_STIM_IRAK4_KO_BMDM_DN	124	-0.37	-1.55	0.002	0.090
DOUGLAS_BMI1_TARGETS_UP	377	-0.32	-1.55	0.000	0.090
SWEET_LUNG_CANCER_KRAS_UP	315	-0.32	-1.55	0.000	0.091
TARTE_PLASMA_CELL_VS_B_LYMPHOCYTE_DN	22	-0.52	-1.55	0.035	0.091
BROWNE_HCMV_INFECTION_2HR_DN	30	-0.48	-1.55	0.040	0.091
FRIDMAN_SENESCENCE_UP	54	-0.43	-1.55	0.017	0.091
AZARE_STAT3_TARGETS	17	-0.56	-1.55	0.045	0.091
BROWNE_INTERFERON_RESPONSIVE_GENES	45	-0.44	-1.55	0.015	0.091
ZWANG_TRANSIENTLY_UP_BY_2ND_EGF_PULSE_ONLY	334	-0.33	-1.55	0.000	0.092
GSE29618_BCELL_VS_PDC_UP	108	-0.38	-1.55	0.008	0.092
XU_HGF_SIGNALING_NOT_VIA_AKT1_6HR	19	-0.54	-1.55	0.049	0.092
RELA_DN.V1_DN	26	-0.50	-1.55	0.031	0.092
GSE20366_TREG_VS_NAIVE_CD4_TCELL_HOMEOSTATIC_CONVERSION_UP	114	-0.37	-1.55	0.007	0.092
GSE2706_LPS_VS_R848_AND_LPS_2H_STIM_DC_DN	35	-0.47	-1.55	0.041	0.092
GSE22886_NEUTROPHIL_VS_MONOCYTE_UP	53	-0.43	-1.54	0.014	0.093
GSE15324_ELF4_KO_VS_WT_NAIVE_CD8_TCELL_DN	67	-0.41	-1.54	0.006	0.093
REACTOME_TRIGLYCERIDE_BIOSYNTHESIS	24	-0.50	-1.54	0.030	0.093
SCHAEFFER_PROSTATE_DEVELOPMENT_12HR_UP	61	-0.41	-1.54	0.015	0.093
NUCLEAR_LUMEN	293	-0.33	-1.54	0.000	0.093
GENTILE_UV_LOW_DOSE_UP	19	-0.53	-1.54	0.046	0.093
RHODES_CANCER_META_SIGNATURE	59	-0.42	-1.54	0.023	0.093
SENESE_HDAC3_TARGETS_UP	307	-0.33	-1.54	0.000	0.093
GSE7460_CTRL_VS_TGFB_TREATED_ACT_TREG_UP	135	-0.36	-1.54	0.004	0.094
TERAO_AOX4_TARGETS_SKIN_UP	26	-0.49	-1.54	0.037	0.093
BIOCARTA_BCR_PATHWAY	23	-0.51	-1.54	0.040	0.094
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_16H_UP	150	-0.36	-1.54	0.002	0.093
PEDERSEN_TARGETS_OF_611CTF_ISOFORM_OF_ERBB2	40	-0.45	-1.54	0.035	0.093
REGULATION_OF_KINASE_ACTIVITY	98	-0.37	-1.54	0.010	0.094
PROTEIN_AMINO_ACID_DEPHOSPHORYLATION	29	-0.48	-1.54	0.033	0.094
GSE17721_ALL_VS_24H_PAM3CSK4_BMDM_UP	113	-0.37	-1.54	0.002	0.094
PHOSPHOPROTEIN_PHOSPHATASE_ACTIVITY	43	-0.44	-1.54	0.026	0.094
MITOCHONDRIAL_OUTER_MEMBRANE	16	-0.56	-1.54	0.045	0.094
GSE9037_CTRL_VS_LPS_4H_STIM_BMDM_DN	122	-0.37	-1.54	0.002	0.094
GSE8678_IL7R_LOW_VS_HIGH_EFF_CD8_TCELL_DN	125	-0.36	-1.54	0.005	0.094
HARRIS_HYPOXIA	51	-0.43	-1.54	0.009	0.095
ENK_UV_RESPONSE_EPIDERMIS_DN	327	-0.32	-1.54	0.002	0.095
PHOSPHORIC_MONOESTER_HYDROLASE_ACTIVITY	63	-0.41	-1.54	0.016	0.095
GSE339_CD4POS_VS_CD8POS_DC_DN	140	-0.35	-1.54	0.002	0.095
REACTOME_MRNA_PROCESSING	138	-0.36	-1.54	0.005	0.095
KEGG_SELENOAMINO_ACID_METABOLISM	19	-0.52	-1.54	0.043	0.096
POTTI_ETOPOSIDE_SENSITIVITY	16	-0.55	-1.54	0.052	0.096
GSE13485_DAY1_VS_DAY7_YF17D_VACCINE_PBMC_DN	131	-0.36	-1.54	0.005	0.096
SANA_RESPONSE_TO_IFNG_DN	62	-0.41	-1.54	0.012	0.096
GSE17721_POLYIC_VS_CPG_4H_BMDM_DN	111	-0.37	-1.53	0.004	0.096
GSE32423_MEMORY_VS_NAIVE_CD8_TCELL_IL7_DN	141	-0.35	-1.53	0.004	0.096
QI_HYPOXIA_TARGETS_OF_HIF1A_AND_FOXA2	29	-0.49	-1.53	0.034	0.096

UDP_GLYCOSYLTRANSFERASE_ACTIVITY	19	-0.53	-1.53	0.038	0.097
DAWSON_METHYLATED_IN_LYMPHOMA_TCL1	21	-0.52	-1.53	0.039	0.097
GSE24634_IL4_VS_CTRL_TREATED_NAIVE_CD4_TCELL_DAY10 _DN	141	-0.36	-1.53	0.006	0.097
BROWNE_HCMV_INFECTION_16HR_UP	152	-0.35	-1.53	0.005	0.097
ROY_WOUND_BLOOD_VESSEL_UP	36	-0.46	-1.53	0.029	0.098
TSAI_RESPONSE_TO_RADIATION_THERAPY	22	-0.51	-1.53	0.043	0.099
STOSSI_RESPONSE_TO_ESTRADIOL	18	-0.53	-1.53	0.042	0.099
REGULATION_OF_PROTEIN_KINASE_ACTIVITY	96	-0.38	-1.53	0.011	0.099
GSE13484_UNSTIM_VS_YF17D_VACCINE_STIM_PBMC_DN	109	-0.37	-1.53	0.004	0.099
LIU_SMARCA4_TARGETS	32	-0.47	-1.53	0.039	0.100
NUNODA_RESPONSE_TO_DASATINIB_IMATINIB_UP	27	-0.49	-1.53	0.052	0.100
GRAHAM_CML_QUIESCENT_VS_NORMAL_QUIESCENT_DN	21	-0.51	-1.53	0.025	0.100
GSE11864_UNTREATED_VS_CSF1_PAM3CYS_IN_MAC_DN	117	-0.36	-1.53	0.004	0.100
OXFORD_RALA_OR_RALB_TARGETS_UP	44	-0.43	-1.53	0.020	0.100

Supplemental Table 5: Gene sets enriched in downregulated genes in A375 cells treated with vemurafenib

NAME	SIZE	ES	NES	NOM p-val	FDR q-val
CUSTOM_A375_siCOP1_UP_IN_VEMU	97	-0.87	-2.97	0.000	0.000
BILD_HRAS_ONCOGENIC_SIGNATURE	181	-0.77	-2.84	0.000	0.000
KIM_WT1_TARGETS_UP	163	-0.77	-2.80	0.000	0.000
NAGASHIMA_NRG1_SIGNALING_UP	139	-0.78	-2.78	0.000	0.000
ZWANG_CLASS_3_TRANSIENTLY_INDUCED_BY_EGF	157	-0.76	-2.74	0.000	0.000
WINZEN_DEGRADED_VIA_KHSRP	54	-0.88	-2.72	0.000	0.000
PLASARI_TGFB1_TARGETS_10HR_UP	113	-0.77	-2.71	0.000	0.000
NAGASHIMA_EGF_SIGNALING_UP	49	-0.87	-2.67	0.000	0.000
MARZEC_IL2_SIGNALING_UP	77	-0.81	-2.66	0.000	0.000
GHANDHI_DIRECT_IRRADIATION_UP	58	-0.84	-2.64	0.000	0.000
AMIT_EGF_RESPONSE_120_HELA	58	-0.83	-2.64	0.000	0.000
OSWALD_HEMATOPOIETIC_STEM_CELL_IN_COLLAGEN_GEL_UP	153	-0.73	-2.64	0.000	0.000
CUSTOM_PRATALIS MAPK	43	-0.87	-2.61	0.000	0.000
KEGG_CYTOKINE_CYTOKINE_RECEPTOR_INTERACTION	68	-0.79	-2.60	0.000	0.000
GSE9988_LOW_LPS_VS_CTRL_TREATED_MONOCYTE_UP	110	-0.75	-2.59	0.000	0.000
ZWANG_CLASS_1_TRANSIENTLY_INDUCED_BY_EGF	324	-0.66	-2.57	0.000	0.000
GSE14769_UNSTIM_VS_40MIN_LPS_BMDM_DN	145	-0.71	-2.55	0.000	0.000
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_1	28	-0.93	-2.55	0.000	0.000
AMIT_EGF_RESPONSE_120_MCF10A	37	-0.88	-2.55	0.000	0.000
SENESE_HDAC1_AND_HDAC2_TARGETS_UP	157	-0.70	-2.54	0.000	0.000
GSE9988_ANTI_TREM1_VS_CTRL_TREATED_MONOCYTES_UP	139	-0.71	-2.54	0.000	0.000
GSE9988_LOW_LPS_VS_VEHICLE_TREATED_MONOCYTE_UP	109	-0.73	-2.53	0.000	0.000
GROSS_HYPOXIA_VIA_ELK3_AND_HIF1A_UP	116	-0.72	-2.53	0.000	0.000
GSE9988_ANTI_TREM1_AND_LPS_VS_CTRL_TREATED_MONOCYTES_UP	126	-0.72	-2.53	0.000	0.000
STK33_NOMO_UP	181	-0.69	-2.52	0.000	0.000
STK33_UP	170	-0.69	-2.52	0.000	0.000
GSE14769_UNSTIM_VS_60MIN_LPS_BMDM_DN	148	-0.71	-2.52	0.000	0.000
SEKI_INFLAMMATORY_RESPONSE_LPS_UP	46	-0.81	-2.51	0.000	0.000
GROSS_HYPOXIA_VIA_ELK3_DN	117	-0.72	-2.51	0.000	0.000
GSE9988_LPS_VS_VEHICLE_TREATED_MONOCYTE_UP	107	-0.72	-2.51	0.000	0.000
IL2_UP.V1_UP	101	-0.73	-2.50	0.000	0.000
GALINDO_IMMUNE_RESPONSE_TO_ENTEROTOXIN	61	-0.78	-2.50	0.000	0.000
ZHANG_RESPONSE_TO_IKK_INHIBITOR_AND_TNF_UP	145	-0.70	-2.50	0.000	0.000
GHANDHI_BYSTANDER_IRRADIATION_UP	43	-0.83	-2.50	0.000	0.000
KRAS.600_UP.V1_UP	88	-0.74	-2.49	0.000	0.000
GSE9988_ANTI_TREM1_AND_LPS_VS_VEHICLE_TREATED_MONOCYTES_UP	113	-0.72	-2.49	0.000	0.000
GSE9988_ANTI_TREM1_VS_LPS_MONOCYTE_DN	113	-0.72	-2.49	0.000	0.000
PHONG_TNF_TARGETS_UP	49	-0.83	-2.48	0.000	0.000
AMIT_EGF_RESPONSE_240_HELA	56	-0.79	-2.48	0.000	0.000
GSE9988_ANTI_TREM1_VS_ANTI_TREM1_AND_LPS_MONOCYTE_DN	103	-0.72	-2.48	0.000	0.000
ZHOU_INFLAMMATORY_RESPONSE_LIVE_UP	237	-0.64	-2.45	0.000	0.000
GSE9988_ANTI_TREM1_VS_LOW_LPS_MONOCYTE_DN	110	-0.69	-2.45	0.000	0.000
PHONG_TNF_RESPONSE_VIA_P38_PARTIAL	132	-0.69	-2.45	0.000	0.000
GROSS_HYPOXIA_VIA_HIF1A_DN	78	-0.74	-2.45	0.000	0.000
GSE2706_UNSTIM_VS_2H_R848_DC_DN	109	-0.71	-2.44	0.000	0.000
ONDER_CDH1_TARGETS_1_DN	116	-0.69	-2.44	0.000	0.000

SMIRNOV_CIRCULATING_ENDOTHELIOCYTES_IN_CANCER_UP	97	-0.72	-2.44	0.000	0.000
KEGG_JAK_STAT_SIGNALING_PATHWAY	67	-0.75	-2.43	0.000	0.000
GSE9988_LPS_VS_CTRL_TREATED_MONOCYTE_UP	109	-0.71	-2.43	0.000	0.000
GSE14769_UNSTIM_VS_80MIN_LPS_BMDM_DN	136	-0.69	-2.43	0.000	0.000
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_TURQUOISE_UP	62	-0.76	-2.42	0.000	0.000
SENESE_HDAC1_TARGETS_UP	357	-0.62	-2.42	0.000	0.000
IL15_UP.V1_UP	108	-0.70	-2.41	0.000	0.000
CUSTOM_G882_siCOP1_UP_IN_PD901	83	-0.72	-2.41	0.000	0.000
CSR_EARLY_UP.V1_UP	136	-0.67	-2.40	0.000	0.000
CELL_CELL_SIGNALING	105	-0.70	-2.39	0.000	0.000
MEL18_DN.V1_UP	96	-0.69	-2.39	0.000	0.000
BMI1_DN_MEL18_DN.V1_UP	96	-0.70	-2.39	0.000	0.000
EGFR_UP.V1_UP	137	-0.67	-2.39	0.000	0.000
ONDER_CDH1_TARGETS_2_DN	223	-0.63	-2.39	0.000	0.000
MCLACHLAN_DENTAL_CARIES_UP	98	-0.70	-2.38	0.000	0.000
BURTON_ADIPOGENESIS_PEAK_AT_2HR	43	-0.79	-2.38	0.000	0.000
ZWANG_CLASS_2_TRANSIENTLY_INDUCED_BY_EGF	33	-0.85	-2.38	0.000	0.000
KRAS.600.LUNG.BREAST_UP.V1_UP	85	-0.70	-2.37	0.000	0.000
ONDER_CDH1_TARGETS_3_DN	19	-0.93	-2.37	0.000	0.000
DIRMEIER_LMP1_RESPONSE_EARLY	45	-0.78	-2.37	0.000	0.000
GSE9988_ANTI_TREM1_VS_VEHICLE_TREATED_MONOCYTES_UP	127	-0.66	-2.36	0.000	0.000
STK33_SKM_UP	152	-0.65	-2.36	0.000	0.000
AMIT_EGF_RESPONSE_60_HELA	40	-0.79	-2.35	0.000	0.000
AMIT_SERUM_RESPONSE_240_MCF10A	40	-0.79	-2.34	0.000	0.000
AMIT_EGF_RESPONSE_40_HELA	36	-0.81	-2.34	0.000	0.000
PRAMOONJAGO_SOX4_TARGETS_UP	45	-0.78	-2.34	0.000	0.000
AMIT_EGF_RESPONSE_60_MCF10A	29	-0.85	-2.34	0.000	0.000
DORN_ADENOVIRUS_INFECTION_48HR_DN	35	-0.80	-2.34	0.000	0.000
LEE_NEURAL_CREST_STEM_CELL_DN	58	-0.74	-2.34	0.000	0.000
VERHAAK_AML_WITH_NPM1_MUTATED_UP	88	-0.69	-2.34	0.000	0.000
GSE17721_POLYIC_VS_PAM3CSK4_1H_BMDM_DN	124	-0.66	-2.33	0.000	0.000
MIYAGAWA_TARGETS_OF_EWSR1_ETS_FUSIONS_DN	135	-0.65	-2.33	0.000	0.000
GSE29617_CTRL_VS_TIV_FLU_VACCINE_PBMC_2008_UP	108	-0.67	-2.33	0.000	0.000
DAVICIONI_TARGETS_OF_PAX_FOXO1_FUSIONS_DN	31	-0.83	-2.33	0.000	0.000
GSE9006_HEALTHY_VS_TYPE_1_DIABETES_PBMC_AT_DX_DN	114	-0.66	-2.32	0.000	0.000
FOSTER_TOLERANT_MACROPHAGE_DN	291	-0.61	-2.32	0.000	0.000
HINATA_NFKB_TARGETS_FIBROBLAST_UP	60	-0.72	-2.32	0.000	0.000
SCHOEN_NFKB_SIGNALING	26	-0.86	-2.32	0.000	0.000
TGFB_UP.V1_UP	111	-0.68	-2.31	0.000	0.000
BASAKI_YBX1_TARGETS_DN	259	-0.61	-2.31	0.000	0.000
HIRSCH_CELLULAR_TRANSFORMATION_SIGNATURE_UP	206	-0.62	-2.31	0.000	0.000
BERENJENO_TRANSFORMED_BY_RHOA_FOREVER_DN	21	-0.88	-2.31	0.000	0.000
GSE29617_CTRL_VS_DAY7_TIV_FLU_VACCINE_PBMC_2008_UP	118	-0.66	-2.30	0.000	0.000
THEILGAARD_NEUTROPHIL_AT_SKIN_WOUND_UP	57	-0.73	-2.30	0.000	0.000
AMIT_SERUM_RESPONSE_60_MCF10A	44	-0.77	-2.30	0.000	0.000
MCLACHLAN_DENTAL_CARIES_DN	100	-0.67	-2.30	0.000	0.000
UZONYI_RESPONSE_TO_LEUKOTRIENE_AND_THROMBIN	26	-0.85	-2.30	0.000	0.000
GSE8515_IL1_VS_IL6_4H_STIM_)MAC_UP	126	-0.65	-2.30	0.000	0.000

NEGATIVE_REGULATION_OF_PROGRAMMED_CELL_DEATH	116	-0.65	-2.30	0.000	0.000
SENESE_HDAC3_TARGETS_UP	386	-0.59	-2.30	0.000	0.000
COULOUARN_TEMPORAL_TGFB1_SIGNATURE_UP	86	-0.68	-2.30	0.000	0.000
DORN_ADENOVIRUS_INFECTION_32HR_DN	36	-0.80	-2.29	0.000	0.000
SARTIPY_NORMAL_AT_INSULIN_RESISTANCE_UP	29	-0.84	-2.29	0.000	0.000
KOBAYASHI_EGFR_SIGNALING_6HR_DN	16	-0.93	-2.29	0.000	0.000
PLASARI_TGFB1_TARGETS_1HR_UP	24	-0.85	-2.29	0.000	0.000
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLUE_UP	106	-0.67	-2.28	0.000	0.000
DORN_ADENOVIRUS_INFECTION_24HR_DN	38	-0.78	-2.28	0.000	0.000
HAHTOLA_MYCOSIS_FUNGOIDES_CD4_UP	42	-0.76	-2.27	0.000	0.000
DELPUECH_FOXO3_TARGETS_UP	53	-0.74	-2.27	0.000	0.000
GSE2706_R848_VS_R848_AND_LPS_2H_STIM_DC_DN	86	-0.67	-2.27	0.000	0.000
CHARAFE_BREAST_CANCER_LUMINAL_VS_BASAL_DN	339	-0.58	-2.27	0.000	0.000
CHEN_HOXA5_TARGETS_9HR_UP	179	-0.62	-2.27	0.000	0.000
REGULATION_OF_MAP_KINASE_ACTIVITY	38	-0.78	-2.27	0.000	0.000
AMIT_SERUM_RESPONSE_40_MCF10A	26	-0.84	-2.27	0.000	0.000
BOQUEST_STEM_CELL_CULTURED_VS_FRESH_UP	248	-0.59	-2.26	0.000	0.000
HINATA_NFKB_TARGETS_KERATINOCYTE_UP	57	-0.72	-2.26	0.000	0.000
NEGATIVE_REGULATION_OF_APOPTOSIS	115	-0.64	-2.25	0.000	0.000
JACKSON_DNMT1_TARGETS_UP	64	-0.70	-2.25	0.000	0.000
MARSON_FOXP3_TARGETS_DN	31	-0.79	-2.25	0.000	0.000
GSE2706_LPS_VS_R848_AND_LPS_8H_STIM_DC_DN	88	-0.67	-2.25	0.000	0.000
RPS14_DN.V1_UP	77	-0.67	-2.25	0.000	0.000
MAHAJAN_RESPONSE_TO_IL1A_UP	43	-0.75	-2.25	0.000	0.000
GSE22886_DAY0_VS_DAY1_MONOCYTE_IN_CULTURE_DN	148	-0.62	-2.24	0.000	0.000
BASSO_CD40_SIGNALING_UP	64	-0.69	-2.24	0.000	0.000
KIM_WT1_TARGETS_8HR_UP	131	-0.62	-2.23	0.000	0.000
BROWNE_HCMV_INFECTION_2HR_DN	35	-0.78	-2.23	0.000	0.000
BMI1_DN.V1_UP	94	-0.67	-2.23	0.000	0.000
ZHOU_INFLAMMATORY_RESPONSE_FIMA_UP	233	-0.59	-2.23	0.000	0.000
CROONQUIST_STROMAL_STIMULATION_UP	36	-0.78	-2.22	0.000	0.000
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_6H_ACT_CD4_TCELL_DN	107	-0.65	-2.22	0.000	0.000
GSE3982_MEMORY_CD4_TCELL_VS_TH1_DN	171	-0.61	-2.22	0.000	0.000
GSE29618_MONOCYTE_VS_MDC_UP	113	-0.64	-2.22	0.000	0.000
WANG_METHYLATED_IN_BREAST_CANCER	33	-0.79	-2.22	0.000	0.000
KRAS.LUNG.BREAST_UP.V1_UP	45	-0.75	-2.22	0.000	0.000
DURAND_STROMA_MAX_DN	84	-0.66	-2.22	0.000	0.000
ENK_UV_RESPONSE_EPIDERMIS_DN	367	-0.56	-2.21	0.000	0.000
GRAHAM_NORMAL_QUIESCENT_VS_NORMAL_DIVIDING_UP	39	-0.75	-2.21	0.000	0.000
GSE17974_0H_VS_24H_IN_VITRO_ACT_CD4_TCELL_UP	96	-0.65	-2.20	0.000	0.000
POSITIVE_REGULATION_OF_CELL_PROLIFERATION	73	-0.68	-2.20	0.000	0.000
LUI_THYROID_CANCER_CLUSTER_1	42	-0.73	-2.20	0.000	0.000
KRAS.BREAST_UP.V1_UP	38	-0.76	-2.20	0.000	0.000
TIAN_TNF_SIGNALING_VIA_NFKB	19	-0.85	-2.19	0.000	0.000
CUSTOM_A375_ETV1SH2_DN	152	-0.60	-2.19	0.000	0.000
NEGATIVE_REGULATION_OF_DEVELOPMENTAL_PROCESS	139	-0.61	-2.19	0.000	0.000
GSE8515_CTRL_VS_IL1_4H_STIM_MAC_DN	127	-0.62	-2.19	0.000	0.000
DELACROIX_RAR_TARGETS_UP	31	-0.78	-2.19	0.000	0.000

GSE17974_0H_VS_0.5H_IN_VITRO_ACT_CD4_TCELL_DN	98	-0.64	-2.19	0.000	0.000
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_GREEN_UP	21	-0.85	-2.19	0.000	0.000
DUTERTRE_ESTRADIOL_RESPONSE_24HR_DN	354	-0.56	-2.19	0.000	0.000
SMIRNOV_RESPONSE_TO_IR_6HR_DN	77	-0.65	-2.19	0.000	0.000
ANTI_APOPTOSIS	93	-0.64	-2.19	0.000	0.000
DAZARD_RESPONSE_TO_UV_NHEK_UP	165	-0.60	-2.19	0.000	0.000
CUSTOM_G48_siETV1_DN	165	-0.61	-2.18	0.000	0.000
LABBE_TARGETS_OF_TGFB1_AND_WNT3A_UP	65	-0.67	-2.18	0.000	0.000
BERENJENO_TRANSFORMED_BY_RHOA_REVERSIBLY_DN	20	-0.85	-2.18	0.000	0.000
GSE20715_0H_VS_24H_OZONE_TLR4_KO_LUNG_DN	131	-0.62	-2.18	0.000	0.000
SATO_SILENCED_BY_METHYLATION_IN_PANCREATIC_CANCER_1	201	-0.58	-2.18	0.000	0.000
KRAS.300_UP.V1_UP	48	-0.72	-2.18	0.000	0.000
TIAN_TNF_SIGNALING_NOT_VIA_NFKB	20	-0.85	-2.17	0.002	0.000
GSE17721_LPS_VS_POLYIC_1H_BMDM_UP	125	-0.62	-2.17	0.000	0.000
GSE2706_UNSTIM_VS_2H_LPS_AND_R848_DC_DN	102	-0.64	-2.17	0.000	0.000
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_12H_CD4_TCELL_UP	115	-0.62	-2.16	0.000	0.000
GSE17974_2H_VS_72H_UNTREATED_IN_VITRO_CD4_TCELL_UP	144	-0.60	-2.16	0.000	0.000
GSE17974_0H_VS_1H_IN_VITRO_ACT_CD4_TCELL_DN	133	-0.61	-2.16	0.000	0.000
RIGGI_EWING_SARCOMA_PROGENITOR_UP	178	-0.59	-2.16	0.000	0.000
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_0.5H_CD4_TCELL_DN	113	-0.61	-2.16	0.000	0.000
BROCKE_APOPTOSIS_REVERSED_BY_IL6	112	-0.62	-2.16	0.000	0.000
GSE8384_CTRL_VS_B_ABORTUS_4H_MAC_CELL_LINE_DN	153	-0.59	-2.15	0.000	0.000
RELA_DN.V1_UP	66	-0.67	-2.15	0.000	0.000
SMIRNOV_RESPONSE_TO_IR_2HR_UP	44	-0.71	-2.15	0.000	0.000
GSE22886_DAY1_VS_DAY7_MONOCYTE_IN_CULTURE_UP	132	-0.60	-2.15	0.000	0.000
GSE29618_MONOCYTE_VS_MDC_DAY7_FLU_VACCINE_UP	125	-0.61	-2.15	0.000	0.000
GESERICK_TERT_TARGETS_DN	17	-0.86	-2.14	0.000	0.000
GSE29618_BCELL_VS_PDC_UP	121	-0.61	-2.14	0.000	0.000
GRAHAM_CML_DIVIDING_VS_NORMAL_QUIESCENT_DN	47	-0.73	-2.14	0.000	0.000
CHARAFE_BREAST_CANCER_LUMINAL_VS_MESENCHYMAL_DN	373	-0.55	-2.14	0.000	0.000
HOEGERKORP_CD44_TARGETS_DIRECT_UP	17	-0.87	-2.14	0.000	0.000
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_6HR_DN	23	-0.81	-2.14	0.000	0.000
HUPER_BREAST_BASAL_VS_LUMINAL_UP	21	-0.86	-2.14	0.000	0.000
JEPSEN_SMRT_TARGETS	24	-0.79	-2.14	0.000	0.000
MCDOWELL_ACUTE_LUNG_INJURY_UP	33	-0.75	-2.14	0.000	0.000
GSE17721_CTRL_VS_GARDIQUIMOD_1H_BMDM_DN	122	-0.61	-2.13	0.000	0.000
PIONTEK_PKD1_TARGETS_UP	21	-0.82	-2.13	0.000	0.000
GSE2706_UNSTIM_VS_2H_LPS_DC_DN	103	-0.62	-2.13	0.000	0.000
LIN_NPAS4_TARGETS_DN	32	-0.75	-2.13	0.000	0.000
KUNINGER_IGF1_VS_PDGFB_TARGETS_DN	22	-0.80	-2.13	0.000	0.000
PASINI_SUZ12_TARGETS_DN	237	-0.56	-2.13	0.000	0.000

BOSCO_ALLERGEN_INDUCED_TH2_ASSOCIATED_MODULE	81	-0.64	-2.12	0.000	0.000
KIM_WT1_TARGETS_12HR_UP	107	-0.61	-2.12	0.000	0.000
GRAHAM_CML_QUIESCENT_VS_NORMAL_DIVIDING_UP	33	-0.74	-2.12	0.000	0.000
GSE24142_DN2_VS_DN3_THYMOCYTE_DN	130	-0.60	-2.12	0.000	0.000
BOQUEST_STEM_CELL_DN	105	-0.61	-2.12	0.000	0.000
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_ERYTHROCYTE_UP	97	-0.62	-2.12	0.000	0.000
KONDO_EZH2_TARGETS	131	-0.59	-2.12	0.000	0.000
MANALO_HYPOXIA_UP	131	-0.60	-2.12	0.000	0.000
DUTTA_APOPTOSIS_VIA_NFKB	24	-0.79	-2.12	0.000	0.000
CORRE_MULTIPLE_MYELOMA_UP	34	-0.75	-2.12	0.000	0.000
DAUER_STAT3_TARGETS_UP	38	-0.72	-2.12	0.000	0.000
GSE360_HIGH_DOSE_B_MALAYI_VS_M_TUBERCULOSIS_DC_DN	115	-0.61	-2.12	0.000	0.000
ELVIDGE_HYPOXIA_BY_DMOG_UP	104	-0.61	-2.12	0.000	0.000
GSE14769_UNSTIM_VS_20MIN_LPS_BMDM_DN	130	-0.59	-2.11	0.000	0.000
LINDSTEDT_DENDRITIC_CELL_MATURATION_A	36	-0.73	-2.11	0.000	0.000
GSE17721_LPS_VS_POLYIC_2H_BMDM_UP	127	-0.60	-2.11	0.000	0.000
GSE17974_0H_VS_72H_IN_VITRO_ACT_CD4_TCELL_UP	122	-0.60	-2.11	0.000	0.000
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED_IN_ERYTHROCYTE_UP	30	-0.76	-2.11	0.000	0.001
GSE1460_INTRATHYMIC_T_PROGENITOR_VS_DP_THYMOCYTE_DN	112	-0.61	-2.11	0.000	0.001
CROONQUIST_NRAS_VS_STROMAL_STIMULATION_UP	22	-0.80	-2.11	0.000	0.001
MANTOVANI_NFKB_TARGETS_UP	23	-0.81	-2.10	0.000	0.001
ELVIDGE_HYPOXIA_UP	131	-0.60	-2.10	0.000	0.001
SENESE_HDAC2_TARGETS_UP	92	-0.62	-2.10	0.000	0.001
GSE2706_UNSTIM_VS_8H_R848_DC_DN	108	-0.61	-2.10	0.000	0.001
RODRIGUES_NTN1_TARGETS_DN	93	-0.62	-2.10	0.000	0.001
GSE360_LOW_DOSE_B_MALAYI_VS_M_TUBERCULOSIS_DC_DN	131	-0.60	-2.10	0.000	0.001
DORN_ADENOVIRUS_INFECTION_12HR_UP	19	-0.82	-2.09	0.000	0.001
ALTEMEIER_RESPONSE_TO_LPS_WITH_MECHANICAL_VENTILATION	59	-0.66	-2.09	0.000	0.001
GSE17721_POLYIC_VS_CPG_2H_BMDM_DN	120	-0.60	-2.09	0.000	0.001
JAZAG_TGFB1_SIGNALING_VIA_SMAD4_DN	36	-0.72	-2.09	0.000	0.001
INGRAM_SHH_TARGETS_UP	75	-0.64	-2.09	0.000	0.001
FLECHNER_PBL_KIDNEY_TRANSPLANT_OK_VS_DONOR_DN	34	-0.72	-2.09	0.000	0.001
KHETCHOUMIAN_TRIM24_TARGETS_UP	27	-0.76	-2.09	0.000	0.001
EXTRACELLULAR_SPACE	70	-0.64	-2.09	0.000	0.001
LENAOUR_DENDRITIC_CELL_MATURATION_DN	71	-0.65	-2.09	0.000	0.001
DEPHOSPHORYLATION	49	-0.67	-2.09	0.000	0.001
KERLEY_RESPONSE_TO_CISPLATIN_UP	35	-0.72	-2.08	0.000	0.001
DEFENSE_RESPONSE	72	-0.65	-2.08	0.000	0.001
CHIANG_LIVER_CANCER_SUBCLASS_CTNNB1_DN	73	-0.63	-2.08	0.000	0.001
PROTEIN_AMINO_ACID_DEPHOSPHORYLATION	43	-0.70	-2.08	0.000	0.001
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_1H_CD4_TCELL_DN	128	-0.59	-2.08	0.000	0.001
RUTELLA_RESPONSE_TO_HGF_VS_CSF2RB_AND_IL4_UP	277	-0.54	-2.08	0.000	0.001
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_KRAS_UP	99	-0.61	-2.08	0.000	0.001

WIEDERSCHAIN_TARGETS_OF_BMI1_AND_PCGF2	42	-0.69	-2.08	0.000	0.001
GSE1460_INTRATHYMIC_T_PROGENITOR_VS_THYMIC_STRO MAL_CELL_DN	144	-0.59	-2.08	0.000	0.001
LANDIS_ERBB2_BREAST_TUMORS_324_UP	126	-0.60	-2.07	0.000	0.001
HOFMANN_MYELODYSPLASTIC_SYNDROM_LOW_RISK_DN	24	-0.79	-2.07	0.000	0.001
DASU_IL6_SIGNALING_UP	48	-0.68	-2.07	0.000	0.001
GSE17721_LPS_VS_PAM3CSK4_2H_BMDM_UP	128	-0.59	-2.07	0.000	0.001
GSE20715_0H_VS_24H_OZONE_LUNG_DN	127	-0.58	-2.07	0.000	0.001
MCMURRAY_TP53_HRAS_COOPERATION_RESPONSE_UP	20	-0.80	-2.07	0.000	0.001
PDGF_ERK_DN.V1_DN	112	-0.60	-2.07	0.000	0.001
WESTON_VEGFA_TARGETS_3HR	38	-0.71	-2.07	0.000	0.001
LINDGREN_BLADDER_CANCER_CLUSTER_2B	215	-0.55	-2.07	0.000	0.001
PHONG_TNF_RESPONSE_VIA_P38_COMPLETE	199	-0.56	-2.07	0.000	0.001
GSE17721_PAM3CSK4_VS_GADIQUIMOD_1H_BMDM_UP	106	-0.59	-2.07	0.000	0.001
MORI_IMMATURE_B_LYMPHOCYTE_UP	38	-0.70	-2.07	0.000	0.001
RUTELLA_RESPONSE_TO_CSF2RB_AND_IL4_DN	203	-0.56	-2.07	0.000	0.001
SESTO_RESPONSE_TO_UV_C5	45	-0.69	-2.07	0.000	0.001
ZHOU_INFLAMMATORY_RESPONSE_LPS_UP	172	-0.56	-2.07	0.000	0.001
GSE360_L_MAJOR_VS_B_MALAYI_LOW_DOSE_DC_UP	121	-0.59	-2.07	0.000	0.001
DELYS_THYROID_CANCER_UP	281	-0.54	-2.06	0.000	0.001
KEGG_PRION_DISEASES	22	-0.80	-2.06	0.000	0.001
GSE360_L_DONOVANI_VS_B_MALAYI_LOW_DOSE_DC_UP	116	-0.59	-2.06	0.000	0.001
BECKER_TAMOXIFEN_RESISTANCE_DN	33	-0.73	-2.06	0.000	0.001
BRUECKNER_TARGETS_OF_MIRLET7A3_UP	78	-0.62	-2.06	0.000	0.001
GSE7852_LN_VS_FAT_TCONV_DN	139	-0.58	-2.06	0.000	0.001
MOREAUX_B_LYMPHOCYTE_MATURATION_BY_TACI_UP	45	-0.67	-2.06	0.000	0.001
IZADPANAH_STEM_CELL_ADIPOSE_VS_BONE_UP	96	-0.60	-2.06	0.000	0.001
DAZARD_UV_RESPONSE_CLUSTER_G2	21	-0.81	-2.06	0.000	0.001
BROWNE_HCMV_INFECTION_30MIN_UP	27	-0.74	-2.06	0.002	0.001
AMIT_EGF_RESPONSE_480_HELA	138	-0.58	-2.06	0.000	0.001
GSE3982_EOSINOPHIL_VS_BCELL_UP	94	-0.60	-2.06	0.000	0.001
HESS_TARGETS_OF_HOXA9_AND_MEIS1_DN	43	-0.70	-2.06	0.000	0.001
CYTOKINE_ACTIVITY	27	-0.76	-2.06	0.000	0.001
BIOCARTA_SPRY_PATHWAY	15	-0.85	-2.05	0.000	0.001
GENTILE_UV_HIGH_DOSE_DN	273	-0.54	-2.05	0.000	0.001
RESPONSE_TO_EXTERNAL_STIMULUS	103	-0.61	-2.05	0.000	0.001
KRAS.DF.V1_UP	138	-0.58	-2.05	0.000	0.001
STREICHER_LSM1_TARGETS_DN	16	-0.82	-2.05	0.000	0.001
RICKMAN_HEAD_AND_NECK_CANCER_C	29	-0.74	-2.05	0.000	0.001
DORN_ADENOVIRUS_INFECTION_12HR_DN	29	-0.74	-2.05	0.000	0.001
GSE17721_CTRL_VS_LPS_1H_BMDM_DN	116	-0.58	-2.05	0.000	0.001
SNIJDERS_AMPLIFIED_IN_HEAD_AND_NECK_TUMORS	31	-0.73	-2.05	0.000	0.001
WINTER_HYPOXIA_METAGENE	168	-0.56	-2.05	0.000	0.001
GSE29618_MONOCYTE_VS_PDC_DAY7_FLU_VACCINE_UP	122	-0.58	-2.05	0.000	0.002
HUNSBERGER_EXERCISE_REGULATED_GENES	15	-0.82	-2.05	0.000	0.002
GSE9006_TYPE_1_DIABETES_AT_DX_VS_4MONTH_POST_DX_ PBMC_UP	159	-0.56	-2.05	0.000	0.002
GSE22886_NAIVE_CD8_TCELL_VS_NEUTROPHIL_DN	81	-0.61	-2.05	0.000	0.002

SCHLESINGER_METHYLATED_DE_NOVO_IN_CANCER	37	-0.70	-2.05	0.000	0.002
MAPKKK_CASCADE_GO_0000165	60	-0.64	-2.04	0.000	0.002
VART_KSHV_INFECTION_ANGIOGENIC_MARKERS_UP	64	-0.63	-2.04	0.000	0.002
TSAI_RESPONSE_TO_RADIATION_THERAPY	24	-0.76	-2.04	0.002	0.002
WONG_ADULT_TISSUE_STEM_MODULE	440	-0.52	-2.04	0.000	0.002
CUSTOM_GIST48_ETV1SH1_DN	51	-0.67	-2.04	0.000	0.002
LIU_SMARCA4_TARGETS	33	-0.73	-2.04	0.000	0.002
PDGF_UP.V1_UP	113	-0.58	-2.04	0.000	0.002
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED _IN_MONOCYTE_UP	15	-0.83	-2.04	0.000	0.002
ABE_VEGFA_TARGETS_30MIN	17	-0.82	-2.04	0.000	0.002
KEGG_HEMATOPOIETIC_CELL_LINEAGE	27	-0.74	-2.04	0.000	0.002
MAINA_VHL_TARGETS_DN	15	-0.85	-2.04	0.000	0.002
PICCALUGA_ANGIOIMMUNOBLASTIC_LYMPHOMA_DN	108	-0.59	-2.04	0.000	0.002
LEE_NEURAL_CREST_STEM_CELL_UP	74	-0.62	-2.04	0.000	0.002
FULCHER_INFLAMMATORY_RESPONSE_LECTIN_VS_LPS_UP	402	-0.51	-2.04	0.000	0.002
GTPASE_ACTIVATOR_ACTIVITY	42	-0.69	-2.03	0.000	0.002
GSE360_T_GONDII_VS_B_MALAYI_HIGH_DOSE_DC_UP	101	-0.59	-2.03	0.000	0.002
DANG_REGULATED_BY_MYC_DN	184	-0.55	-2.03	0.000	0.002
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_RE D_UP	15	-0.83	-2.03	0.000	0.002
MEISSNER_BRAIN_HCP_WITH_H3K4ME3_AND_H3K27ME3	419	-0.51	-2.03	0.000	0.002
PID_P53DOWNSTREAMPATHWAY	100	-0.60	-2.03	0.000	0.002
WORSCHECH_TUMOR_REJECTION_UP	19	-0.80	-2.03	0.000	0.002
GSE10325_BCELL_VS_MYELOID_DN	109	-0.58	-2.03	0.000	0.002
REGULATION_OF_PROGRAMMED_CELL_DEATH	241	-0.54	-2.03	0.000	0.002
DURCHDEWALD_SKIN_CARCINOGENESIS_DN	194	-0.55	-2.03	0.000	0.002
ENZYME_ACTIVATOR_ACTIVITY	82	-0.61	-2.03	0.000	0.002
LIN_SILENCED_BY_TUMOR_MICROENVIRONMENT	45	-0.67	-2.03	0.000	0.002
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_48H_CD4_TCE LL_UP	110	-0.59	-2.03	0.000	0.002
NOTCH_DN.V1_DN	54	-0.65	-2.03	0.000	0.002
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLA CK_UP	28	-0.74	-2.03	0.000	0.002
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_HSC_UP	120	-0.58	-2.03	0.000	0.002
PHONG_TNF_RESPONSE_NOT_VIA_P38	274	-0.53	-2.02	0.000	0.002
REACTOME_SMAD2_SMAD3_SMAD4_HETEROTRIMER_REGU LATES_TRANSCRIPTION	23	-0.76	-2.02	0.000	0.002
RASHI_RESPONSE_TO_IONIZING_RADIATION_2	92	-0.60	-2.02	0.000	0.002
GSE17721_LPS_VS_CPG_1H_BMDM_DN	134	-0.57	-2.02	0.000	0.002
GSE360_CTRL_VS_L_MAJOR_DC_DN	116	-0.58	-2.02	0.000	0.002
AMIT_EGF_RESPONSE_40_MCF10A	18	-0.83	-2.02	0.000	0.002
AMIT_EGF_RESPONSE_240_MCF10A	16	-0.82	-2.02	0.002	0.002
GERY_CEBP_TARGETS	88	-0.60	-2.02	0.000	0.002
REGULATION_OF_SECRETION	15	-0.83	-2.02	0.000	0.002
JECHLINGER_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_D N	47	-0.66	-2.02	0.000	0.002
KOBAYASHI_EGFR_SIGNALING_24HR_DN	227	-0.53	-2.02	0.000	0.002
TGFB_UP.V1_DN	107	-0.58	-2.02	0.000	0.002
SIMBULAN_UV_RESPONSE_NORMAL_DN	25	-0.74	-2.02	0.002	0.002
GSE9650_EFFECTOR_VS_EXHAUSTED_CD8_TCELL_DN	117	-0.58	-2.02	0.000	0.002

KAECH_DAY8_EFF_VS_MEMORY_CD8_TCELL_DN	159	-0.55	-2.01	0.000	0.002
KIM_WT1_TARGETS_12HR_DN	174	-0.55	-2.01	0.000	0.002
RASHI_RESPONSE_TO_IONIZING_RADIATION_1	31	-0.73	-2.01	0.000	0.002
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_2H_DN	83	-0.61	-2.01	0.000	0.002
KRAS.KIDNEY_UP.V1_UP	36	-0.70	-2.01	0.000	0.002
PEDERSEN_TARGETS_OF_611CTF_ISOFORM_OF_ERBB2	53	-0.64	-2.01	0.000	0.002
HOELZEL_NF1_TARGETS_UP	77	-0.61	-2.01	0.000	0.002
ACEVEDO_FGFR1_TARGETS_IN_PROSTATE_CANCER_MODEL_UP	154	-0.55	-2.01	0.000	0.003
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_CDC25_UP	75	-0.62	-2.01	0.000	0.003
LIM_MAMMARY_STEM_CELL_UP	260	-0.53	-2.01	0.000	0.003
ELVIDGE_HIF1A_AND_HIF2A_TARGETS_DN	81	-0.61	-2.01	0.000	0.003
LI_WILMS_TUMOR_VS_FETAL_KIDNEY_2_DN	35	-0.69	-2.00	0.000	0.003
SESTO_RESPONSE_TO_UV_C3	16	-0.83	-2.00	0.000	0.003
REGULATION_OF_PROTEIN_KINASE_ACTIVITY	102	-0.58	-2.00	0.000	0.003
REACTOME_CLASS_A1_RHODOPSIN_LIKE_RECEPTORS	28	-0.72	-2.00	0.000	0.003
AMUNDSON_GENOTOXIC_SIGNATURE	78	-0.60	-2.00	0.000	0.003
RUTELLA_RESPONSE_TO_HGF_UP	294	-0.52	-2.00	0.000	0.003
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_6H_CD4_TCELL_UP	112	-0.58	-2.00	0.000	0.003
PROTEIN_TYROSINE_PHOSPHATASE_ACTIVITY	38	-0.69	-2.00	0.000	0.003
GSE17974_0H_VS_2H_IN_VITRO_ACT_CD4_TCELL_DN	135	-0.55	-2.00	0.001	0.003
HAN_SATB1_TARGETS_DN	320	-0.52	-2.00	0.000	0.003
GSE1432_CTRL_VS_IFNG_1H_MICROGLIA_DN	116	-0.57	-2.00	0.000	0.003
TSAI_RESPONSE_TO_IONIZING_RADIATION	109	-0.58	-2.00	0.000	0.003
SEITZ_NEOPLASTIC_TRANSFORMATION_BY_8P_DELETION_DN	22	-0.76	-2.00	0.000	0.003
GSE9988_LPS_VS_LPS_AND_ANTI_TREM1_MONOCYTE_UP	132	-0.56	-2.00	0.000	0.003
GSE17721_CTRL_VS_CPG_2H_BMDM_DN	106	-0.58	-2.00	0.000	0.003
GSE360_L_MAJOR_VS_B_MALAYI_HIGH_DOSE_MAC_UP	91	-0.59	-2.00	0.000	0.003
HUANG_DASATINIB_RESISTANCE_UP	67	-0.62	-2.00	0.000	0.003
REGULATION_OF_APOPTOSIS	240	-0.53	-1.99	0.000	0.003
E2F1_UP.V1_DN	130	-0.56	-1.99	0.000	0.003
SPIRA_SMOKERS_LUNG_CANCER_UP	25	-0.76	-1.99	0.000	0.003
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_2H_ACT_CD4_TCELL_DN	78	-0.60	-1.99	0.000	0.003
ELVIDGE_HIF1A_TARGETS_DN	70	-0.61	-1.99	0.000	0.003
TOMIDA_METASTASIS_UP	20	-0.78	-1.99	0.000	0.003
GSE22886_DC_VS_MONOCYTE_DN	122	-0.57	-1.98	0.000	0.003
AMIT_EGF_RESPONSE_480_MCF10A	36	-0.69	-1.98	0.000	0.003
BASSO_HAIRY_CELL_LEUKEMIA_DN	53	-0.64	-1.98	0.000	0.003
IKEDA_MIR1_TARGETS_UP	48	-0.65	-1.98	0.000	0.003
TARTE_PLASMA_CELL_VS_B_LYMPHOCYTE_DN	23	-0.75	-1.98	0.000	0.004
GTPASE_REGULATOR_ACTIVITY	86	-0.59	-1.98	0.000	0.004
OSADA_ASCL1_TARGETS_DN	16	-0.82	-1.98	0.000	0.004
PROTEIN_KINASE_CASCADE	202	-0.53	-1.98	0.000	0.004
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_KRAS_CDC25_DN	28	-0.70	-1.98	0.000	0.004
TENEDINI_MEGAKARYOCYTE_MARKERS	40	-0.66	-1.98	0.002	0.004
REGULATION_OF_TRANSFERASE_ACTIVITY	107	-0.57	-1.98	0.000	0.004
P53_DN.V2_UP	38	-0.66	-1.98	0.002	0.004

TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_16D_UP	69	-0.62	-1.98	0.000	0.004
TRANSMEMBRANE_RECEPTOR_PROTEIN_SERINE_THREONINE_KINASE_SIGNALING_PATHWAY	29	-0.72	-1.97	0.000	0.004
GSE24634_IL4_VS_CTRL_TREATED_NAIVE_CD4_TCELL_DAY7_DN	142	-0.56	-1.97	0.000	0.004
ZHENG_IL22_SIGNALING_UP	21	-0.75	-1.97	0.002	0.004
CUSTOM_EXPO-GIST	24	-0.73	-1.97	0.002	0.004
GSE15750_WT_VS_TRAF6KO_DAY10_EFF_CD8_TCELL_DN	59	-0.63	-1.97	0.000	0.004
REGULATION_OF_G_PROTEIN_COUPLED_RECEPTOR_PROTEIN_SIGNALING_PATHWAY	15	-0.83	-1.97	0.002	0.004
KRAS.LUNG_UP.V1_UP	40	-0.66	-1.97	0.000	0.004
PROGRAMMED_CELL_DEATH	303	-0.51	-1.97	0.000	0.004
GSE9006_1MONTH_VS_4MONTH_POST_TYPE_1_DIABETES_DX_PBMC_UP	116	-0.56	-1.97	0.000	0.004
GSE37416_0H_VS_3H_F_TULARENSIS_LVS_NEUTROPHIL_DN	148	-0.54	-1.97	0.000	0.004
COULOUARN_TEMPORAL_TGFB1_SIGNATURE_DN	89	-0.58	-1.96	0.000	0.004
EXTRACELLULAR_REGION	140	-0.55	-1.96	0.000	0.004
GSE360_L_DONOVANI_VS_B_MALAYI_HIGH_DOSE_DC_UP	116	-0.56	-1.96	0.000	0.004
CELL_SURFACE_RECEPTOR_LINKED_SIGNAL_TRANSDUCTION_GO_0007166	228	-0.52	-1.96	0.000	0.004
REACTOME_TRANSCRIPTIONAL_ACTIVITY_OF_SMAD2_SMAD3_SMAD4_HETEROTRIMER	34	-0.70	-1.96	0.002	0.004
GSE7852_THYMUS_VS_FAT_TREG_DN	125	-0.56	-1.96	0.000	0.004
BURTON_ADIPOGENESIS_1	31	-0.70	-1.96	0.002	0.004
CHICAS_RB1_TARGETS_SENESCENT	420	-0.49	-1.96	0.000	0.005
KOKKINAKIS_METHIONINE_DEPRIVATION_48HR_UP	99	-0.58	-1.96	0.000	0.005
TBK1.DN.48HRS_DN	46	-0.65	-1.96	0.000	0.005
WANG_SMARCE1_TARGETS_DN	291	-0.51	-1.96	0.000	0.005
KAN_RESPONSE_TO_ARSENIC_TRIOXIDE	86	-0.58	-1.96	0.001	0.005
MIYAGAWA_TARGETS_OF_EWSR1_ETS_FUSIONS_UP	159	-0.54	-1.96	0.000	0.005
LANDIS_ERBB2_BREAST_TUMORS_65_UP	18	-0.77	-1.96	0.000	0.005
SABATES_COLORECTAL_ADENOMA_UP	60	-0.62	-1.95	0.000	0.005
BROWNE_HCMV_INFECTION_1HR_UP	32	-0.67	-1.95	0.002	0.005
GSE9650_EFFECTOR_VS_MEMORY_CD8_TCELL_DN	163	-0.54	-1.95	0.000	0.005
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_2	46	-0.65	-1.95	0.000	0.005
REGULATION_OF_KINASE_ACTIVITY	104	-0.58	-1.95	0.000	0.005
ESC_J1_UP_EARLY.V1_DN	109	-0.56	-1.95	0.000	0.005
GSE20366_EX_VIVO_VS_DEC205_CONVERSION_DN	131	-0.55	-1.95	0.000	0.005
GSE3982_CTRL_VS_LPS_4H_MAC_DN	136	-0.54	-1.95	0.000	0.005
GSE14000_UNSTIM_VS_4H_LPS_DC_TRANSLATED_RNA_DN	101	-0.57	-1.95	0.000	0.005
ZUCCHI_METASTASIS_DN	33	-0.68	-1.95	0.002	0.005
INFLAMMATORY_RESPONSE	36	-0.66	-1.95	0.005	0.005
VART_KSHV_INFECTION_ANGIOGENIC_MARKERS_DN	57	-0.63	-1.95	0.000	0.005
ST_ERK1_ERK2_MAPK_PATHWAY	28	-0.72	-1.95	0.000	0.005
GSE30083_SP3_VS_SP4_THYMOCYTE_DN	105	-0.56	-1.95	0.000	0.005
PHOSPHOPROTEIN_PHOSPHATASE_ACTIVITY	56	-0.63	-1.94	0.001	0.005
NIELSEN_GIST	69	-0.60	-1.94	0.000	0.005
RAF_UP.V1_DN	128	-0.55	-1.94	0.000	0.005

MISSIAGLIA_REGULATED_BY_METHYLATION_UP	87	-0.58	-1.94	0.000	0.005
DEBIASI_APOPTOSIS_BY_REOVIRUS_INFECTION_UP	255	-0.51	-1.94	0.000	0.005
GSE2706_R848_VS_LPS_2H_STIM_DC_DN	76	-0.59	-1.94	0.000	0.005
MEK_UP.V1_UP	130	-0.54	-1.94	0.000	0.006
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_MONOCYTE _UP	160	-0.53	-1.94	0.000	0.005
TOOKER_GEMCITABINE_RESISTANCE_DN	112	-0.57	-1.94	0.000	0.006
DAZARD_RESPONSE_TO_UV_SCC_DN	108	-0.55	-1.94	0.000	0.006
GSE3982_MEMORY_CD4_TCELL_VS_TH2_DN	169	-0.54	-1.94	0.000	0.006
PID_FRA_PATHWAY	21	-0.75	-1.94	0.000	0.006
JOHNSTONE_PARVB_TARGETS_3_UP	357	-0.49	-1.94	0.000	0.006
GSE3982_NEUTROPHIL_VS_BASOPHIL_UP	118	-0.55	-1.94	0.000	0.006
FRASOR_RESPONSE_TO_ESTRADIOL_DN	50	-0.64	-1.94	0.003	0.006
MCBRYAN_PUBERTAL_TGFB1_TARGETS_UP	135	-0.54	-1.93	0.000	0.006
GSE7852_THYMUS_VS_FAT_TCONV_DN	138	-0.55	-1.93	0.000	0.006
GSE360_L_DONOVANI_VS_L_MAJOR_MAC_DN	111	-0.56	-1.93	0.000	0.006
HEDENFALK_BREAST_CANCER_BRACX_UP	18	-0.76	-1.93	0.000	0.006
ACTIVATION_OF_MAPK_ACTIVITY	19	-0.75	-1.93	0.002	0.006
ZHENG_GLIOBLASTOMA_PLASTICITY_UP	168	-0.53	-1.93	0.000	0.006
REACTOME_EGFR_DOWNREGULATION	23	-0.73	-1.93	0.000	0.006
BROWNE_HCMV_INFECTION_2HR_UP	20	-0.76	-1.93	0.003	0.006
GSE17974_0H_VS_12H_IN_VITRO_ACT_CD4_TCELL_UP	115	-0.55	-1.93	0.000	0.006
RAO_BOUND_BY_SALL4	145	-0.54	-1.93	0.000	0.006
APOPTOSIS_GO	302	-0.50	-1.93	0.000	0.006
GSE360_CTRL_VS_L_DONOVANI_DC_DN	115	-0.55	-1.93	0.001	0.006
GENTILE_UV_RESPONSE_CLUSTER_D4	52	-0.62	-1.93	0.000	0.006
PID_AP1_PATHWAY	45	-0.64	-1.93	0.002	0.006
ZHAN_MULTIPLE_MYELOMA_MF_DN	23	-0.72	-1.93	0.000	0.006
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_72H_CD4_TCE LL_UP	128	-0.55	-1.93	0.000	0.006
REGULATION_OF_DEVELOPMENTAL_PROCESS	297	-0.50	-1.93	0.000	0.006
XU_HGF_SIGNALING_NOT_VIA_AKT1_6HR	22	-0.73	-1.93	0.003	0.006
REACTOME_SIGNALING_BY_TGF_BETA_RECEPTOR_COMPLEX	56	-0.61	-1.93	0.002	0.007
GSE17974_0H_VS_48H_IN_VITRO_ACT_CD4_TCELL_UP	106	-0.56	-1.92	0.000	0.007
RESPONSE_TO_WOUNDING	58	-0.61	-1.92	0.004	0.007
POSITIVE_REGULATION_OF_CELLULAR_PROTEIN_METABOLIC _PROCESS	35	-0.67	-1.92	0.000	0.007
FRIDMAN_SENESCENCE_UP	63	-0.61	-1.92	0.001	0.007
KRIEG_HYPOXIA_VIA_KDM3A	41	-0.65	-1.92	0.000	0.007
SESTO_RESPONSE_TO_UV_C2	46	-0.63	-1.92	0.000	0.007
AMIT_SERUM_RESPONSE_120_MCF10A	53	-0.63	-1.92	0.002	0.007
GSE2706_2H_VS_8H_R848_STIM_DC_UP	123	-0.54	-1.92	0.000	0.007
BRUINS_UVC_RESPONSE_VIA_TP53_GROUP_B	337	-0.49	-1.92	0.000	0.007
KEGG_MAPK_SIGNALING_PATHWAY	155	-0.53	-1.92	0.000	0.007
GSE13306_TREG_VS_TCONV_SPLEEN_UP	102	-0.56	-1.92	0.000	0.007
GSE24142_EARLY_THYMIC_PROGENITOR_VS_DN2_THYMOCY TE_UP	109	-0.56	-1.92	0.000	0.007
RODRIGUES_NTN1_AND_DCC_TARGETS	25	-0.71	-1.92	0.000	0.007
CARD_MIR302A_TARGETS	59	-0.61	-1.92	0.000	0.007
WANG_LSD1_TARGETS_DN	16	-0.79	-1.92	0.000	0.007
SUNG_METASTASIS_STROMA_UP	82	-0.58	-1.92	0.000	0.007
GSE24142_EARLY_THYMIC_PROGENITOR_VS_DN3_THYMOCY TE_UP	120	-0.55	-1.91	0.000	0.007

GSE13411_NAIVE_BCELL_VS_PLASMA_CELL_UP	132	-0.54	-1.91	0.000	0.007
REGULATION_OF_CELL_DIFFERENTIATION	31	-0.68	-1.91	0.002	0.007
KEGG_APOPTOSIS	65	-0.59	-1.91	0.000	0.007
GSE360_L_MAJOR_VS_B_MALAYI_HIGH_DOSE_DC_UP	120	-0.55	-1.91	0.000	0.007
MCCLUNG_COCAIN_REWARD_4WK	49	-0.62	-1.91	0.000	0.007
QI_HYPOXIA	100	-0.55	-1.91	0.000	0.007
JECHLINGER_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_UP	49	-0.62	-1.91	0.003	0.007
RIGGI_EWING_SARCOMA_PROGENITOR_DN	92	-0.57	-1.91	0.000	0.007
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_12H_ACT_CD4_TCELL_DN	59	-0.60	-1.91	0.000	0.007
GSE24634_IL4_VS_CTRL_TREATED_NAIVE_CD4_TCELL_DAY3_DN	129	-0.54	-1.91	0.000	0.007
REACTOME_PEPTIDE_LIGAND_BINDING_RECEPTORS	16	-0.77	-1.91	0.002	0.007
BIOCARTA_NTHI_PATHWAY	19	-0.74	-1.91	0.003	0.008
BCAT.100_UP.V1_UP	20	-0.74	-1.91	0.000	0.008
BROWNE_HCMV_INFECTION_4HR_UP	29	-0.69	-1.91	0.003	0.008
GSE13484_3H_UNSTIM_VS_YF17D_VACCINE_STIM_PBMC_DN	123	-0.55	-1.90	0.001	0.008
GSE24142_DN2_VS_DN3_THYMOCYTE_UP	115	-0.54	-1.90	0.000	0.008
PODAR_RESPONSE_TO_ADAPHOSTIN_UP	122	-0.55	-1.90	0.000	0.008
SWEET_KRAS_ONCOGENIC_SIGNATURE	74	-0.58	-1.90	0.001	0.008
PID_IL23PATHWAY	17	-0.76	-1.90	0.003	0.008
GRAHAM_CML_QUIESCENT_VS_NORMAL_QUIESCENT_DN	24	-0.72	-1.90	0.000	0.008
LI_INDUCED_T_TO_NATURAL_KILLER_UP	189	-0.51	-1.90	0.000	0.008
ANATOMICAL_STRUCTURE_MORPHOGENESIS	180	-0.52	-1.90	0.000	0.009
SCHAEFFER_PROSTATE_DEVELOPMENT_12HR_UP	66	-0.58	-1.90	0.000	0.009
HALMOS_CEBPA_TARGETS_UP	32	-0.68	-1.90	0.000	0.009
TURASHVILI_BREAST_DUCTAL_CARCINOMA_VS_DUCTAL_NORMAL_DN	89	-0.56	-1.90	0.000	0.009
GSE16755_CTRL_VS_IFNA_TREATED_MAC_DN	135	-0.53	-1.90	0.001	0.009
PAPASPYRIDONOS_UNSTABLE_ATEROSCLEROTIC_PLAQUE_UP	37	-0.65	-1.90	0.002	0.009
BHAT_ESR1_TARGETS_NOT_VIA_AKT1_DN	58	-0.61	-1.90	0.000	0.009
GSE3982_CTRL_VS_PMA_STIM_EOSINOPHIL_DN	100	-0.56	-1.89	0.000	0.009
LINDSTEDT_DENDRITIC_CELL_MATURATION_B	40	-0.65	-1.89	0.000	0.009
GSE37416_CTRL_VS_3H_F_TULARENSIS_LVS_NEUTROPHIL_DN	120	-0.54	-1.89	0.000	0.009
REACTOME_MAPK_TARGETS_NUCLEAR_EVENTS_MEDIATED_BY_MAP_KINASES	28	-0.69	-1.89	0.002	0.009
CORDENONSI_YAP_CONSERVED_SIGNATURE	49	-0.62	-1.89	0.003	0.009
CROMER_TUMORIGENESIS_UP	26	-0.70	-1.89	0.003	0.009
WESTON_VEGFA_TARGETS	54	-0.61	-1.89	0.003	0.009
SABATES_COLORECTAL_ADENOMA_DN	50	-0.60	-1.89	0.000	0.009
SMALL_GTPASE_REGULATOR_ACTIVITY	49	-0.62	-1.89	0.000	0.009
HARRIS_HYPOXIA	54	-0.62	-1.89	0.000	0.009
KYNG_DNA_DAMAGE_DN	145	-0.53	-1.89	0.000	0.009
WOO_LIVER_CANCER_RECURRENCE_UP	73	-0.58	-1.89	0.000	0.009
REGULATION_OF_CELL_PROLIFERATION	173	-0.52	-1.89	0.000	0.009
PACHER_TARGETS_OF_IGF1_AND_IGF2_UP	25	-0.70	-1.89	0.002	0.009
REGULATION_OF_CATALYTIC_ACTIVITY	167	-0.51	-1.89	0.000	0.009
ZHAN_MULTIPLE_MYELOMA_LB_DN	26	-0.69	-1.89	0.006	0.009
TRACEY_RESISTANCE_TO_IFNA2_DN	21	-0.73	-1.89	0.002	0.009

GSE29618_MONOCYTE_VS_PDC_UP	113	-0.55	-1.89	0.000	0.009
GSE9037_CTRL_VS_LPS_4H_STIM_BMDM_DN	141	-0.53	-1.89	0.000	0.009
NEGATIVE_REGULATION_OF_TRANSFERASE_ACTIVITY	23	-0.71	-1.89	0.005	0.009
WANG_ESOPHAGUS_CANCER_VS_NORMAL_UP	71	-0.58	-1.89	0.000	0.009
NGUYEN_NOTCH1_TARGETS_DN	76	-0.56	-1.89	0.000	0.009
BERENJENO_TRANSFORMED_BY_RHOA_UP	465	-0.48	-1.89	0.000	0.009
G_PROTEIN_COUPLED_RECEPTOR_PROTEIN_SIGNALING_PATHWAY	77	-0.58	-1.88	0.000	0.010
CHEN_PDGF_TARGETS	17	-0.77	-1.88	0.007	0.010
TBK1.DF_DN	241	-0.50	-1.88	0.000	0.010
SAGIV_CD24_TARGETS_DN	32	-0.66	-1.88	0.006	0.010
CUSTOM_Colo800_ETV1SH2_DN	151	-0.52	-1.88	0.000	0.010
DORSEY_GAB2_TARGETS	16	-0.76	-1.88	0.002	0.010
GSE2706_UNSTIM_VS_8H_LPS_AND_R848_DC_DN	111	-0.54	-1.88	0.001	0.010
PLASARI_TGFB1_SIGNALING_VIA_NFIC_10HR_UP	21	-0.73	-1.88	0.000	0.010
ACEVEDO_LIVER_TUMOR_VS_NORMAL_ADJACENT_TISSUE_DN	148	-0.52	-1.88	0.000	0.010
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_6H_CD4_TCELL_DN	125	-0.53	-1.88	0.000	0.010
PID_ATF2_PATHWAY	36	-0.64	-1.88	0.006	0.010
ZHAN_LATE_DIFFERENTIATION_GENES_UP	24	-0.71	-1.88	0.003	0.010
PETROVA_ENDOTHELIUM_LYMPHATIC_VS_BLOOD_DN	111	-0.54	-1.88	0.000	0.010
GSE29618_BCELL_VS_PDC_DAY7_FLU_VACCINE_UP	119	-0.54	-1.88	0.000	0.010
CYCLIC_NUCLEOTIDE_MEDIATED_SIGNALING	25	-0.68	-1.88	0.005	0.011
WEINMANN_ADAPTATION_TO_HYPOXIA_DN	31	-0.67	-1.88	0.002	0.010
ENK_UV_RESPONSE_KERATINOCYTE_UP	405	-0.47	-1.88	0.000	0.010
RUTELLA_RESPONSE_TO_HGF_DN	150	-0.51	-1.87	0.001	0.011
LABBE_TGFB1_TARGETS_UP	63	-0.59	-1.87	0.000	0.011
RAS_GTPASE_ACTIVATOR_ACTIVITY	22	-0.71	-1.87	0.003	0.011
PHOSPHORIC_MONOESTER_HYDROLASE_ACTIVITY	79	-0.57	-1.87	0.000	0.011
HERNANDEZ_MITOTIC_ARREST_BY_DOCETAXEL_2_UP	39	-0.63	-1.87	0.000	0.011
SEQUENCE_SPECIFIC_DNA_BINDING	36	-0.66	-1.87	0.003	0.011
GSE17721_POLYIC_VS_GARDIQUIMOD_1H_BMDM_DN	147	-0.52	-1.87	0.000	0.011
FERRARI_RESPONSE_TO_FENRETINIDE_UP	16	-0.76	-1.87	0.005	0.011
G_PROTEIN_SIGNALING_COUPLED_TO_CYCLIC_NUCLEOTIDE_SECOND_MESSENGER	23	-0.68	-1.87	0.003	0.011
GSE17721_LPS_VS_PAM3CSK4_1H_BMDM_DN	126	-0.52	-1.87	0.000	0.011
LIU_SOX4_TARGETS_UP	106	-0.55	-1.87	0.000	0.011
GSE17721_CPG_VS_GARDIQUIMOD_12H_BMDM_DN	135	-0.52	-1.87	0.003	0.011
GSE360_T_GONDII_VS_B_MALAYI_LOW_DOSE_DC_UP	111	-0.53	-1.87	0.000	0.011
KEGG_GRAFT_VERSUS_HOST_DISEASE	19	-0.74	-1.87	0.003	0.011
NAKAMURA_METASTASIS_MODEL_DN	28	-0.67	-1.87	0.003	0.011
HELLER_HDAC_TARGETS_SILENCED_BY_METHYLATION_DN	185	-0.51	-1.87	0.000	0.011
PID_FGF_PATHWAY	33	-0.66	-1.87	0.003	0.011
GSE360_HIGH_DOSE_B_MALAYI_VS_M_TUBERCULOSIS_MAC_DN	120	-0.53	-1.87	0.000	0.011
REACTOME_ERK_MAPK_TARGETS	20	-0.71	-1.87	0.003	0.011
REACTOME_GPCR_LIGAND_BINDING	54	-0.60	-1.87	0.000	0.011
WANG_BARRETTS_ESOPHAGUS_AND_ESOPHAGUS_CANCER_UP	16	-0.75	-1.87	0.003	0.011
CREIGHTON_ENDOCRINE_THERAPY_RESISTANCE_3	462	-0.47	-1.86	0.000	0.011
EMBRYONIC_DEVELOPMENT	29	-0.68	-1.86	0.008	0.012

GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_YELLOW_DN	16	-0.75	-1.86	0.007	0.012
P53_DN.V1_UP	114	-0.54	-1.86	0.000	0.012
REACTOME_NUCLEAR_EVENTS_KINASE_AND_TRANSCRIPTION_FACTOR_ACTIVATION	23	-0.70	-1.86	0.005	0.012
PID_NFAT_TFPATHWAY	23	-0.70	-1.86	0.005	0.012
POSITIVE_REGULATION_OF_PROTEIN_METABOLIC_PROCESS	37	-0.65	-1.86	0.003	0.012
KIM_HYPOXIA	21	-0.70	-1.86	0.002	0.012
WILCOX_PRESPONSE_TO_ROGESTERONE_DN	35	-0.63	-1.86	0.000	0.012
GSE36392_TYPE_2_MYELOID_VS_MAC_IL25_TREATED_LUNG_UP	64	-0.59	-1.86	0.000	0.012
RASHI_NFKB1_TARGETS	15	-0.77	-1.86	0.009	0.012
PLASARI_TGFB1_SIGNALING_VIA_NFIC_10HR_DN	15	-0.75	-1.86	0.010	0.012
GSE13484_12H_UNSTIM_VS_YF17D_VACCINE_STIM_PBMC_DN	123	-0.53	-1.86	0.000	0.012
HEMATOPOIETIN_INTERFERON_CLASSD200_DOMAIN_CYTOKINE_RECEPTOR_ACTIVITY	15	-0.78	-1.86	0.005	0.012
ROSS_ACUTE_MYELOID_LEUKEMIA_CBF	56	-0.60	-1.86	0.003	0.012
CEBALLOS_TARGETS_OF_TP53_AND_MYC_UP	17	-0.75	-1.86	0.005	0.012
EXTRACELLULAR_REGION_PART	104	-0.54	-1.85	0.000	0.013
AMIT_SERUM_RESPONSE_20_MCF10A	16	-0.75	-1.85	0.003	0.013
ZHENG_BOUND_BY_FOXP3	307	-0.48	-1.85	0.000	0.013
MCBRYAN_PUBERTAL_TGFB1_TARGETS_DN	35	-0.65	-1.85	0.003	0.013
RECEPTOR_COMPLEX	23	-0.69	-1.85	0.003	0.013
ERB2_UP.V1_DN	149	-0.51	-1.85	0.000	0.013
FALVELLA_SMOKERS_WITH_LUNG_CANCER	58	-0.59	-1.85	0.006	0.013
MCBRYAN_PUBERTAL_BREAST_3_4WK_DN	22	-0.70	-1.85	0.005	0.013
WU_CELL_MIGRATION	119	-0.53	-1.85	0.003	0.013
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_24H_ACT_CD4_TCELL_UP	58	-0.59	-1.85	0.001	0.013
LU_EZH2_TARGETS_DN	288	-0.48	-1.85	0.000	0.013
RECEPTOR_BINDING	148	-0.51	-1.85	0.000	0.014
NEGATIVE_REGULATION_OF_CATALYTIC_ACTIVITY	41	-0.62	-1.85	0.002	0.014
GSE7460_TCONV_VS_TREG_LN_DN	125	-0.53	-1.84	0.000	0.014
DACOSTA_UV_RESPONSE_VIA_ERCC3_COMMON_DN	421	-0.47	-1.84	0.000	0.014
GSE30083_SP2_VS_SP4_THYMOCYTE_DN	94	-0.54	-1.84	0.001	0.014
HALMOS_CEBPA_TARGETS_DN	26	-0.68	-1.84	0.003	0.014
BILBAN_B_CLL_LPL_DN	29	-0.66	-1.84	0.005	0.014
DOANE_BREAST_CANCER_ESR1_UP	39	-0.63	-1.84	0.002	0.014
DAZARD_RESPONSE_TO_UV_NHEK_DN	257	-0.48	-1.84	0.000	0.014
KANG_IMMORTALIZED_BY_TERT_DN	41	-0.63	-1.84	0.000	0.014
GSE3982_MAC_VS_TH1_UP	133	-0.52	-1.84	0.000	0.014
SENGUPTA_NASOPHARYNGEAL_CARCINOMA_WITH_LMP1_UP	245	-0.48	-1.84	0.000	0.014
GSE7852_TREG_VS_TCONV_FAT_UP	138	-0.52	-1.84	0.001	0.014
STOSSI_RESPONSE_TO_ESTRADIOL	22	-0.70	-1.84	0.005	0.014
GSE22886_CD8_TCELL_VS_BCELL_NAIVE_DN	89	-0.55	-1.84	0.000	0.014
AMIT_DELAYED_EARLY_GENES	18	-0.74	-1.84	0.003	0.015
GSE7460_TREG_VS_TCONV_ACT_UP	119	-0.52	-1.84	0.000	0.015
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_6H_ACT_CD4_TCELL_UP	65	-0.56	-1.84	0.001	0.015
SAFFORD_T_LYMPHOCYTE_ANERGY	47	-0.60	-1.84	0.001	0.015
POSITIVE_REGULATION_OF_MAP_KINASE_ACTIVITY	23	-0.69	-1.83	0.006	0.015

GSE17721_LPS_VS_GARDIQUIMOD_1H_BMDM_UP	103	-0.53	-1.83	0.003	0.015
MEISSNER_NPC_HCP_WITH_H3K4ME2_AND_H3K27ME3	65	-0.57	-1.83	0.001	0.015
VECCHI_GASTRIC_CANCER_ADVANCED_VS_EARLY_UP	93	-0.54	-1.83	0.001	0.015
GSE17721_PAM3CSK4_VS_CPG_8H_BMDM_DN	143	-0.51	-1.83	0.000	0.015
GSE30083_SP1_VS_SP2_THYMOCYTE_UP	126	-0.51	-1.83	0.001	0.015
MIKKELSEN_NPC_HCP_WITH_H3K27ME3	60	-0.58	-1.83	0.000	0.015
HOFFMANN_LARGE_TO_SMALL_PRE_BII_LYMPHOCYTE_DN	42	-0.61	-1.83	0.000	0.015
ZHU_CMV_24_HR_UP	81	-0.55	-1.83	0.000	0.015
HELLER_SILENCED_BY_METHYLATION_DN	76	-0.56	-1.83	0.001	0.015
MCBRYAN_PUBERTAL_BREAST_4_5WK_UP	140	-0.52	-1.83	0.000	0.015
GSE7852_TREG_VS_TCONV_THYMUS_DN	110	-0.52	-1.83	0.000	0.015
BEHAVIOR	34	-0.65	-1.83	0.005	0.016
MYELOID_CELL_DIFFERENTIATION	20	-0.71	-1.83	0.008	0.016
GSE360_L_DONOVANI_VS_B_MALAYI_HIGH_DOSE_MAC_UP	122	-0.52	-1.83	0.001	0.016
GSE37416_0H_VS_6H_F_TULARENSIS_LVS_NEUTROPHIL_DN	152	-0.51	-1.83	0.000	0.016
GSE1460_INTRATHYMIC_T_PROGENITOR_VS_CD4_THYMOCYTE_DN	107	-0.53	-1.83	0.000	0.016
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_12H_ACT_CD4_TCELL_UP	120	-0.52	-1.83	0.000	0.016
LEF1_UP.V1_UP	99	-0.54	-1.83	0.000	0.016
GSE29618_PDC_VS_MDC_DAY7_FLU_VACCINE_UP	114	-0.52	-1.83	0.000	0.016
ZIRN_TRETINOIN_RESPONSE_WT1_UP	15	-0.76	-1.83	0.009	0.016
GSE9988_LOW_LPS_VS_ANTI_TREM1_AND_LPS_MONOCYTE_DN	136	-0.51	-1.83	0.000	0.016
GSE9037_CTRL_VS_LPS_4H_STIM_IRAK4_KO_BMDM_DN	136	-0.51	-1.83	0.001	0.016
SECOND_MESSENGER_MEDIATED_SIGNALING	38	-0.63	-1.82	0.003	0.016
SWEET_KRAS_TARGETS_DN	38	-0.63	-1.82	0.003	0.016
WATTEL_AUTONOMOUS_THYROID_ADENOMA_DN	27	-0.67	-1.82	0.006	0.016
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_16H_DN	91	-0.53	-1.82	0.000	0.016
GSE16522_MEMORY_VS_NAIVE_CD8_TCELL_DN	110	-0.53	-1.82	0.001	0.016
GSE17721_LPS_VS_CPG_2H_BMDM_UP	136	-0.51	-1.82	0.000	0.016
PRC2_EZH2_UP.V1_DN	107	-0.52	-1.82	0.000	0.016
HOSHIDA_LIVER_CANCER_SURVIVAL_UP	48	-0.60	-1.82	0.005	0.016
GSE9037_CTRL_VS_LPS_1H_STIM_BMDM_DN	114	-0.52	-1.82	0.000	0.016
WIERENGA_STAT5A_TARGETS_UP	127	-0.52	-1.82	0.000	0.016
GAUSSMANN_MLL_AF4_FUSION_TARGETS_E_UP	34	-0.65	-1.82	0.003	0.016
CELL_DEVELOPMENT	372	-0.46	-1.82	0.000	0.017
GSE360_L_DONOVANI_VS_M_TUBERCULOSIS_MAC_DN	122	-0.52	-1.82	0.001	0.017
BORLAK_LIVER_CANCER_EGF_UP	38	-0.63	-1.82	0.003	0.017
MENSE_HYPOXIA_UP	79	-0.55	-1.82	0.000	0.017
LU_IL4_SIGNALING	53	-0.58	-1.82	0.001	0.017
LU_TUMOR_ANGIOGENESIS_UP	15	-0.76	-1.82	0.003	0.017
SMID_BREAST_CANCER_LUMINAL_B_DN	232	-0.48	-1.81	0.000	0.017
MARSON_FOXP3_TARGETS_UP	45	-0.60	-1.81	0.000	0.017
PID_NFKAPPABCANONICALPATHWAY	19	-0.72	-1.81	0.007	0.017
ERB2_UP.V1_UP	119	-0.51	-1.81	0.000	0.017
GSE29618_PRE_VS_DAY7_FLU_VACCINE_MDC_UP	87	-0.53	-1.81	0.000	0.017
GSE17721_0.5H_VS_4H_CPG_BMDM_DN	130	-0.51	-1.81	0.000	0.017
GSE29618_BCELL_VS_MONOCYTE_DN	141	-0.51	-1.81	0.000	0.017
P53_DN.V1_DN	110	-0.52	-1.81	0.000	0.017

IL21_UP.V1_UP	58	-0.57	-1.81	0.001	0.017
CASORELLI_ACUTE_PROMYELOCYTIC_LEUKEMIA_UP	114	-0.52	-1.81	0.000	0.017
MIKKELSEN_IPS_WITH_HCP_H3K27ME3	20	-0.71	-1.81	0.003	0.017
NEMETH_INFLAMMATORY_RESPONSE_LPS_UP	66	-0.56	-1.81	0.001	0.017
SESTO_RESPONSE_TO_UV_C1	57	-0.58	-1.81	0.003	0.017
MCBRYAN_PUBERTAL_BREAST_6_7WK_DN	51	-0.58	-1.81	0.001	0.018
OUILLETTE_CLL_13Q14_DELETION_DN	41	-0.62	-1.81	0.001	0.018
RHEIN_ALL_GLUCOCORTICOID_THERAPY_UP	43	-0.61	-1.81	0.005	0.018
HUANG_FOXA2_TARGETS_UP	29	-0.66	-1.81	0.006	0.018
REGULATION_OF_TRANSPORT	37	-0.62	-1.81	0.005	0.018
RECEPTOR_ACTIVITY	179	-0.49	-1.81	0.000	0.018
GSE36392_EOSINOPHIL_VS_MAC_IL25_TREATED_LUNG_UP	55	-0.58	-1.81	0.001	0.018
GSE29618_BCELL_VS_MDC_DAY7_FLU_VACCINE_UP	108	-0.52	-1.81	0.000	0.018
GSE339_EX_VIVO_VS_IN_CULTURE_CD8POS_DC_DN	146	-0.50	-1.81	0.000	0.018
PARK_TRETINOIN_RESPONSE_AND_PML_RARA_FUSION	16	-0.72	-1.80	0.007	0.018
NOJIMA_SFRP2_TARGETS_UP	21	-0.71	-1.80	0.003	0.018
GSE9006_HEALTHY_VS_TYPE_2_DIABETES_PBMC_AT_DX_DN	129	-0.51	-1.80	0.000	0.018
REACTOME_TRIF_MEDIATED_TLR3_SIGNALING	61	-0.56	-1.80	0.001	0.018
RODRIGUES_THYROID_CARCINOMA_DN	60	-0.57	-1.80	0.003	0.018
GSE14769_UNSTIM_VS_120MIN_LPS_BMDM_DN	138	-0.51	-1.80	0.000	0.018
HOFMANN_MYELODYSPLASTIC_SYNDROM_RISK_UP	19	-0.73	-1.80	0.011	0.018
BEGUM_TARGETS_OF_PAX3_FOXO1_FUSION_DN	31	-0.63	-1.80	0.009	0.018
GSE24142_EARLY_THYMIC_PROGENITOR_VS_DN3_THYMOCYTE_ADULT_UP	119	-0.52	-1.80	0.000	0.018
WANG_MLL_TARGETS	124	-0.51	-1.80	0.001	0.018
MAHADEVAN_RESPONSE_TO_MP470_DN	17	-0.72	-1.80	0.007	0.018
RHO_GTPASE_ACTIVATOR_ACTIVITY	15	-0.73	-1.80	0.012	0.019
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_4H_CD4_TCELL_UP	111	-0.52	-1.80	0.000	0.019
ESC_V6.5_UP_EARLY.V1_DN	93	-0.53	-1.80	0.000	0.019
LINDVALL_IMMORTALIZED_BY_TERT_DN	47	-0.59	-1.80	0.002	0.019
MONNIER_POSTRADIATION_TUMOR_ESCAPE_DN	280	-0.47	-1.80	0.000	0.019
GSE22886_NAIVE_BCELL_VS_BLOOD_PLASMA_CELL_UP	129	-0.51	-1.80	0.000	0.019
GSE13411_NAIVE_VS_IGM_MEMORY_BCELL_UP	93	-0.53	-1.80	0.003	0.019
NUNODA_RESPONSE_TO_DASATINIB_IMATINIB_UP	26	-0.66	-1.80	0.010	0.019
GSE3982_MAC_VS_TH2_UP	133	-0.51	-1.80	0.001	0.019
BENPORATH_ES_WITH_H3K27ME3	271	-0.47	-1.80	0.000	0.019
DAVICIONI_TARGETS_OF_PAX_FOXO1_FUSIONS_UP	177	-0.49	-1.80	0.000	0.019
CHANGOLKAR_H2AFY_TARGETS_UP	34	-0.63	-1.80	0.005	0.019
GAURNIER_PSMD4_TARGETS	33	-0.63	-1.80	0.006	0.020
GSE22886_DAY0_VS_DAY7_MONOCYTE_IN_CULTURE_UP	127	-0.50	-1.80	0.001	0.020
DAIRKEE_TERT_TARGETS_DN	70	-0.55	-1.80	0.001	0.020
GROSS_ELK3_TARGETS_DN	21	-0.69	-1.79	0.015	0.020
NEGATIVE_REGULATION_OF_CELLULAR_PROCESS	444	-0.45	-1.79	0.000	0.020
GSE29614_CTRL_VS_DAY7_TIV_FLU_VACCINE_PBMC_UP	56	-0.57	-1.79	0.003	0.020
ZHOU_TNF_SIGNALING_30MIN	44	-0.60	-1.79	0.006	0.020
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_24H_CD4_TCELL_UP	110	-0.51	-1.79	0.001	0.020
XU_HGF_SIGNALING_NOT_VIA_AKT1_48HR_UP	28	-0.64	-1.79	0.003	0.020

VANHARANTA_UTERINE_FIBROID_DN	37	-0.63	-1.79	0.000	0.020
YANG_BREAST_CANCER_ESR1_BULK_DN	18	-0.71	-1.79	0.012	0.020
SMID_BREAST_CANCER_BASAL_UP	389	-0.45	-1.79	0.000	0.020
MITSIADES_RESPONSE_TO_APLIDIN_UP	320	-0.46	-1.79	0.000	0.020
DELYS_THYROID_CANCER_DN	99	-0.53	-1.79	0.001	0.021
WU_HBX_TARGETS_1_DN	19	-0.72	-1.79	0.007	0.021
GSE9988_LPS_VS_LPS_AND_ANTI_TREM1_MONOCYTE_DN	132	-0.51	-1.79	0.001	0.021
BERENJENO_ROCK_SIGNALING_NOT_VIA_RHOA_DN	40	-0.61	-1.79	0.006	0.021
CELL_PROLIFERATION_GO_0008283	301	-0.47	-1.79	0.000	0.021
LUI_THYROID_CANCER_PAX8_PPARG_UP	31	-0.64	-1.79	0.008	0.021
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_72H_ACT_CD4_TCELL_UP	82	-0.54	-1.79	0.007	0.021
LIANG_SILENCED_BY_METHYLATION_2	26	-0.66	-1.79	0.008	0.021
VALK_AML_CLUSTER_2	17	-0.72	-1.79	0.005	0.021
CUSTOM_GIST882_ETV1SH2_DN	77	-0.54	-1.79	0.000	0.021
THUM_SYSTOLIC_HEART_FAILURE_UP	251	-0.47	-1.79	0.000	0.021
RUTELLA_RESPONSE_TO_CSF2RB_AND_IL4_UP	241	-0.47	-1.78	0.000	0.021
CROONQUIST_NRAS_VS_STROMAL_STIMULATION_DN	75	-0.55	-1.78	0.003	0.021
HELLEBREKERS_SILENCED_DURING_TUMOR_ANGIOGENESIS	49	-0.58	-1.78	0.004	0.021
TAVOR_CEBPA_TARGETS_UP	29	-0.65	-1.78	0.013	0.022
CAIRO_HEPATOBLASTOMA_CLASSES_DN	105	-0.52	-1.78	0.000	0.022
POMEROY_MEDULLOBLASTOMA_DESMOPLASIC_VS_CLASSIC_DN	36	-0.61	-1.78	0.010	0.022
GSE11057_EFF_MEM_VS_CENT_MEM_CD4_TCELL_UP	108	-0.52	-1.78	0.000	0.022
BHATI_G2M_ARREST_BY_2METHOXYESTRADIOL_UP	82	-0.53	-1.78	0.003	0.022
SHAFFER_IRF4_TARGETS_IN_ACTIVATED_B_LYMPHOCYTE	68	-0.54	-1.78	0.004	0.022
REACTOME_MYD88_MAL_CASCADE_INITIATED_ON_PLASMA_MEMBRANE	65	-0.56	-1.78	0.000	0.022
GSE26669_CD4_VS_CD8_TCELL_IN_MLR_COSTIM_BLOCK_UP	131	-0.50	-1.78	0.001	0.022
LEONARD_HYPOXIA	41	-0.61	-1.78	0.009	0.022
GSE13484_12H_VS_3H_YF17D_VACCINE_STIM_PBMC_DN	140	-0.49	-1.78	0.000	0.022
LENAOUR_DENDRITIC_CELL_MATURATION_UP	73	-0.54	-1.78	0.001	0.022
RODRIGUES_DCC_TARGETS_DN	90	-0.52	-1.78	0.001	0.022
HAN_SATB1_TARGETS_UP	265	-0.46	-1.78	0.000	0.022
STAMBOLSKY_RESPONSE_TO_VITAMIN_D3_UP	44	-0.60	-1.78	0.002	0.023
MATTIOLI_MULTIPLE_MYELOMA_WITH_14Q32_TRANSLOCATIONS	19	-0.70	-1.77	0.005	0.023
DAZARD_RESPONSE_TO_UV_SCC_UP	99	-0.51	-1.77	0.001	0.023
PROTEIN_SERINE_THREONINE_PHOSPHATASE_ACTIVITY	18	-0.71	-1.77	0.002	0.023
GSE39820_TGFBETA3_IL6_VS_TGFBETA3_IL6_IL23A_TREATED_CD4_TCELL_UP	138	-0.50	-1.77	0.000	0.023
AKL_HTLV1_INFECTION_DN	40	-0.60	-1.77	0.006	0.023
KEGG_LEISHMANIA_INFECTION	43	-0.59	-1.77	0.007	0.023
GSE360_T_GONDII_VS_M_TUBERCULOSIS_DC_DN	113	-0.51	-1.77	0.000	0.023
HELLER_HDAC_TARGETS_DN	193	-0.47	-1.77	0.000	0.023
BURTON_ADIPOGENESIS_PEAK_AT_8HR	31	-0.63	-1.77	0.013	0.023
GSE360_CTRL_VS_M_TUBERCULOSIS_DC_DN	114	-0.52	-1.77	0.000	0.024
PID_CD8TCRDOWNSTREAMPATHWAY	29	-0.63	-1.77	0.011	0.024

REACTOME_NEGATIVE_REGULATION_OF_FGFR_SIGNALING	17	-0.71	-1.77	0.012	0.024
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_1H_DN	77	-0.53	-1.77	0.001	0.024
LOCOMOTORY_BEHAVIOR	19	-0.69	-1.77	0.008	0.024
PID_ERBB1_DOWNSTREAM_PATHWAY	96	-0.52	-1.77	0.001	0.024
GSE22886_NAIVE_CD4_TCELL_VS_NEUTROPHIL_DN	82	-0.53	-1.77	0.004	0.024
RESPONSE_TO_CHEMICAL_STIMULUS	139	-0.49	-1.77	0.000	0.024
GSE20715_0H_VS_6H_OZONE_LUNG_DN	129	-0.49	-1.77	0.001	0.024
GSE37416_0H_VS_24H_F_TULARENSIS_LVS_NEUTROPHIL_DN	154	-0.49	-1.77	0.001	0.024
SARRIO_EPITHELIAL_MESENCHYMAL_TRANSITION_UP	154	-0.48	-1.77	0.001	0.024
RESPONSE_TO_UV	18	-0.71	-1.77	0.008	0.024
MORI_PRE_BI_LYMPHOCYTE_DN	57	-0.56	-1.76	0.007	0.025
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_2H_CD4_TCELL_DN	155	-0.49	-1.76	0.000	0.025
PID_REG_GR_PATHWAY	51	-0.57	-1.76	0.006	0.025
ENZYME_LINKED_RECEPTOR_PROTEIN_SIGNALING_PATHWAY	77	-0.53	-1.76	0.001	0.025
PID_IL6_7PATHWAY	35	-0.61	-1.76	0.010	0.025
NAKAJIMA_MAST_CELL	28	-0.64	-1.76	0.006	0.025
FOURNIER_ACINAR_DEVELOPMENT_LATE_2	251	-0.46	-1.76	0.000	0.025
POSITIVE_REGULATION_OF_BIOLOGICAL_PROCESS	448	-0.44	-1.76	0.000	0.025
GSE2706_UNSTIM_VS_8H_LPS_DC_DN	118	-0.51	-1.76	0.000	0.025
MARTORIATI_MDM4_TARGETS_NEUROEPITHELIUM_UP	119	-0.50	-1.76	0.001	0.025
GSE7460_TCONV_VS_TREG_THYMUS_UP	121	-0.50	-1.76	0.004	0.025
NEGATIVE_REGULATION_OF_BIOLOGICAL_PROCESS	457	-0.44	-1.76	0.000	0.025
REACTOME_ACTIVATED_TLR4_SIGNALLING	73	-0.53	-1.76	0.001	0.025
RUTELLA_RESPONSE_TO_HGF_VS_CSF2RB_AND_IL4_DN	167	-0.48	-1.76	0.000	0.025
TBK1.DF_UP	223	-0.47	-1.76	0.000	0.025
PEREZ_TP63_TARGETS	152	-0.48	-1.76	0.001	0.026
GSE13485_PRE_VS_POST_YF17D_VACCINATION_PBMC_UP	92	-0.52	-1.76	0.007	0.026
GSE6269_E_COLI_VS_STREP_AUREUS_INF_PBMC_DN	126	-0.50	-1.76	0.000	0.026
LEE_AGING_MUSCLE_UP	31	-0.63	-1.76	0.012	0.026
GSE3982_BCELL_VS_CENT_MEMORY_CD4_TCELL_DN	93	-0.52	-1.76	0.004	0.026
LA_MEN1_TARGETS	17	-0.71	-1.76	0.005	0.026
GSE29618_PDC_VS_MDC_UP	119	-0.50	-1.76	0.000	0.026
GAUSSMANN_MLL_AF4_FUSION_TARGETS_A_UP	125	-0.50	-1.76	0.003	0.026
MULTICELLULAR_ORGANISMAL_DEVELOPMENT	480	-0.44	-1.75	0.000	0.027
CUSTOM_Colo800_ETV1SH1_DN	335	-0.44	-1.75	0.000	0.027
GSE3982_DC_VS_NEUTROPHIL_LPS_STIM_DN	100	-0.51	-1.75	0.001	0.027
REACTOME_NFKB_AND_MAP_KINASES_ACTIVATION_MEDIATED_BY_TLR4_SIGNALING_REPERTOIRE	60	-0.56	-1.75	0.004	0.027
GSE2197_IMMUNOSUPPRESSIVE_DNA_VS_UNTREATED_IN_DC_UP	143	-0.48	-1.75	0.000	0.027
NEGATIVE_REGULATION_OF_BIOSYNTHETIC_PROCESS	15	-0.72	-1.75	0.012	0.027
PHOSPHORIC_ESTER_HYDROLASE_ACTIVITY	97	-0.51	-1.75	0.001	0.027
MARTINEZ_RESPONSE_TO_TRABECTEDIN_DN	246	-0.46	-1.75	0.000	0.027
SASSON_RESPONSE_TO_FORSKOLIN_DN	73	-0.53	-1.75	0.001	0.027
OLSSON_E2F3_TARGETS_DN	36	-0.59	-1.75	0.008	0.027
TARTE_PLASMA_CELL_VS_PLASMABLAST_UP	186	-0.48	-1.75	0.000	0.027
KOKKINAKIS_METHIONINE_DEPRIVATION_96HR_UP	93	-0.52	-1.75	0.001	0.027

REACTOME_TRAF6_MEDIATED_INDUCTION_OF_NFKB_AND_MAP_KINASES_UPON_TLR7_8_OR_9_ACTIVATION	62	-0.54	-1.75	0.001	0.027
ZHENG_FOXP3_TARGETS_IN_THYMUS_UP	139	-0.49	-1.75	0.000	0.027
GSE17721_PAM3CSK4_VS_CPG_1H_BMDM_DN	139	-0.49	-1.75	0.000	0.027
BURTON_ADIPOGENESIS_9	68	-0.54	-1.75	0.003	0.027
GSE1460_CD4_THYMOCYTE_VS_NAIVE_CD4_TCELL_CORD_BLOOD_UP	167	-0.47	-1.75	0.000	0.027
GSE17721_POLYIC_VS_PAM3CSK4_2H_BMDM_DN	113	-0.50	-1.75	0.000	0.028
VALK_AML_WITH_CEBPA	21	-0.65	-1.75	0.008	0.028
MRNA_BINDING	19	-0.68	-1.75	0.012	0.028
GSE20366_TREG_VS_NAIVE_CD4_TCELL_UP	129	-0.49	-1.75	0.000	0.028
TRANSMEMBRANE_RECEPTOR_ACTIVITY	106	-0.51	-1.74	0.003	0.028
POSITIVE_REGULATION_OF_CELLULAR_PROCESS	432	-0.44	-1.74	0.000	0.028
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_4	64	-0.54	-1.74	0.007	0.028
TRANSFORMING_GROWTH_FACTOR_BETA_RECEPTOR_SIGNALING_PATHWAY	21	-0.65	-1.74	0.016	0.028
MARTORIATI_MDM4_TARGETS_FETAL_LIVER_UP	154	-0.49	-1.74	0.000	0.028
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_8	33	-0.62	-1.74	0.017	0.028
CUSTOM_A375_ETV1SH1_DN	28	-0.64	-1.74	0.016	0.028
GSE17974_0H_VS_6H_IN_VITRO_ACT_CD4_TCELL_UP	114	-0.50	-1.74	0.001	0.028
SANA_TNF_SIGNALING_UP	50	-0.57	-1.74	0.000	0.028
MURAKAMI_UV_RESPONSE_6HR_UP	26	-0.65	-1.74	0.013	0.029
YAMASHITA_LIVER_CANCER_STEM_CELL_UP	28	-0.62	-1.74	0.005	0.029
HUANG_GATA2_TARGETS_DN	52	-0.57	-1.74	0.004	0.029
GSE13306_TREG_VS_TCONV_LAMINA_PROPRIA_UP	114	-0.50	-1.74	0.001	0.029
PID_PTP1BPATHWAY	36	-0.60	-1.74	0.014	0.029
CENTRAL_NERVOUS_SYSTEM_DEVELOPMENT	56	-0.55	-1.74	0.001	0.029
GROSS_HYPOXIA_VIA_ELK3_ONLY_UP	24	-0.65	-1.74	0.010	0.029
DARWICHE_SQUAMOUS_CELL_CARCINOMA_UP	98	-0.50	-1.74	0.003	0.029
ORGAN_MORPHOGENESIS	66	-0.54	-1.74	0.007	0.029
MELLMAN_TUT1_TARGETS_DN	39	-0.58	-1.74	0.008	0.029
GSE25087_TREG_VS_TCONV_ADULT_UP	129	-0.50	-1.74	0.000	0.029
SIMBULAN_UV_RESPONSE_IMMORTALIZED_DN	27	-0.63	-1.74	0.017	0.030
PDGF_UP.V1_DN	42	-0.59	-1.74	0.008	0.030
LABBE_WNT3A_TARGETS_UP	80	-0.52	-1.73	0.001	0.030
INTRACELLULAR_SIGNALING_CASCADE	403	-0.44	-1.73	0.000	0.030
KEGG_TOLL_LIKE_RECEPTOR_SIGNALING_PATHWAY	55	-0.55	-1.73	0.001	0.030
CYTOKINE_PRODUCTION	26	-0.64	-1.73	0.014	0.030
WEIGEL_OXIDATIVE_STRESS_BY_HNE_AND_H2O2	34	-0.60	-1.73	0.008	0.030
GSE360_CTRL_VS_T_GONDII_DC_DN	108	-0.51	-1.73	0.001	0.030
ORGAN_DEVELOPMENT	252	-0.46	-1.73	0.000	0.030
GSE36476_CTRL_VS_TSST_ACT_72H_MEMORY_CD4_TCELL_OLD_UP	114	-0.49	-1.73	0.004	0.031
BONCI_TARGETS_OF_MIR15A_AND_MIR16_1	62	-0.54	-1.73	0.013	0.031
REACTOME_MAP_KINASE_ACTIVATION_IN_TLR_CASCADE	44	-0.59	-1.73	0.003	0.031
AZARE_NEOPLASTIC_TRANSFORMATION_BY_STAT3_DN	76	-0.53	-1.73	0.001	0.031
ZHU_CMV_ALL_UP	95	-0.51	-1.73	0.000	0.031
GSE20366_CD103_POS_VS_NEG_TREG_KLRG1NEG_UP	82	-0.52	-1.73	0.001	0.031
GSE11057_NAIVE_VS_MEMORY_CD4_TCELL_DN	147	-0.48	-1.73	0.000	0.031

REACTOME_KERATAN_SULFATE_KERATIN_METABOLISM	17	-0.71	-1.73	0.016	0.031
POST_TRANSLATIONAL_PROTEIN_MODIFICATION	325	-0.45	-1.73	0.000	0.031
GSE9988_LOW_LPS_VS_ANTI_TREM1_AND_LPS_MONOCYTE_UP	121	-0.50	-1.73	0.001	0.031
HENDRICKS_SMARCA4_TARGETS_DN	23	-0.64	-1.73	0.009	0.031
BERNARD_PPAPDC1B_TARGETS_DN	36	-0.59	-1.73	0.012	0.031
CERVERA_SDHB_TARGETS_2	50	-0.55	-1.73	0.006	0.032
GSE25087_FETAL_VS_ADULT_TREG_UP	150	-0.48	-1.73	0.000	0.032
BCAT_BILD_ET_AL_DN	36	-0.60	-1.73	0.009	0.032
BHAT_ESR1_TARGETS_VIA_AKT1_DN	51	-0.56	-1.73	0.006	0.032
GOZGIT_ESR1_TARGETS_DN	383	-0.44	-1.72	0.000	0.032
GSE20366_EX_VIVO_VS_DEC205_CONVERSION_NAIVE_CD4_TCELL_DN	108	-0.50	-1.72	0.004	0.032
SHETH_LIVER_CANCER_VS_TXNIP_LOSS_PAM2	102	-0.51	-1.72	0.001	0.032
GSE39820_CTRL_VS_IL1B_IL6_IL23A_CD4_TCELL_UP	140	-0.48	-1.72	0.001	0.032
PID_IL12_2PATHWAY	29	-0.63	-1.72	0.011	0.033
GSE32423_MEMORY_VS_NAIVE_CD8_TCELL_IL7_IL4_DN	150	-0.48	-1.72	0.000	0.033
BROWN_MYELOID_CELL_DEVELOPMENT_UP	86	-0.51	-1.72	0.007	0.033
STEIN_ESRRA_TARGETS_RESPONSIVE_TO_ESTROGEN_UP	24	-0.65	-1.72	0.014	0.033
KEEN_RESPONSE_TO_ROSIGLITAZONE_DN	69	-0.52	-1.72	0.004	0.033
GSE9037_CTRL_VS_LPS_1H_STIM_IRAK4_KO_BMDM_DN	128	-0.49	-1.72	0.003	0.033
SCHAEFFER_PROSTATE_DEVELOPMENT_48HR_DN	191	-0.46	-1.72	0.000	0.033
GSE37416_CTRL_VS_0H_F_TULARENSIS_LVS_NEUTROPHIL_DN	51	-0.56	-1.72	0.004	0.033
MOHANKUMAR_TLX1_TARGETS_DN	72	-0.52	-1.72	0.007	0.033
VERHAAK_GLIOBLASTOMA_NEURAL	122	-0.48	-1.72	0.001	0.033
SMID_BREAST_CANCER_LUMINAL_A_UP	21	-0.65	-1.72	0.015	0.033
SWEET_LUNG_CANCER_KRAS_UP	351	-0.44	-1.72	0.000	0.033
GSE17721_CTRL_VS_PAM3CSK4_1H_BMDM_DN	115	-0.50	-1.72	0.004	0.033
GSE15930_STIM_VS_STIM_AND_IFNAB_24H_CD8_T_CELL_DN	122	-0.49	-1.72	0.003	0.033
YOSHIMURA_MAPK8_TARGETS_DN	271	-0.45	-1.72	0.000	0.033
NEGATIVE_REGULATION_OF_CELLULAR_PROTEIN_METABOLIC_PROCESS	28	-0.62	-1.72	0.009	0.033
MARSHALL_VIRAL_INFECTION_RESPONSE_DN	20	-0.67	-1.72	0.009	0.033
SMID_BREAST_CANCER_BASAL_DN	313	-0.44	-1.72	0.000	0.033
KAECH_DAY8_EFF_VS_DAY15_EFF_CD8_TCELL_DN	138	-0.49	-1.72	0.001	0.033
CHIBA_RESPONSE_TO_TSA_DN	19	-0.68	-1.72	0.017	0.033
HUPER_BREAST_BASAL_VS_LUMINAL_DN	40	-0.59	-1.72	0.009	0.033
RIZ_ERYTHROID_DIFFERENTIATION_HEMGN	17	-0.70	-1.72	0.015	0.033
AZARE_STAT3_TARGETS	16	-0.69	-1.72	0.015	0.033
SCHAEFFER_PROSTATE_DEVELOPMENT_48HR_UP	226	-0.46	-1.72	0.000	0.033
INTEGRAL_TO_PLASMA_MEMBRANE	310	-0.44	-1.72	0.000	0.033
KEGG_TYPE_I_DIABETES_MELLITUS	23	-0.65	-1.72	0.008	0.033
SHEPARD_CRUSH_AND_BURN_MUTANT_UP	145	-0.47	-1.72	0.000	0.033
TIEN_INTESTINE_PROBIOTICS_6HR_UP	50	-0.55	-1.71	0.006	0.034
KANG_IMMORTALIZED_BY_TERT_UP	52	-0.56	-1.71	0.014	0.034
GSE360_DC_VS_MAC_T_GONDII_DN	126	-0.49	-1.71	0.000	0.034
GSE2706_R848_VS_LPS_8H_STIM_DC_DN	100	-0.50	-1.71	0.007	0.034
ANATOMICAL_STRUCTURE_DEVELOPMENT	455	-0.43	-1.71	0.000	0.034
ESC_J1_UP_LATE.V1_DN	110	-0.50	-1.71	0.004	0.035

ALFANO_MYC_TARGETS	189	-0.46	-1.71	0.001	0.035
REGULATION_OF_CELLULAR_PROTEIN_METABOLIC_PROCESS	100	-0.50	-1.71	0.001	0.035
VILIMAS_NOTCH1_TARGETS_UP	16	-0.71	-1.71	0.018	0.036
GSE36392_MAC_VS_NEUTROPHIL_IL25_TREATED_LUNG_DN	95	-0.50	-1.71	0.004	0.036
GSE29614_CTRL_VS_TIV_FLU_VACCINE_PBMC_2007_UP	42	-0.58	-1.70	0.005	0.036
GSE3982_MAST_CELL_VS_BCELL_UP	119	-0.49	-1.70	0.001	0.036
GENTILE_UV_RESPONSE_CLUSTER_D1	16	-0.69	-1.70	0.028	0.036
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_10D_UP	79	-0.51	-1.70	0.007	0.036
GSE7852_TREG_VS_TCONV_THYMUS_UP	123	-0.48	-1.70	0.003	0.036
REACTOME_TOLL_RECEPTOR_CASCADES	85	-0.51	-1.70	0.008	0.036
GSE17721_12H_VS_24H_LPS_BMDM_UP	139	-0.47	-1.70	0.001	0.037
RIGGINS_TAMOXIFEN_RESISTANCE_UP	37	-0.58	-1.70	0.020	0.037
KIM_PTEN_TARGETS_UP	15	-0.70	-1.70	0.018	0.037
BENPORATH_SUZ12_TARGETS	259	-0.45	-1.70	0.000	0.037
CHARAFE_BREAST_CANCER_BASAL_VS_MESENCHYMAL_DN	37	-0.58	-1.70	0.015	0.037
JIANG_TIP30_TARGETS_UP	36	-0.59	-1.70	0.011	0.037
GSE36476_CTRL_VS_TSST_ACT_72H_MEMORY_CD4_TCELL_YOUNG_UP	139	-0.47	-1.70	0.003	0.037
ACEVEDO_LIVER_CANCER_WITH_H3K27ME3_UP	89	-0.50	-1.70	0.003	0.037
RESPONSE_TO_LIGHT_STIMULUS	27	-0.62	-1.70	0.026	0.037
SMID_BREAST_CANCER_LUMINAL_B_UP	72	-0.52	-1.70	0.003	0.037
GSE17721_0.5H_VS_8H_POLYIC_BMDM_DN	137	-0.47	-1.70	0.001	0.037
GUO_HEX_TARGETS_UP	61	-0.53	-1.70	0.006	0.037
INTRINSIC_TO_PLASMA_MEMBRANE	316	-0.44	-1.70	0.000	0.037
KARLSSON_TGFB1_TARGETS_UP	109	-0.50	-1.70	0.001	0.037
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_12H_DN	112	-0.49	-1.70	0.003	0.037
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_HSC_DN	96	-0.50	-1.70	0.000	0.037
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_KRAS_CDC25_UP	47	-0.55	-1.70	0.014	0.037
BRAIN_DEVELOPMENT	23	-0.64	-1.70	0.020	0.037
SECRETION	90	-0.50	-1.70	0.003	0.037
GSE360_T_GONDII_VS_M_TUBERCULOSIS_MAC_DN	115	-0.48	-1.70	0.001	0.038
BLUM_RESPONSE_TO_SALIRASIB_UP	219	-0.45	-1.70	0.001	0.038
ATM_DN.V1_DN	35	-0.59	-1.70	0.017	0.038
GSE17721_CTRL_VS_PAM3CSK4_24H_BMDM_DN	140	-0.47	-1.70	0.001	0.038
GSE2706_2H_VS_8H_LPS_STIM_DC_UP	126	-0.49	-1.69	0.000	0.038
RICKMAN_TUMOR_DIFFERENTIATED_WELL_VS_MODERATELY_DN	57	-0.53	-1.69	0.012	0.038
HOOI_ST7_TARGETS_DN	63	-0.53	-1.69	0.010	0.038
NAKAMURA_ADIPOGENESIS_LATE_DN	24	-0.64	-1.69	0.014	0.038
WEST_ADRENOCORTICAL_TUMOR_DN	311	-0.44	-1.69	0.000	0.038
ENZYME_REGULATOR_ACTIVITY	205	-0.46	-1.69	0.000	0.039
KORKOLA_TERATOMA	21	-0.65	-1.69	0.015	0.039
IL21_UP.V1_DN	45	-0.57	-1.69	0.009	0.039
GSE7852_TREG_VS_TCONV_DN	115	-0.49	-1.69	0.003	0.039
TSUNODA_CISPLATIN_RESISTANCE_DN	37	-0.57	-1.69	0.008	0.039
VERRECCHIA_EARLY_RESPONSE_TO_TGFB1	44	-0.57	-1.69	0.012	0.039
GSE28237_FOLLICULAR_VS_LATE_GC_BCELL_DN	145	-0.47	-1.69	0.003	0.040
MANN_RESPONSE_TO_AMIFOSTINE_UP	20	-0.66	-1.69	0.024	0.040

SEMENZA_HIF1_TARGETS	25	-0.63	-1.69	0.005	0.040
BIOCARTA_NFKB_PATHWAY	19	-0.66	-1.69	0.018	0.040
XU_GH1_EXOGENOUS_TARGETS_DN	57	-0.54	-1.69	0.007	0.040
PID_IL4_2PATHWAY	32	-0.60	-1.69	0.013	0.040
REACTOME_SIGNALING_BY_BMP	17	-0.68	-1.69	0.020	0.040
BROWNE_HCMV_INFECTION_10HR_UP	68	-0.52	-1.69	0.009	0.040
REGULATION_OF_MOLECULAR_FUNCTION	200	-0.45	-1.69	0.000	0.040
LEE_LIVER_CANCER_DENA_UP	35	-0.59	-1.69	0.015	0.041
TAVAZOIE_METASTASIS	41	-0.56	-1.68	0.008	0.041
PID_AMB2_NEUTROPHILS_PATHWAY	20	-0.66	-1.68	0.022	0.041
NAKAYAMA_SOFT_TISSUE_TUMORS_PCA2_DN	21	-0.65	-1.68	0.020	0.041
GSE12845_PRE_GC_VS_DARKZONE_GC_TONSIL_BCELL_UP	119	-0.48	-1.68	0.003	0.041
GSE2197_CPG_DNA_VS_UNTREATED_IN_DC_UP	137	-0.47	-1.68	0.000	0.042
GSE1448_CTRL_VS_ANTI_VBETA5_DP_THYMOCYTE_DN	143	-0.47	-1.68	0.000	0.042
KOKKINAKIS_METHIONINE_DEPRIVATION_96HR_DN	62	-0.53	-1.68	0.012	0.042
PLASMA_MEMBRANE_PART	389	-0.43	-1.68	0.000	0.042
GSE17721_CTRL_VS_GARDIQUIMOD_12H_BMDM_DN	138	-0.47	-1.68	0.001	0.042
KEGG_PANCREATIC_CANCER	59	-0.53	-1.68	0.004	0.042
SYSTEM_DEVELOPMENT	383	-0.43	-1.68	0.000	0.042
BURTON_ADIPOGENESIS_2	58	-0.53	-1.68	0.010	0.042
GSE11057_PBMC_VS_MEM_CD4_TCELL_UP	78	-0.51	-1.68	0.006	0.042
ION_HOMEOSTASIS	35	-0.58	-1.68	0.016	0.043
GSE30962_ACUTE_VS_CHRONIC_LCMV_SECONDARY_INF_CD 8_TCELL_DN	145	-0.47	-1.68	0.003	0.043
REGULATION_OF_PHOSPHORYLATION	26	-0.63	-1.68	0.019	0.043
GSE22886_NAIVE_TCELL_VS_NEUTROPHIL_DN	87	-0.50	-1.68	0.005	0.043
CYTOKINE_BINDING	22	-0.65	-1.68	0.022	0.043
CHIN_BREAST_CANCER_COPY_NUMBER_UP	18	-0.67	-1.68	0.025	0.043
ROSS_AML_WITH_CBFB_MYH11_FUSION	25	-0.62	-1.68	0.016	0.043
DE_YY1_TARGETS_DN	83	-0.50	-1.67	0.007	0.044
GSE17721_CTRL_VS_CPG_1H_BMDM_DN	101	-0.49	-1.67	0.004	0.044
YIH_RESPONSE_TO_ARSENITE_C2	15	-0.70	-1.67	0.026	0.044
GSE37416_12H_VS_48H_F_TULARENSIS_LVS_NEUTROPHIL_U P	147	-0.46	-1.67	0.001	0.044
CELLULAR_CATION_HOMEOSTASIS	27	-0.62	-1.67	0.013	0.044
CHUANG_OXIDATIVE_STRESS_RESPONSE_UP	23	-0.65	-1.67	0.017	0.044
GSE39820_CTRL_VS_TGFBETA1_IL6_IL23A_CD4_TCELL_UP	155	-0.46	-1.67	0.001	0.044
HOELZEL_NF1_TARGETS_DN	42	-0.57	-1.67	0.011	0.044
GSE24634_TEFF_VS_TCONV_DAY7_IN_CULTURE_DN	118	-0.48	-1.67	0.005	0.044
GRUETZMANN_PANCREATIC_CANCER_UP	280	-0.43	-1.67	0.000	0.044
WANG_RESPONSE_TO_GSK3_INHIBITOR_SB216763_DN	286	-0.43	-1.67	0.000	0.044
GSE17721_0.5H_VS_8H_GARDIQUIMOD_BMDM_DN	149	-0.47	-1.67	0.004	0.044
CUSTOM_GIST48_ETV1SH2_DN	74	-0.51	-1.67	0.003	0.044
ZHANG_TARGETS_OF_EWSR1_FLI1_FUSION	61	-0.52	-1.67	0.006	0.044
GSE17721_LPS_VS_GARDIQUIMOD_2H_BMDM_UP	122	-0.48	-1.67	0.003	0.044
BAKKER_FOXO3_TARGETS_UP	43	-0.56	-1.67	0.012	0.044
VEGF_A_UP.V1_DN	149	-0.46	-1.67	0.005	0.045
GSE17721_POLYIC_VS_CPG_1H_BMDM_DN	126	-0.47	-1.67	0.001	0.045
WU_SILENCED_BY_METHYLATION_IN_BLADDER_CANCER	19	-0.66	-1.67	0.018	0.045
GSE17580_TREG_VS_TEFF_S_MANSONI_INF_UP	129	-0.48	-1.67	0.001	0.046
IVANOVA_HEMATOPOIESIS_STEM_CELL	152	-0.46	-1.67	0.000	0.046

GSE29615_CTRL_VS_DAY3_LAIV_IFLU_VACCINE_PBMC_UP	124	-0.47	-1.67	0.003	0.046
GSE13738_RESTING_VS_BYSTANDER_ACTIVATED_CD4_TCELL_DN	140	-0.47	-1.66	0.003	0.046
NEGATIVE_REGULATION_OF_CELL_DIFFERENTIATION	15	-0.71	-1.66	0.016	0.046
GSE17721_PAM3CSK4_VS_GADIQUIMOD_0.5H_BMDM_UP	111	-0.48	-1.66	0.007	0.046
CAMP_MEDIATED_SIGNALING	19	-0.66	-1.66	0.017	0.046
GROWTH_FACTOR_BINDING	16	-0.67	-1.66	0.022	0.047
ABE_VEGFA_TARGETS_2HR	23	-0.63	-1.66	0.023	0.047
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_2H_CD4_TCELL_UP	123	-0.47	-1.66	0.001	0.047
GSE22886_NAIVE_VS_IGM_MEMORY_BCELL_UP	107	-0.48	-1.66	0.001	0.047
ZHU_CMV_8_HR_UP	31	-0.59	-1.66	0.019	0.047
ST_GA13_PATHWAY	29	-0.60	-1.66	0.013	0.047
KRAS.50_UP.V1_UP	15	-0.69	-1.66	0.033	0.047
GSE39820_CTRL_VS_TGFBETA3_IL6_CD4_TCELL_UP	150	-0.46	-1.66	0.001	0.047
SASSON_RESPONSE_TO_GONADOTROPHINS_DN	72	-0.51	-1.66	0.001	0.047
BARIS_THYROID_CANCER_DN	46	-0.55	-1.66	0.015	0.048
GSE26495_NAIVE_VS_PD1HIGH_CD8_TCELL_DN	117	-0.47	-1.66	0.004	0.048
MULLIGHAN_MLL_SIGNATURE_1_DN	145	-0.46	-1.66	0.000	0.048
GYORFFY_DOXORUBICIN_RESISTANCE	30	-0.59	-1.66	0.023	0.048
CERVERA_SDHB_TARGETS_1_UP	46	-0.55	-1.66	0.009	0.048
KIM_MYCN_AMPLIFICATION_TARGETS_DN	70	-0.52	-1.66	0.010	0.049
ZHAN_MULTIPLE_MYELOMA_CD1_VS_CD2_DN	26	-0.61	-1.66	0.021	0.049
GSE29618_MONOCYTE_VS_PDC_DAY7_FLU_VACCINE_DN	129	-0.47	-1.66	0.004	0.049
NAKAYAMA_FRA2_TARGETS	35	-0.57	-1.66	0.024	0.049
HERNANDEZ_MITOTIC_ARREST_BY_DOCETAXEL_1_UP	20	-0.65	-1.65	0.038	0.049
SHAFFER_IRF4_TARGETS_IN_MYELOMA_VS_MATURE_B_LYMPHOCYTE	88	-0.49	-1.65	0.013	0.049
GSE17721_PAM3CSK4_VS_GADIQUIMOD_8H_BMDM_DN	148	-0.46	-1.65	0.000	0.049
REGULATION_OF_PROTEIN_MODIFICATION_PROCESS	25	-0.62	-1.65	0.021	0.050
RIZ_ERYTHROID_DIFFERENTIATION_12HR	26	-0.61	-1.65	0.022	0.050
KEGG_SMALL_CELL_LUNG_CANCER	66	-0.51	-1.65	0.019	0.050
CUSTOM_ICC-MY UP	23	-0.63	-1.65	0.021	0.050
ST_GAQ_PATHWAY	22	-0.63	-1.65	0.024	0.050
GSE29618_BCELL_VS_MONOCYTE_DAY7_FLU_VACCINE_UP	110	-0.47	-1.65	0.005	0.050
GSE17721_CTRL_VS_LPS_2H_BMDM_DN	123	-0.47	-1.65	0.004	0.050
XU_HGF_TARGETS_INDUCED_BY_AKT1_6HR	15	-0.68	-1.65	0.030	0.050
KYNG_ENVIRONMENTAL_STRESS_RESPONSE_UP	45	-0.55	-1.65	0.011	0.050
REGULATION_OF_SIGNAL_TRANSDUCTION	152	-0.45	-1.65	0.004	0.050
NAKAMURA_ADIPOGENESIS_EARLY_DN	23	-0.63	-1.65	0.024	0.050

Supplemental Table 6: Gene sets enriched in downregulated genes in Colo800 cells treated with vemurafenib

NAME	SIZE	ES	NES	NOM p-val	FDR q-val
KOBAYASHI_EGFR_SIGNALING_24HR_DN	240	-0.83	-3.02	0.000	0.000
ROSTY_CERVICAL_CANCER_PROLIFERATION_CLUSTER	138	-0.88	-3.02	0.000	0.000
DUTERTRE_ESTRADIOL_RESPONSE_24HR_UP	309	-0.80	-2.98	0.000	0.000
GSE15750_DAY6_VS_DAY10_EFF_CD8_TCELL_UP	191	-0.84	-2.97	0.000	0.000
SOTIRIOU_BREAST_CANCER_GRADE_1_VS_3_UP	148	-0.84	-2.95	0.000	0.000
GSE15750_DAY6_VS_DAY10_TRAF6KO_EFF_CD8_TCELL_UP	189	-0.82	-2.94	0.000	0.000
CROONQUIST_IL6_DEPRIVATION_DN	98	-0.88	-2.94	0.000	0.000
LEE_EARLY_T_LYMPHOCYTE_UP	94	-0.88	-2.91	0.000	0.000
CHANG_CYCLING_GENES	145	-0.82	-2.86	0.000	0.000
GRAHAM_NORMAL_QUIESCENT_VS_NORMAL_DIVIDING_DN	80	-0.87	-2.85	0.000	0.000
GRAHAM_CML_DIVIDING_VS_NORMAL_QUIESCENT_UP	160	-0.81	-2.84	0.000	0.000
WHITEFORD_PEDIATRIC_CANCER_MARKERS	108	-0.84	-2.83	0.000	0.000
GOLDRATH_EFF_VS_MEMORY_CD8_TCELL_UP	179	-0.79	-2.83	0.000	0.000
CROONQUIST_NRAS_SIGNALING_DN	72	-0.88	-2.82	0.000	0.000
KANG_DOXORUBICIN_RESISTANCE_UP	54	-0.92	-2.81	0.000	0.000
SARRIO_EPITHELIAL_MESENCHYMAL_TRANSITION_UP	163	-0.80	-2.81	0.000	0.000
GSE30962_PRIMARY_VS_SECONDARY_ACUTE_LCMV_INF_CD8_TCELL_UP	181	-0.79	-2.80	0.000	0.000
ZHOU_CELL_CYCLE_GENES_IN_IR_RESPONSE_24HR	122	-0.82	-2.80	0.000	0.000
CUSTOM_A375_ETV1SH2_DN	150	-0.80	-2.80	0.000	0.000
HOFFMANN_LARGE_TO_SMALL_PRE_BII_LYMPHOCYTE_UP	158	-0.79	-2.79	0.000	0.000
ODONNELL_TFRC_TARGETS_DN	112	-0.82	-2.78	0.000	0.000
ZHOU_CELL_CYCLE_GENES_IN_IR_RESPONSE_6HR	82	-0.84	-2.77	0.000	0.000
KONG_E2F3_TARGETS	90	-0.84	-2.76	0.000	0.000
WANG_RESPONSE_TO_GSK3_INHIBITOR_SB216763_DN	324	-0.75	-2.76	0.000	0.000
GSE36476_CTRL_VS_TSST_ACT_72H_MEMORY_CD4_TCELL_YOUNG_DN	192	-0.77	-2.75	0.000	0.000
ZHANG_TLX_TARGETS_60HR_DN	269	-0.76	-2.75	0.000	0.000
FUJII_YBX1_TARGETS_DN	196	-0.76	-2.73	0.000	0.000
WINNEPENNINCKX_MELANOMA_METASTASIS_UP	156	-0.78	-2.72	0.000	0.000
SHEDDEN_LUNG_CANCER_POOR_SURVIVAL_A6	428	-0.73	-2.72	0.000	0.000
HORIUCHI_WTAP_TARGETS_DN	298	-0.74	-2.72	0.000	0.000
RUIZ_TNC_TARGETS_DN	136	-0.78	-2.72	0.000	0.000
GOLDRATH_NAIVE_VS_EFF_CD8_TCELL_DN	170	-0.77	-2.72	0.000	0.000
GSE24634_TEFF_VS_TCONV_DAY7_IN_CULTURE_UP	175	-0.77	-2.72	0.000	0.000
GSE36476_CTRL_VS_TSST_ACT_40H_MEMORY_CD4_TCELL_YOUNG_DN	188	-0.77	-2.71	0.000	0.000
MORI_IMMATURE_B_LYMPHOCYTE_DN	87	-0.82	-2.71	0.000	0.000
BURTON_ADIPOGENESIS_3	98	-0.81	-2.71	0.000	0.000
VECCHI_GASTRIC_CANCER_EARLY_UP	377	-0.72	-2.70	0.000	0.000
GSE24634_TREG_VS_TCONV_POST_DAY7_IL4_CONVERSION_UP	171	-0.76	-2.69	0.000	0.000
FOURNIER_ACINAR_DEVELOPMENT_LATE_2	272	-0.74	-2.69	0.000	0.000
MISSIAGLIA_REGULATED_BY_METHYLATION_DN	117	-0.78	-2.68	0.000	0.000
NAKAYAMA_SOFT_TISSUE_TUMORS_PCA2_UP	74	-0.84	-2.68	0.000	0.000
ZHANG_TLX_TARGETS_UP	87	-0.82	-2.68	0.000	0.000
BENPORATH_PROLIFERATION	143	-0.76	-2.66	0.000	0.000
ZHAN_MULTIPLE_MYELOMA_PR_UP	45	-0.90	-2.65	0.000	0.000

BLUM_RESPONSE_TO_SALIRASIB_DN	328	-0.71	-2.64	0.000	0.000
MORI_LARGE_PRE_BII_LYMPHOCYTE_UP	80	-0.82	-2.64	0.000	0.000
ISHIDA_E2F_TARGETS	52	-0.87	-2.64	0.000	0.000
CHIANG_LIVER_CANCER_SUBCLASS_PROLIFERATION_UP	164	-0.75	-2.63	0.000	0.000
FERREIRA_EWINGS_SARCOMA_UNSTABLE_VS_STABLE_UP	153	-0.75	-2.63	0.000	0.000
BASAKI_YBX1_TARGETS_UP	273	-0.72	-2.62	0.000	0.000
GOLDRATH_ANTIGEN_RESPONSE	295	-0.71	-2.61	0.000	0.000
GSE36476_CTRL_VS_TSST_ACT_40H_MEMORY_CD4_TCELL_OLD_DN	197	-0.73	-2.61	0.000	0.000
MANALO_HYPOXIA_DN	286	-0.71	-2.60	0.000	0.000
FURUKAWA_DUSP6_TARGETS_PCI35_DN	66	-0.83	-2.60	0.000	0.000
ZHENG_GLIOBLASTOMA_PLASTICITY_UP	209	-0.71	-2.60	0.000	0.000
GAVIN_FOXP3_TARGETS_CLUSTER_P6	84	-0.79	-2.60	0.000	0.000
WU_APOPTOSIS_BY_CDKN1A_VIA_TP53	54	-0.84	-2.59	0.000	0.000
WHITFIELD_CELL_CYCLE_LITERATURE	44	-0.87	-2.59	0.000	0.000
MOLENAAR_TARGETS_OF_CCND1_AND_CDK4_DN	56	-0.84	-2.59	0.000	0.000
CHEMNITZ_RESPONSE_TO_PROSTAGLANDIN_E2_UP	142	-0.75	-2.58	0.000	0.000
AMUNDSON_GAMMA_RADIATION_RESPONSE	39	-0.88	-2.58	0.000	0.000
ZHANG_TLX_TARGETS_36HR_DN	183	-0.73	-2.57	0.000	0.000
PUJANA_XPRSS_INT_NETWORK	165	-0.72	-2.57	0.000	0.000
GSE36476_CTRL_VS_TSST_ACT_72H_MEMORY_CD4_TCELL_OLD_DN	197	-0.72	-2.56	0.000	0.000
POOLA_INVASIVE_BREAST_CANCER_UP	179	-0.72	-2.56	0.000	0.000
TANG_SENESCENCE_TP53_TARGETS_DN	51	-0.84	-2.55	0.000	0.000
RHODES_UNDIFFERENTIATED_CANCER	67	-0.80	-2.54	0.000	0.000
MARKEY_RB1_ACUTE_LOF_DN	214	-0.71	-2.54	0.000	0.000
REACTOME_DNA_REPLICATION	186	-0.71	-2.54	0.000	0.000
GSE22886_UNSTIM_VS_IL2_STIM_NKCELL_DN	190	-0.71	-2.53	0.000	0.000
KAUFFMANN_MELANOMA_RELAPSE_UP	60	-0.81	-2.53	0.000	0.000
M_PHASE	100	-0.75	-2.52	0.000	0.000
REACTOME_CELL_CYCLE_MITOTIC	304	-0.69	-2.52	0.000	0.000
SENGUPTA_NASOPHARYNGEAL_CARCINOMA_UP	267	-0.69	-2.52	0.000	0.000
GREENBAUM_E2A_TARGETS_UP	31	-0.92	-2.52	0.000	0.000
CELL_CYCLE_PROCESS	174	-0.71	-2.51	0.000	0.000
MORI_PRE_BI_LYMPHOCYTE_UP	72	-0.78	-2.50	0.000	0.000
M_PHASE_OF_MITOTIC_CELL_CYCLE	78	-0.77	-2.50	0.000	0.000
CELL_CYCLE_PHASE	151	-0.72	-2.50	0.000	0.000
GSE10239_NAIVE_VS_DAY4.5_EFF_CD8_TCELL_DN	181	-0.71	-2.50	0.000	0.000
MITOSIS	75	-0.77	-2.50	0.000	0.000
LE_EGR2_TARGETS_UP	102	-0.75	-2.50	0.000	0.000
ODONNELL_TARGETS_OF_MYC_AND_TFRC_DN	43	-0.84	-2.49	0.000	0.000
PUJANA_BRCA2_PCC_NETWORK	396	-0.67	-2.49	0.000	0.000
GSE10239_NAIVE_VS_KLRG1HIGH_EFF_CD8_TCELL_DN	181	-0.70	-2.49	0.000	0.000
CROONQUIST_NRAS_VS_STROMAL_STIMULATION_DN	88	-0.76	-2.49	0.000	0.000
GSE3982_MEMORY_CD4_TCELL_VS_TH2_DN	190	-0.70	-2.48	0.000	0.000
YU_MYC_TARGETS_UP	42	-0.84	-2.48	0.000	0.000
LINDGREN_BLADDER_CANCER_CLUSTER_3_UP	311	-0.67	-2.48	0.000	0.000
SHEPARD_BMYB_TARGETS	57	-0.80	-2.47	0.000	0.000
LI_WILMS_TUMOR_VS_FETAL_KIDNEY_1_DN	154	-0.71	-2.47	0.000	0.000
MITOTIC_CELL_CYCLE	143	-0.71	-2.47	0.000	0.000
GSE24634_IL4_VS_CTRL_TREATED_NAIVE_CD4_TCELL_DAY7_UP	177	-0.69	-2.47	0.000	0.000

VERNELL_RETINOBLASTOMA_PATHWAY_UP	69	-0.77	-2.46	0.000	0.000
PUJANA_BRCA_CENTERED_NETWORK	117	-0.73	-2.46	0.000	0.000
GSE30962_ACUTE_VS_CHRONIC_LCMV_PRIMARY_INF_CD8_T CELL_DN	177	-0.69	-2.45	0.000	0.000
REN_BOUND_BY_E2F	60	-0.78	-2.45	0.000	0.000
GRAHAM_CML_QUIESCENT_VS_NORMAL_QUIESCENT_UP	68	-0.77	-2.45	0.000	0.000
PID_PLK1_PATHWAY	46	-0.81	-2.45	0.000	0.000
WILCOX_PRESPONSE_TO_ROGESTERONE_UP	131	-0.71	-2.45	0.000	0.000
EGUCHI_CELL_CYCLE_RB1_TARGETS	23	-0.94	-2.45	0.000	0.000
GSE12845_IGD_POS_BLOOD_VS_PRE_GC_TONSIL_BCELL_DN	190	-0.68	-2.45	0.000	0.000
REACTOME_MITOTIC_M_M_G1_PHASES	166	-0.69	-2.45	0.000	0.000
VANTVEER_BREAST_CANCER_METASTASIS_DN	110	-0.73	-2.45	0.000	0.000
BURTON_ADIPOGENESIS_PEAK_AT_24HR	39	-0.84	-2.44	0.000	0.000
FARMER_BREAST_CANCER_CLUSTER_2	33	-0.88	-2.44	0.000	0.000
SMIRNOV_RESPONSE_TO_IR_6HR_DN	94	-0.73	-2.44	0.000	0.000
GAL_LEUKEMIC_STEM_CELL_DN	168	-0.69	-2.44	0.000	0.000
KAMMINGA_EZH2_TARGETS	40	-0.83	-2.44	0.000	0.000
GSE3982_MEMORY_CD4_TCELL_VS_TH1_DN	191	-0.68	-2.44	0.000	0.000
CUSTOM_Colo800_ETV1SH2	175	-0.68	-2.43	0.000	0.000
FRASOR_RESPONSE_TO_SERM_OR_FULVESTRANT_DN	47	-0.82	-2.43	0.000	0.000
LINDGREN_BLADDER_CANCER_CLUSTER_1_DN	340	-0.65	-2.43	0.000	0.000
PETROVA_ENDOTHELIUM_LYMPHATIC_VS_BLOOD_UP	115	-0.71	-2.42	0.000	0.000
AFFAR_YY1_TARGETS_DN	182	-0.68	-2.42	0.000	0.000
CUSTOM_PRATALIS MAPK	44	-0.83	-2.42	0.000	0.000
ALCALAY_AML_BY_NPM1_LOCALIZATION_DN	162	-0.68	-2.42	0.000	0.000
WONG_EMBRYONIC_STEM_CELL_CORE	327	-0.65	-2.41	0.000	0.000
REACTOME_MITOTIC_G1_G1_S_PHASES	128	-0.70	-2.41	0.000	0.000
GSE17974_0H_VS_24H_IN_VITRO_ACT_CD4_TCELL_DN	180	-0.67	-2.41	0.000	0.000
SONG_TARGETS_OF_IE86_CMV_PROTEIN	60	-0.78	-2.41	0.000	0.000
REACTOME_CELL_CYCLE	365	-0.65	-2.41	0.000	0.000
KEGG_CELL_CYCLE	117	-0.71	-2.41	0.000	0.000
CSR_LATE_UP.V1_UP	149	-0.69	-2.40	0.000	0.000
SHEPARD_BMYB_MORPHOLINO_DN	153	-0.69	-2.40	0.000	0.000
GSE29614_CTRL_VS_DAY7_TIV_FLU_VACCINE_PBMC_DN	160	-0.69	-2.40	0.000	0.000
REACTOME_G2_M_CHECKPOINTS	41	-0.83	-2.40	0.000	0.000
REICHERT_MITOSIS_LIN9_TARGETS	28	-0.89	-2.40	0.000	0.000
MITSIADES_RESPONSE_TO_APLIDIN_DN	243	-0.66	-2.40	0.000	0.000
STEIN_ESRRA_TARGETS_RESPONSIVE_TO_ESTROGEN_DN	38	-0.83	-2.40	0.000	0.000
TARTE_PLASMA_CELL_VS_PLASMABLAST_DN	297	-0.65	-2.39	0.000	0.000
CHICAS_RB1_TARGETS_GROWING	216	-0.67	-2.39	0.000	0.000
ONDER_CDH1_TARGETS_1_DN	136	-0.69	-2.39	0.000	0.000
NADERI_BREAST_CANCER_PROGNOSIS_UP	42	-0.80	-2.39	0.000	0.000
GSE22886_UNSTIM_VS_IL15_STIM_NKCELL_DN	194	-0.67	-2.39	0.000	0.000
PUJANA_BREAST_CANCER_WITH_BRCA1_MUTATED_UP	56	-0.78	-2.39	0.000	0.000
MEL18_DN.V1_UP	117	-0.69	-2.39	0.000	0.000
LY_AGING_OLD_DN	55	-0.77	-2.39	0.000	0.000
REACTOME_ACTIVATION_OF_ATR_IN_RESPONSE_TO_REPLIC ATION_STRESS	35	-0.84	-2.39	0.000	0.000
GSE3982_NKCELL_VS_TH1_DN	186	-0.66	-2.38	0.000	0.000

GSE30962_ACUTE_VS_CHRONIC_LCMV_SECONDARY_INF_CD8_TCELL_DN	177	-0.67	-2.38	0.000	0.000
GSE7764_IL15_TREATED_VS_CTRL_NK_CELL_24H_UP	193	-0.66	-2.37	0.000	0.000
DUTERTRE_ESTRADIOL_RESPONSE_6HR_UP	211	-0.65	-2.37	0.000	0.000
GSE20715_0H_VS_48H_OZONE_LUNG_DN	178	-0.67	-2.37	0.000	0.000
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_TURQUOISE_DN	52	-0.77	-2.37	0.000	0.000
BOYAULT_LIVER_CANCER_SUBCLASS_G23_UP	49	-0.78	-2.37	0.000	0.000
ONDER_CDH1_TARGETS_3_DN	31	-0.85	-2.37	0.000	0.000
MARZEC_IL2_SIGNALING_UP	90	-0.72	-2.36	0.000	0.000
GHANDHI_DIRECT_IRRADIATION_UP	84	-0.73	-2.36	0.000	0.000
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_KRAS_UP	115	-0.69	-2.36	0.000	0.000
GSE24634_TEFF_VS_TCONV_DAY10_IN_CULTURE_UP	172	-0.66	-2.36	0.000	0.000
OXFORD_RALA_OR_RALB_TARGETS_UP	47	-0.79	-2.36	0.000	0.000
AMIT_EGF_RESPONSE_120_MCF10A	41	-0.79	-2.35	0.000	0.000
LY_AGING_PREMATURE_DN	30	-0.83	-2.35	0.000	0.000
BIDUS_METASTASIS_UP	208	-0.65	-2.35	0.000	0.000
GSE24634_TREG_VS_TCONV_POST_DAY5_IL4_CONVERSION_UP	193	-0.65	-2.35	0.000	0.000
GSE3982_NKCELL_VS_TH2_DN	184	-0.66	-2.35	0.000	0.000
SHEPARD_CRUSH_AND_BURN_MUTANT_DN	142	-0.67	-2.35	0.000	0.000
GSE3982_BCELL_VS_TH2_DN	164	-0.67	-2.35	0.000	0.000
REACTOME_ACTIVATION_OF_THE_PRE_REPLICATIVE_COMPLEX	30	-0.85	-2.34	0.000	0.000
CELL_CYCLE_GO_0007049	285	-0.64	-2.34	0.000	0.000
REACTOME_MITOTIC_PROMETAPHASE	85	-0.72	-2.34	0.000	0.000
WHITFIELD_CELL_CYCLE_G2	171	-0.66	-2.34	0.000	0.000
GSE24634_TREG_VS_TCONV_POST_DAY3_IL4_CONVERSION_UP	189	-0.66	-2.34	0.000	0.000
GSE24634_TEFF_VS_TCONV_DAY5_IN_CULTURE_UP	194	-0.66	-2.34	0.000	0.000
CHROMOSOMAL_PART	91	-0.71	-2.34	0.000	0.000
REACTOME_S_PHASE	105	-0.69	-2.33	0.000	0.000
KAUFFMANN_DNA_REPLICATION_GENES	136	-0.68	-2.33	0.000	0.000
CHANG_CORE_SERUM_RESPONSE_UP	203	-0.65	-2.33	0.000	0.000
WHITFIELD_CELL_CYCLE_G2_M	202	-0.65	-2.33	0.000	0.000
REACTOME_G1_S_TRANSITION	105	-0.70	-2.33	0.000	0.000
CHICAS_RB1_TARGETS_SENESCENT	494	-0.62	-2.33	0.000	0.000
MCLACHLAN_DENTAL_CARIES_UP	159	-0.66	-2.33	0.000	0.000
VEGF_A_UP.V1_DN	174	-0.65	-2.33	0.000	0.000
REACTOME_E2F_MEDIATED_REGULATION_OF_DNA_REPLICATION	32	-0.83	-2.33	0.000	0.000
GSE24634_TEFF_VS_TCONV_DAY3_IN_CULTURE_UP	186	-0.66	-2.32	0.000	0.000
GHANDHI_BYSTANDER_IRRADIATION_UP	66	-0.73	-2.32	0.000	0.000
GSE15930_NAIVE_VS_72H_IN_VITRO_STIM_IFNAB_CD8_TCELL_DN	191	-0.65	-2.32	0.000	0.000
BILD_HRAS_ONCOGENIC_SIGNATURE	228	-0.64	-2.32	0.000	0.000
SPINDLE	38	-0.79	-2.32	0.000	0.000
GSE12366_GC_VS_MEMORY_BCELL_UP	178	-0.65	-2.32	0.000	0.000
MUELLER_PLURINET	275	-0.63	-2.32	0.000	0.000
REGULATION_OF_MITOSIS	36	-0.83	-2.31	0.000	0.000
NAGASHIMA_EGF_SIGNALING_UP	53	-0.76	-2.31	0.000	0.000
WEST_ADRENOCORTICAL_TUMOR_UP	289	-0.63	-2.30	0.000	0.000
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_1	36	-0.81	-2.30	0.000	0.000

GSE3982_BCELL_VS_TH1_DN	167	-0.64	-2.29	0.000	0.000
SMID_BREAST_CANCER_BASAL_UP	498	-0.61	-2.29	0.000	0.000
BURTON_ADIPOGENESIS_PEAK_AT_16HR	39	-0.78	-2.29	0.000	0.000
KEGG_DNA_REPLICATION	36	-0.80	-2.29	0.000	0.000
CHROMOSOME	116	-0.69	-2.29	0.000	0.000
GSE20715_0H_VS_48H_OZONE_TLR4_KO_LUNG_DN	181	-0.65	-2.28	0.000	0.000
NAGASHIMA_NRG1_SIGNALING_UP	162	-0.65	-2.28	0.000	0.000
GSE34205_HEALTHY_VS_RSV_INF_INFANT_PBMC_DN	131	-0.66	-2.28	0.000	0.000
KAECH_DAY8_EFF_VS_MEMORY_CD8_TCELL_UP	185	-0.64	-2.28	0.000	0.000
HARRIS_HYPOXIA	65	-0.72	-2.28	0.000	0.000
HINATA_NFKB_TARGETS_KERATINOCYTE_UP	71	-0.71	-2.27	0.000	0.000
CROMER_TUMORIGENESIS_UP	46	-0.75	-2.27	0.000	0.000
GSE3982_CENT_MEMORY_CD4_TCELL_VS_TH1_DN	186	-0.64	-2.27	0.000	0.000
KRAS.LUNG.BREAST_UP.V1_UP	73	-0.72	-2.27	0.000	0.000
GSE3982_CENT_MEMORY_CD4_TCELL_VS_TH2_DN	188	-0.64	-2.27	0.000	0.000
REACTOME_DNA_STRAND_ELONGATION	30	-0.83	-2.27	0.000	0.000
SABATES_COLORECTAL_ADENOMA_UP	77	-0.70	-2.27	0.000	0.000
GSE10239_NAIVE_VS_KLRG1INT_EFF_CD8_TCELL_DN	179	-0.64	-2.27	0.000	0.000
GSE29614_CTRL_VS_TIV_FLU_VACCINE_PBMC_2007_DN	124	-0.67	-2.27	0.000	0.000
PID_FOXM1PATHWAY	38	-0.78	-2.27	0.000	0.000
GSE3982_DC_VS_TH2_DN	173	-0.64	-2.26	0.000	0.000
GSE15930_NAIVE_VS_72H_IN_VITRO_STIM_CD8_TCELL_DN	188	-0.64	-2.26	0.000	0.000
RIGGI_EWING_SARCOMA_PROGENITOR_DN	150	-0.65	-2.26	0.000	0.000
GSE24634_TREG_VS_TCONV_POST_DAY10_IL4_CONVERSION_UP	177	-0.64	-2.26	0.000	0.000
GSE9988_LOW_LPS_VS_VEHICLE_TREATED_MONOCYTE_UP	157	-0.64	-2.26	0.000	0.000
REACTOME_KINESINS	22	-0.88	-2.26	0.000	0.000
PEART_HDAC_PROLIFERATION_CLUSTER_DN	68	-0.71	-2.26	0.000	0.000
NAKAMURA_CANCER_MICROENVIRONMENT_DN	46	-0.74	-2.26	0.000	0.000
CUSTOM_GIST48_ETV1SH1_DN	67	-0.70	-2.26	0.000	0.000
MCLACHLAN_DENTAL_CARIES_DN	158	-0.65	-2.25	0.000	0.000
LEE_LIVER_CANCER_SURVIVAL_DN	157	-0.64	-2.25	0.000	0.000
KIM_WT1_TARGETS_UP	199	-0.63	-2.25	0.000	0.000
PYEON_CANCER_HEAD_AND_NECK_VS_CERVICAL_UP	174	-0.64	-2.25	0.000	0.000
WEST_ADRENOCORTICAL_TUMOR_MARKERS_UP	21	-0.89	-2.25	0.000	0.000
KAECH_DAY8_EFF_VS_DAY15_EFF_CD8_TCELL_UP	187	-0.63	-2.25	0.000	0.000
RESPONSE_TO_EXTERNAL_STIMULUS	163	-0.63	-2.24	0.000	0.000
FINETTI_BREAST_CANCER_KINOME_RED	16	-0.91	-2.24	0.000	0.000
EGFR_UP.V1_UP	165	-0.63	-2.24	0.000	0.000
SCIAN_CELL_CYCLE_TARGETS_OF_TP53_AND_TP73_DN	21	-0.87	-2.24	0.000	0.000
BROWNE_HCMV_INFECTION_2HR_DN	44	-0.75	-2.24	0.000	0.000
CONCANNON_APOPTOSIS_BY_EPOXOMICIN_DN	144	-0.65	-2.24	0.000	0.000
REACTOME_CELL_CYCLE_CHECKPOINTS	110	-0.66	-2.24	0.000	0.000
GSE29614_DAY3_VS_DAY7_TIV_FLU_VACCINE_PBMC_DN	152	-0.64	-2.24	0.000	0.000
BENPORATH_ES_1	320	-0.61	-2.24	0.000	0.000
PLASARI_TGFB1_TARGETS_10HR_UP	151	-0.65	-2.24	0.000	0.000
MCBRYAN_PUBERTAL_BREAST_6_7WK_DN	64	-0.71	-2.24	0.000	0.000
SERVITJA_LIVER_HNF1A_TARGETS_UP	108	-0.67	-2.24	0.000	0.000
HOXA9_DN.V1_DN	176	-0.62	-2.24	0.000	0.000
LINDSTEDT_DENDRITIC_CELL_MATURATION_A	48	-0.74	-2.23	0.000	0.000

GSE9988_LPS_VS_VEHICLE_TREATED_MONOCYTE_UP	153	-0.64	-2.23	0.000	0.000
GSE7460_CTRL_VS_TGFB_TREATED_ACT_TREG_UP	182	-0.64	-2.23	0.000	0.000
GSE7852_LN_VS_THYMUS_TCONV_DN	182	-0.62	-2.23	0.000	0.000
LIANG_SILENCED_BY_METHYLATION_2	41	-0.76	-2.23	0.000	0.000
REACTOME_SYNTHESIS_OF_DNA	89	-0.68	-2.23	0.000	0.000
RHEIN_ALL_GLUCOCORTICOID_THERAPY_DN	344	-0.60	-2.23	0.000	0.000
LY_AGING_MIDDLE_DN	16	-0.93	-2.22	0.000	0.000
MARKEY_RB1_CHRONIC_LOF_UP	97	-0.67	-2.22	0.000	0.000
REACTOME_M_G1_TRANSITION	77	-0.69	-2.22	0.000	0.000
INTERPHASE_OF_MITOTIC_CELL_CYCLE	59	-0.70	-2.22	0.000	0.000
INTERPHASE	63	-0.71	-2.22	0.000	0.000
GSE9988_LOW_LPS_VS_CTRL_TREATED_MONOCYTE_UP	156	-0.64	-2.22	0.000	0.000
PID_AURORA_B_PATHWAY	37	-0.77	-2.21	0.000	0.000
OLSSON_E2F3_TARGETS_DN	41	-0.75	-2.21	0.000	0.000
GSE22886_NAIVE_CD4_TCELL_VS_48H_ACT_TH1_DN	197	-0.61	-2.20	0.000	0.000
GSE15930_NAIVE_VS_24H_IN_VITRO_STIM_CD8_TCELL_DN	193	-0.61	-2.20	0.000	0.000
PUJANA_BREAST_CANCER_LIT_INT_NETWORK	101	-0.66	-2.20	0.000	0.000
LABBE_WNT3A_TARGETS_UP	95	-0.66	-2.20	0.000	0.000
RPS14_DN.V1_DN	165	-0.62	-2.19	0.000	0.000
KAUFFMANN_DNA_REPAIR_GENES	219	-0.60	-2.19	0.000	0.000
BMI1_DN.V1_UP	116	-0.65	-2.19	0.000	0.000
GSE15930_NAIVE_VS_72H_IN_VITRO_STIM_TRICHOSTATINA_CD8_TCELL_DN	185	-0.61	-2.19	0.000	0.000
PID_FANCONI_PATHWAY	47	-0.73	-2.19	0.000	0.000
GSE3982_EFF_MEMORY_CD4_TCELL_VS_TH1_DN	186	-0.61	-2.19	0.000	0.000
GSE20366_EX_VIVO_VS_HOMEOSTATIC_CONVERSION_TREG_DN	167	-0.62	-2.19	0.000	0.000
PHONG_TNF_TARGETS_UP	58	-0.70	-2.19	0.000	0.000
WANG_SMARCE1_TARGETS_DN	332	-0.59	-2.18	0.000	0.000
KRAS.BREAST_UP.V1_UP	67	-0.70	-2.18	0.000	0.000
PLASARI_TGFB1_TARGETS_1HR_UP	31	-0.78	-2.18	0.000	0.000
JAEGER_METASTASIS_UP	40	-0.75	-2.18	0.000	0.000
FOURNIER_ACINAR_DEVELOPMENT_LATE_DN	19	-0.86	-2.18	0.000	0.000
AMIT_EGF_RESPONSE_480_HELA	151	-0.63	-2.18	0.000	0.000
WIEDERSCHAIN_TARGETS_OF_BMI1_AND_PCGF2	47	-0.72	-2.18	0.000	0.000
GSE3982_DC_VS_TH1_DN	176	-0.61	-2.18	0.000	0.000
GSE3982_BASOPHIL_VS_TH1_DN	182	-0.61	-2.18	0.000	0.000
NAKAMURA_TUMOR_ZONE_PERIPHERAL_VS_CENTRAL_UP	253	-0.60	-2.18	0.000	0.000
HINATA_NFKB_TARGETS_FIBROBLAST_UP	70	-0.67	-2.18	0.000	0.000
RESPONSE_TO_WOUNDING	102	-0.65	-2.18	0.000	0.000
SANA_TNF_SIGNALING_UP	70	-0.69	-2.17	0.000	0.000
RB_P107_DN.V1_UP	119	-0.64	-2.17	0.000	0.000
GSE15930_NAIVE_VS_24H_IN_VITRO_STIM_IL12_CD8_TCELL_DN	190	-0.61	-2.17	0.000	0.000
PHONG_TNF_RESPONSE_VIA_P38_PARTIAL	151	-0.61	-2.17	0.000	0.000
INFLAMMATORY_RESPONSE	64	-0.68	-2.17	0.000	0.000
TOYOTA_TARGETS_OF_MIR34B_AND_MIR34C	434	-0.58	-2.17	0.000	0.000
LI_WILMS_TUMOR_ANAPLASTIC_UP	19	-0.87	-2.17	0.000	0.000
GSE9988_ANTI_TREM1_AND_LPS_VS_VEHICLE_TREATED_MONOCYTES_UP	165	-0.61	-2.17	0.000	0.000
KEGG_CYTOKINE_CYTOKINE_RECEPTOR_INTERACTION	109	-0.64	-2.17	0.000	0.000

ALTEMEIER_RESPONSE_TO_LPS_WITH_MECHANICAL_VENTILATION	89	-0.66	-2.17	0.000	0.000
SMID_BREAST_CANCER_LUMINAL_A_DN	17	-0.88	-2.17	0.000	0.000
GSE13411_PLASMA_CELL_VS_MEMORY_BCELL_UP	153	-0.63	-2.17	0.000	0.000
WANG_CISPLATIN_RESPONSE_AND_XPC_UP	165	-0.61	-2.17	0.000	0.000
IL2_UP.V1_UP	131	-0.63	-2.17	0.000	0.000
GSE15930_NAIVE_VS_24H_IN_VITRO_STIM_INFAB_CD8_TCELL_DN	190	-0.61	-2.16	0.000	0.000
CUSTOM_GIST882_ETV1SH2_DN	89	-0.66	-2.16	0.000	0.000
DEFENSE_RESPONSE	128	-0.63	-2.16	0.000	0.000
HU_GENOTOXIC_DAMAGE_4HR	34	-0.76	-2.16	0.000	0.000
KRAS.600.LUNG.BREAST_UP.V1_UP	143	-0.62	-2.16	0.000	0.000
DNA_METABOLIC_PROCESS	240	-0.60	-2.16	0.000	0.000
BENPORATH_ES_2	26	-0.80	-2.16	0.000	0.000
GSE9988_ANTI_TREM1_VS_ANTI_TREM1_AND_LPS_MONOCYTE_DN	149	-0.62	-2.16	0.000	0.000
GRADE_COLON_AND_RECTAL_CANCER_UP	276	-0.59	-2.15	0.000	0.000
GSE3982_EFF_MEMORY_CD4_TCELL_VS_TH2_DN	193	-0.60	-2.15	0.000	0.000
BOYAULT_LIVER_CANCER_SUBCLASS_G3_UP	186	-0.60	-2.15	0.000	0.000
VANTVEER_BREAST_CANCER_ESR1_DN	201	-0.60	-2.15	0.000	0.000
SUNG_METASTASIS_STROMA_DN	50	-0.71	-2.15	0.000	0.000
CHROMOSOMEPERICENTRIC_REGION	31	-0.76	-2.15	0.000	0.000
KAECH_NAIVE_VS_DAY8_EFF_CD8_TCELL_DN	179	-0.60	-2.15	0.000	0.000
REGULATION_OF_CELL_CYCLE	167	-0.61	-2.15	0.000	0.000
LE_NEURONAL_DIFFERENTIATION_DN	19	-0.86	-2.15	0.000	0.000
BHATI_G2M_ARREST_BY_2METHOXYESTRADIOL_UP	99	-0.64	-2.15	0.000	0.000
CAFFAREL_RESPONSE_TO_THC_DN	30	-0.77	-2.14	0.000	0.000
ONDER_CDH1_TARGETS_2_DN	336	-0.58	-2.14	0.000	0.000
ZWANG_CLASS_3_TRANSIENTLY_INDUCED_BY_EGF	193	-0.59	-2.14	0.000	0.000
DNA_DEPENDENT_DNA_REPLICATION	52	-0.70	-2.14	0.000	0.000
SEKI_INFLAMMATORY_RESPONSE_LPS_UP	62	-0.68	-2.14	0.000	0.000
AMIT_EGF_RESPONSE_120_HELA	63	-0.68	-2.14	0.000	0.000
ACEVEDO_FGFR1_TARGETS_IN_PROSTATE_CANCER_MODEL_UP	211	-0.59	-2.14	0.000	0.000
REACTOME_EXTENSION_OF_TELOMERES	27	-0.79	-2.13	0.000	0.000
FERRANDO_T_ALL_WITH_MLL_ENL_FUSION_DN	79	-0.66	-2.13	0.000	0.000
PETROVA_PROX1_TARGETS_UP	26	-0.81	-2.13	0.000	0.000
SCHUHMACHER_MYC_TARGETS_UP	76	-0.66	-2.13	0.000	0.000
YU_BAP1_TARGETS	27	-0.79	-2.13	0.000	0.000
GCNP_SHH_UP_LATE.V1_UP	162	-0.61	-2.13	0.000	0.000
ABE_VEGFA_TARGETS_2HR	28	-0.78	-2.13	0.000	0.000
GSE9988_LPS_VS_CTRL_TREATED_MONOCYTE_UP	153	-0.61	-2.13	0.000	0.000
BMI1_DN_MEL18_DN.V1_UP	116	-0.62	-2.13	0.000	0.000
DNA_REPLICATION	97	-0.64	-2.13	0.000	0.000
KORKOLA_TERATOMA	30	-0.77	-2.12	0.000	0.000
GSE12366_GC_VS_NAIVE_BCELL_UP	182	-0.60	-2.12	0.000	0.000
KOBAYASHI_EGFR_SIGNALING_6HR_DN	17	-0.86	-2.12	0.000	0.000
COLINA_TARGETS_OF_4EBP1_AND_4EBP2	313	-0.58	-2.12	0.000	0.000
GSE22886_UNSTIM_VS_STIM_MEMORY_TCELL_DN	196	-0.60	-2.12	0.000	0.000
GSE9988_ANTI_TREM1_AND_LPS_VS_CTRL_TREATED_MONOCYTES_UP	170	-0.60	-2.12	0.000	0.000
GEORGES_CELL_CYCLE_MIR192_TARGETS	61	-0.69	-2.12	0.000	0.000
MATTIOLI_MGUS_VS_PCL	90	-0.64	-2.12	0.000	0.000
REACTOME_G1_S_SPECIFIC_TRANSCRIPTION	17	-0.89	-2.12	0.000	0.000

SARTIPY_NORMAL_AT_INSULIN_RESISTANCE_UP	32	-0.76	-2.12	0.000	0.000
PID_E2F_PATHWAY	70	-0.66	-2.11	0.000	0.000
GSE15930_NAIVE_VS_48H_IN_VITRO_STIM_CD8_TCELL_DN	198	-0.59	-2.11	0.000	0.000
PRC2_EZH2_UP.V1_UP	140	-0.61	-2.11	0.000	0.000
KRIEG_HYPOXIA_VIA_KDM3A	46	-0.71	-2.11	0.000	0.000
SCHOEN_NFKB_SIGNALING	30	-0.75	-2.11	0.000	0.000
RHODES_CANCER_META_SIGNATURE	62	-0.67	-2.11	0.000	0.000
DELYS_THYROID_CANCER_UP	343	-0.57	-2.11	0.000	0.000
CROONQUIST_STROMAL_STIMULATION_UP	43	-0.72	-2.11	0.000	0.000
MCMURRAY_TP53_HRAS_COOPERATION_RESPONSE_UP	22	-0.80	-2.11	0.000	0.000
PYEON_HPV_POSITIVE_TUMORS_UP	84	-0.64	-2.11	0.000	0.000
KRAS.LUNG_UP.V1_UP	74	-0.65	-2.11	0.000	0.000
GARCIA_TARGETS_OF_FLI1_AND_DAX1_DN	159	-0.60	-2.11	0.000	0.000
DANG_MYC_TARGETS_UP	132	-0.61	-2.11	0.000	0.000
YANG_BCL3_TARGETS_UP	291	-0.57	-2.10	0.000	0.000
AMUNDSON_GENOTOXIC_SIGNATURE	92	-0.64	-2.10	0.000	0.000
GSE3982_MAST_CELL_VS_TH2_DN	173	-0.60	-2.10	0.000	0.000
SU_TESTIS	57	-0.68	-2.10	0.000	0.000
WHITFIELD_CELL_CYCLE_G1_S	135	-0.61	-2.10	0.000	0.000
PRAMOONJAGO_SOX4_TARGETS_UP	52	-0.69	-2.10	0.000	0.000
CELL_CYCLE_CHECKPOINT_GO_0000075	47	-0.69	-2.10	0.000	0.000
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_24H_CD4_TCELL_DN	193	-0.59	-2.10	0.000	0.000
KEGG_JAK_STAT_SIGNALING_PATHWAY	86	-0.64	-2.10	0.000	0.000
IL15_UP.V1_UP	132	-0.61	-2.10	0.000	0.000
WINZEN_DEGRADED_VIA_KHSRP	81	-0.65	-2.10	0.000	0.000
REACTOME_CYCLIN_A_B1_ASSOCIATED_EVENTS_DURING_G2_M_TRANSITION	15	-0.89	-2.10	0.000	0.000
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_HSC_DN	127	-0.61	-2.10	0.000	0.000
GSE3982_MAC_VS_TH1_DN	165	-0.59	-2.09	0.000	0.000
SISTER_CHROMATID_SEGREGATION	16	-0.87	-2.09	0.000	0.000
MTOR_UP.V1_UP	123	-0.61	-2.09	0.000	0.000
CHROMOSOME_SEGREGATION	31	-0.76	-2.09	0.000	0.000
SENESE_HDAC1_AND_HDAC2_TARGETS_UP	196	-0.59	-2.09	0.000	0.000
ORGANELLE_LOCALIZATION	20	-0.81	-2.09	0.000	0.000
CHICAS_RB1_TARGETS_LOW_SERUM	83	-0.63	-2.09	0.000	0.000
GSE3982_EOSINOPHIL_VS_TH2_DN	187	-0.59	-2.09	0.000	0.000
HUNSBERGER_EXERCISE_REGULATED_GENES	24	-0.80	-2.09	0.000	0.000
GSE1460_INTRATHYMIC_T_PROGENITOR_VS_NAIVE_CD4_TCELL_ADULT_BLOOD_UP	193	-0.59	-2.08	0.000	0.000
LEE_LIVER_CANCER_ACOX1_UP	49	-0.70	-2.08	0.000	0.000
GSE1460_DP_THYMOCYTE_VS_NAIVE_CD4_TCELL_ADULT_BLOOD_UP	186	-0.58	-2.08	0.000	0.000
TIAN_TNF_SIGNALING_VIA_NFKB	25	-0.77	-2.08	0.000	0.000
PENG_LEUCINE_DEPRIVATION_DN	183	-0.58	-2.08	0.000	0.000
SHIPP_DLBCL_VS_FOLLICULAR_LYMPHOMA_UP	44	-0.71	-2.08	0.000	0.000
DANG_REGULATED_BY_MYC_UP	68	-0.65	-2.08	0.000	0.000
UZONYI_RESPONSE_TO_LEUKOTRIENE_AND_THROMBIN	35	-0.73	-2.08	0.000	0.000
RIZ_ERYTHROID_DIFFERENTIATION	72	-0.65	-2.08	0.000	0.000
LANDIS_ERBB2_BREAST_TUMORS_324_UP	139	-0.60	-2.08	0.000	0.000

KRAS.DF.V1_UP	168	-0.59	-2.07	0.000	0.000
ZHU_CMV_ALL_UP	109	-0.62	-2.07	0.000	0.000
KHETCHOUMIAN_TRIM24_TARGETS_UP	37	-0.72	-2.07	0.000	0.000
GSE24142_EARLY_THYMIC_PROGENITOR_VS_DN2_THYMOCYTE_ADULT_DN	152	-0.60	-2.07	0.000	0.000
GSE9988_ANTI_TREM1_VS_CTRL_TREATED_MONOCYTES_UP	181	-0.58	-2.07	0.000	0.000
AMIT_EGF_RESPONSE_60_MCF10A	33	-0.75	-2.07	0.000	0.000
GSE22886_DAY0_VS_DAY1_MONOCYTE_IN_CULTURE_DN	171	-0.58	-2.07	0.000	0.000
LEE_LIVER_CANCER_CIPROFIBRATE_UP	44	-0.70	-2.07	0.000	0.000
THEILGAARD_NEUTROPHIL_AT_SKIN_WOUND_UP	64	-0.65	-2.07	0.000	0.000
OSWALD_HEMATOPOIETIC_STEM_CELL_IN_COLLAGEN_GEL_UP	195	-0.58	-2.07	0.000	0.000
GSE22886_NAIVE_CD4_TCELL_VS_12H_ACT_TH1_DN	194	-0.58	-2.07	0.000	0.000
E2F1_UP.V1_UP	177	-0.58	-2.06	0.000	0.000
REACTOME_ASSEMBLY_OF_THE_PRE_REPLICATIVE_COMPLEX	62	-0.65	-2.06	0.000	0.000
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_7	352	-0.55	-2.06	0.000	0.000
LEI_MYB_TARGETS	278	-0.56	-2.06	0.000	0.000
GSE24634_NAIVE_CD4_TCELL_VS_DAY7_IL4_CONV_TREG_DN	187	-0.58	-2.06	0.000	0.000
PID_ATR_PATHWAY	39	-0.71	-2.06	0.000	0.000
WEIGEL_OXIDATIVE_STRESS_RESPONSE	33	-0.73	-2.06	0.000	0.000
WEINMANN_ADAPTATION_TO_HYPOXIA_DN	31	-0.73	-2.06	0.000	0.000
GSE24634_NAIVE_CD4_TCELL_VS_DAY3_IL4_CONV_TREG_DN	187	-0.58	-2.06	0.000	0.000
CELL_PROLIFERATION_GO_0008283	377	-0.55	-2.06	0.000	0.000
BORLAK_LIVER_CANCER_EGF_UP	47	-0.68	-2.06	0.000	0.000
MAHAJAN_RESPONSE_TO_IL1A_UP	60	-0.66	-2.05	0.000	0.000
SASAKI_ADULT_T_CELL_LEUKEMIA	156	-0.59	-2.05	0.000	0.000
ZAMORA_NOS2_TARGETS_UP	64	-0.65	-2.05	0.000	0.000
REACTOME_CHROMOSOME_MAINTENANCE	88	-0.62	-2.05	0.000	0.000
GSE14350_TREG_VS_TEFF_IN_IL2RB_KO_DN	149	-0.59	-2.05	0.000	0.000
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_12H_CD4_TCELL_DN	187	-0.58	-2.05	0.000	0.000
GALINDO_IMMUNE_RESPONSE_TO_ENTEROTOXIN	75	-0.64	-2.05	0.000	0.000
MITOTIC_CELL_CYCLE_CHECKPOINT	20	-0.79	-2.04	0.000	0.000
PENG_RAPAMYCIN_RESPONSE_DN	238	-0.56	-2.04	0.000	0.000
ZHU_CMV_24_HR_UP	89	-0.62	-2.04	0.000	0.000
BHATTACHARYA_EMBRYONIC_STEM_CELL	73	-0.64	-2.04	0.000	0.000
SCIBETTA_KDM5B_TARGETS_DN	75	-0.64	-2.04	0.000	0.000
GSE3982_EOSINOPHIL_VS_TH1_DN	186	-0.57	-2.04	0.000	0.000
MIYAGAWA_TARGETS_OF_EWSR1_ETS_FUSIONS_DN	186	-0.57	-2.04	0.000	0.000
GSE9006_HEALTHY_VS_TYPE_1_DIABETES_PBMC_AT_DX_DN	145	-0.59	-2.04	0.000	0.000
ZWANG_CLASS_2_TRANSIENTLY_INDUCED_BY_EGF	38	-0.70	-2.04	0.000	0.000
HERNANDEZ_MITOTIC_ARREST_BY_DOCETAXEL_1_DN	33	-0.72	-2.04	0.000	0.000
REACTOME_FANCONI_ANEMIA_PATHWAY	20	-0.80	-2.04	0.000	0.000
GSE9988_ANTI_TREM1_VS_LPS_MONOCYTE_DN	158	-0.58	-2.04	0.000	0.000
PID_P73PATHWAY	72	-0.64	-2.04	0.000	0.000
CUSTOM_GIST-T1_ETV1SH2_DN	60	-0.66	-2.03	0.000	0.000
HUPER_BREAST_BASAL_VS_LUMINAL_UP	26	-0.76	-2.03	0.000	0.000

GSE9988_ANTI_TREM1_VS_VEHICLE_TREATED_MONOCYTES_UP	172	-0.57	-2.03	0.000	0.000
G1_S_TRANSITION_OF_MITOTIC_CELL_CYCLE	26	-0.76	-2.03	0.000	0.000
MITOTIC_SISTER_CHROMATID_SEGREGATION	15	-0.87	-2.03	0.000	0.000
REGULATION_OF_TRANSFERASE_ACTIVITY	140	-0.58	-2.03	0.000	0.000
REGULATION_OF_PROTEIN_KINASE_ACTIVITY	134	-0.58	-2.03	0.000	0.000
SATO_SILENCED_BY_METHYLATION_IN_PANCREATIC_CANCER_2	30	-0.73	-2.03	0.000	0.000
REACTOME_REGULATION_OF_MITOTIC_CELL_CYCLE	76	-0.63	-2.03	0.000	0.000
PENG_GLUTAMINE_DEPRIVATION_DN	323	-0.55	-2.03	0.000	0.000
CYTOKINE_ACTIVITY	40	-0.70	-2.03	0.000	0.000
MCDOWELL_ACUTE_LUNG_INJURY_UP	37	-0.70	-2.03	0.000	0.000
BIOCARTA_G2_PATHWAY	24	-0.76	-2.03	0.000	0.000
BURTON_ADIPOGENESIS_2	67	-0.63	-2.03	0.000	0.000
BIOCARTA_G1_PATHWAY	28	-0.74	-2.03	0.000	0.000
REACTOME_DNA_REPAIR	103	-0.61	-2.03	0.000	0.000
SNF5_DN.V1_UP	131	-0.58	-2.03	0.000	0.000
SENESE_HDAC1_TARGETS_UP	410	-0.54	-2.03	0.000	0.000
OUELLET_OVARIAN_CANCER_INVASIVE_VS_LMP_UP	113	-0.60	-2.03	0.000	0.000
YAMAZAKI_TCEB3_TARGETS_DN	190	-0.56	-2.02	0.000	0.000
GROSS_HYPOXIA_VIA_ELK3_DN	134	-0.59	-2.02	0.000	0.000
WANG_METHYLATED_IN_BREAST_CANCER	32	-0.72	-2.02	0.000	0.000
REGULATION_OF_KINASE_ACTIVITY	136	-0.59	-2.02	0.000	0.000
PID_MYC_ACTIVPATHWAY	74	-0.64	-2.02	0.000	0.000
CUSTOM_G882_siCOP1_UP_IN_PD901	117	-0.59	-2.02	0.000	0.000
WU_CELL_MIGRATION	148	-0.58	-2.02	0.000	0.000
GSE2706_UNSTIM_VS_2H_R848_DC_DN	149	-0.58	-2.02	0.000	0.000
SEMENZA_HIF1_TARGETS	31	-0.73	-2.02	0.000	0.000
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_8	39	-0.70	-2.02	0.000	0.000
GRAHAM_CML_QUIESCENT_VS_NORMAL_DIVIDING_UP	39	-0.69	-2.02	0.000	0.000
KOKKINAKIS_METHIONINE_DEPRIVATION_96HR_DN	74	-0.64	-2.02	0.000	0.000
LEF1_UP.V1_UP	142	-0.58	-2.02	0.000	0.000
NIELSEN_MALIGNAT_FIBROUS_HISTIOCYTOMA_UP	15	-0.83	-2.02	0.000	0.000
GSE9650_EFFECTOR_VS_MEMORY_CD8_TCELL_UP	180	-0.57	-2.02	0.000	0.000
SHAFFER_IRF4_TARGETS_IN_ACTIVATED_B_LYMPHOCYTE	75	-0.62	-2.01	0.000	0.000
CUI_TCF21_TARGETS_2_UP	364	-0.54	-2.01	0.000	0.000
CUSTOM_G48_SISCR_PD_DN	270	-0.55	-2.01	0.000	0.000
KOKKINAKIS_METHIONINE_DEPRIVATION_48HR_UP	121	-0.59	-2.01	0.000	0.000
WHITFIELD_CELL_CYCLE_S	150	-0.58	-2.01	0.000	0.000
ESTABLISHMENT_OF_ORGANELLE_LOCALIZATION	15	-0.85	-2.01	0.000	0.000
PEDERSEN_TARGETS_OF_611CTF_ISOFORM_OF_ERBB2	67	-0.64	-2.01	0.000	0.000
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_KRAS_CDC25_UP	55	-0.66	-2.01	0.000	0.000
HESS_TARGETS_OF_HOXA9_AND_MEIS1_UP	58	-0.65	-2.01	0.000	0.000
BERENJENO_TRANSFORMED_BY_RHOA_REVERSIBLY_DN	25	-0.75	-2.01	0.000	0.000
DNA_REPLICATION_INITIATION	16	-0.83	-2.01	0.000	0.000
KANG_IMMORTALIZED_BY_TERT_UP	69	-0.63	-2.01	0.000	0.000
GSE15930_NAIVE_VS_48H_IN_VITRO_STIM_IL12_CD8_TCELL_DN	197	-0.56	-2.00	0.000	0.000
GCNP_SHH_UP_EARLY.V1_UP	154	-0.57	-2.00	0.000	0.000

KEGG_BLADDER_CANCER	38	-0.70	-2.00	0.000	0.000
REACTOME_G0_AND_EARLY_G1	23	-0.76	-2.00	0.000	0.000
KATSANOU_ELAVL1_TARGETS_DN	116	-0.59	-2.00	0.000	0.000
CONDENSED_CHROMOSOME	31	-0.72	-2.00	0.000	0.000
GSE8515_IL1_VS_IL6_4H_STIM_)MAC_UP	163	-0.57	-2.00	0.000	0.000
GSE10239_MEMORY_VS_KLRG1INT_EFF_CD8_TCELL_DN	191	-0.56	-1.99	0.000	0.000
VANTVEER_BREAST_CANCER_POOR_PROGNOSIS	41	-0.67	-1.99	0.000	0.000
CORDENONSI_YAP_CONSERVED_SIGNATURE	50	-0.66	-1.99	0.000	0.000
REACTOME_LAGGING_STRAND_SYNTHESIS	19	-0.79	-1.99	0.000	0.000
CHARAFE_BREAST_CANCER_LUMINAL_VS_MESENCHYMAL_DN	434	-0.53	-1.99	0.000	0.000
CHARAFE_BREAST_CANCER_LUMINAL_VS_BASAL_DN	401	-0.53	-1.99	0.000	0.000
ABE_VEGFA_TARGETS_30MIN	22	-0.75	-1.99	0.000	0.000
MORI_EMU_MYC_LYMPHOMA_BY_ONSET_TIME_UP	105	-0.59	-1.99	0.000	0.000
BIOCARTA_CELLCYCLE_PATHWAY	22	-0.77	-1.99	0.000	0.000
CSR_EARLY_UP.V1_UP	154	-0.57	-1.99	0.000	0.000
CUSTOM_Colo800_ETV1SH1_DN	398	-0.53	-1.99	0.000	0.000
KIM_GLIS2_TARGETS_UP	62	-0.63	-1.99	0.000	0.000
CUSTOM_A375_siCOP1_UP_IN_VEMU	101	-0.60	-1.99	0.000	0.000
BURTON_ADIPOGENESIS_PEAK_AT_2HR	47	-0.68	-1.99	0.000	0.000
REPLICATION_FORK	18	-0.82	-1.99	0.000	0.000
REGULATION_OF_CYCLIN_DEPENDENT_PROTEIN_KINASE_ACTIVITY	40	-0.69	-1.99	0.000	0.000
LEUKOCYTE_ACTIVATION	37	-0.69	-1.99	0.000	0.000
GRUETZMANN_PANCREATIC_CANCER_UP	323	-0.54	-1.99	0.000	0.000
SCHMIDT_POR_TARGETS_IN_LIMB_BUD_UP	23	-0.77	-1.99	0.000	0.000
SMID_BREAST_CANCER_LUMINAL_B_DN	349	-0.54	-1.99	0.000	0.000
WINTER_HYPOXIA_UP	84	-0.61	-1.98	0.000	0.000
KEGG_MISMATCH_REPAIR	23	-0.76	-1.98	0.000	0.000
PID_IL23PATHWAY	20	-0.79	-1.98	0.000	0.000
GSE12845_NAIVE_VS_PRE_GC_TONSIL_BCELL_DN	189	-0.55	-1.98	0.000	0.000
GSE34205_HEALTHY_VS_FLU_INF_INFANT_PBMC_DN	168	-0.56	-1.98	0.000	0.000
GENTILE_RESPONSE_CLUSTER_D3	60	-0.63	-1.98	0.000	0.000
TURASHVILI_BREAST_DUCTAL_CARCINOMA_VS_LOBULAR_NORMAL_UP	70	-0.62	-1.98	0.000	0.000
CUSTOM_GIST48_ETV1SH2_DN	90	-0.61	-1.98	0.000	0.000
BIOCARTA_MCM_PATHWAY	18	-0.82	-1.98	0.000	0.000
HONRADO_BREAST_CANCER_BRCA1_VS_BRCA2	16	-0.82	-1.98	0.000	0.000
GSE9988_ANTI_TREM1_VS_LOW_LPS_MONOCYTE_DN	153	-0.58	-1.98	0.000	0.000
HESS_TARGETS_OF_HOXA9_AND_MEIS1_DN	57	-0.64	-1.98	0.000	0.000
BERENJENO_TRANSFORMED_BY_RHOA_FOREVER_DN	24	-0.74	-1.98	0.000	0.000
KAN_RESPONSE_TO_ARSENIC_TRIOXIDE	109	-0.59	-1.97	0.000	0.000
GSE2706_R848_VS_R848_AND_LPS_2H_STIM_DC_DN	134	-0.57	-1.97	0.000	0.000
MICROTUBULE_CYTOSKELETON	143	-0.57	-1.97	0.000	0.000
SANA_RESPONSE_TO_IFNG_DN	79	-0.60	-1.97	0.000	0.000
SIMBULAN_PARP1_TARGETS_DN	17	-0.79	-1.97	0.002	0.000
GSE3982_DC_VS_MAC_DN	154	-0.56	-1.97	0.000	0.000
SLEBOS_HEAD_AND_NECK_CANCER_WITH_HPV_UP	72	-0.62	-1.97	0.000	0.000
SRC_UP.V1_DN	131	-0.57	-1.97	0.000	0.000
ZHAN_EARLY_DIFFERENTIATION_GENES_DN	34	-0.70	-1.97	0.000	0.000
JUBAN_TARGETS_OF_SPI1_AND_FLI1_DN	82	-0.60	-1.97	0.000	0.000
AMIT_EGF_RESPONSE_60_HELA	44	-0.67	-1.97	0.000	0.000
REACTOME_CLASS_A1_RHODOPSIN_LIKE_RECEPTORS	80	-0.60	-1.97	0.000	0.000
HORTON_SREBF_TARGETS	24	-0.74	-1.97	0.000	0.000

POSITIVE_REGULATION_OF_CELL_PROLIFERATION	102	-0.59	-1.97	0.000	0.000
PAL_PRMT5_TARGETS_UP	195	-0.54	-1.97	0.000	0.000
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_48H_CD4_TCELL_DN	191	-0.55	-1.97	0.000	0.000
CAFFAREL_RESPONSE_TO_THC_24HR_5_DN	55	-0.64	-1.97	0.000	0.000
SATO_SILENCED_BY_METHYLATION_IN_PANCREATIC_CANCER_1	294	-0.53	-1.97	0.000	0.000
BIOCARTA_VIP_PATHWAY	23	-0.74	-1.96	0.000	0.000
GSE24026_PD1_LIGATION_VS_CTRL_IN_ACT_TCELL_LINE_DN	186	-0.55	-1.96	0.000	0.000
DELPUECH_FOXO3_TARGETS_DN	39	-0.68	-1.96	0.000	0.000
GSE3982_MAST_CELL_VS_TH1_DN	171	-0.56	-1.96	0.000	0.000
GSE24142_EARLY_THYMIC_PROGENITOR_VS_DN2_THYMOCYTE_DN	145	-0.56	-1.96	0.000	0.000
GSE15930_NAIVE_VS_48H_IN_VITRO_STIM_IFNAB_CD8_TCELL_DN	196	-0.55	-1.96	0.000	0.000
GSE36392_TYPE_2_MYELOID_VS_MAC_IL25_TREATED_LUNG_UP	110	-0.58	-1.96	0.000	0.000
LOCOMOTORY_BEHAVIOR	39	-0.68	-1.96	0.000	0.000
JACKSON_DNMT1_TARGETS_UP	69	-0.62	-1.96	0.000	0.000
BORCZUK_MALIGNANT_MESOTHELIOMA_UP	302	-0.53	-1.96	0.000	0.000
REACTOME_MITOTIC_G2_G2_M_PHASES	78	-0.60	-1.96	0.000	0.000
CELL_ACTIVATION	40	-0.67	-1.96	0.000	0.000
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_3	16	-0.78	-1.95	0.000	0.000
REACTOME_ORC1_REMOVAL_FROM_CHROMATIN	64	-0.63	-1.95	0.000	0.000
GSE31082_CD4_VS_CD8_SP_THYMOCYTE_DN	165	-0.56	-1.95	0.000	0.000
GSE24634_IL4_VS_CTRL_TREATED_NAIVE_CD4_TCELL_DAY10_UP	155	-0.55	-1.95	0.000	0.000
REACTOME_GPCR_LIGAND_BINDING	124	-0.57	-1.95	0.000	0.000
HAHTOLA_SEZARY_SYNDROM_DN	23	-0.74	-1.95	0.000	0.000
ZUCCHI_METASTASIS_DN	34	-0.68	-1.95	0.000	0.000
GSE36476_CTRL_VS_TSST_ACT_16H_MEMORY_CD4_TCELL_OLD_DN	189	-0.54	-1.95	0.000	0.000
KEGG_NUCLEOTIDE_EXCISION_REPAIR	44	-0.65	-1.95	0.000	0.000
REGULATION_OF_PHOSPHORYLATION	33	-0.69	-1.95	0.000	0.000
DAZARD_UV_RESPONSE_CLUSTER_G28	16	-0.80	-1.95	0.002	0.000
BILD_E2F3_ONCOGENIC_SIGNATURE	226	-0.54	-1.95	0.000	0.000
GSE1460_INTRATHYMIC_T_PROGENITOR_VS_NAIVE_CD4_TCELL_CORD_BLOOD_UP	190	-0.54	-1.95	0.000	0.000
HIRSCH_CELLULAR_TRANSFORMATION_SIGNATURE_UP	226	-0.54	-1.94	0.000	0.000
ELVIDGE_HIF1A_AND_HIF2A_TARGETS_DN	97	-0.58	-1.94	0.000	0.000
ICHIBA_GRAFT_VERSUS_HOST_DISEASE_D7_UP	78	-0.59	-1.94	0.000	0.000
WIELAND_UP_BY_HBV_INFECTION	81	-0.59	-1.94	0.000	0.000
THILLAINADESAN_ZNF217_TARGETS_UP	41	-0.67	-1.94	0.000	0.000
SPINDLE_POLE	17	-0.80	-1.94	0.000	0.000
SWEET_KRAS_TARGETS_DN	49	-0.65	-1.94	0.000	0.000
GSE14769_UNSTIM_VS_40MIN_LPS_BMDM_DN	168	-0.55	-1.94	0.000	0.000
DIRMEIER_LMP1_RESPONSE_EARLY	56	-0.63	-1.94	0.000	0.000
LIEN_BREAST_CARCINOMA_METAPLASTIC_VS_DUCTAL_UP	68	-0.60	-1.94	0.000	0.000
BOYAULT_LIVER_CANCER_SUBCLASS_G123_UP	42	-0.66	-1.94	0.000	0.000
IWANAGA_E2F1_TARGETS_INDUCED_BY_SERUM	30	-0.69	-1.94	0.001	0.000
XU_HGF_SIGNALING_NOT_VIA_AKT1_48HR_UP	33	-0.70	-1.94	0.000	0.000
GROSS_ELK3_TARGETS_DN	26	-0.72	-1.94	0.000	0.000

ZHANG_BREAST_CANCER_PROGENITORS_UP	404	-0.52	-1.94	0.000	0.000
MEK_UP.V1_UP	164	-0.55	-1.94	0.000	0.000
GSE20715_0H_VS_24H_OZONE_TLR4_KO_LUNG_DN	168	-0.55	-1.94	0.000	0.000
WINTER_HYPOXIA_METAGENE	207	-0.54	-1.94	0.000	0.000
REGULATION_OF_DNA_METABOLIC_PROCESS	41	-0.67	-1.93	0.000	0.000
ZHU_CMV_8_HR_UP	41	-0.66	-1.93	0.000	0.000
GSE12845_IGD_NEG_BLOOD_VS_PRE_GC_TONSIL_BCELL_DN	177	-0.55	-1.93	0.000	0.000
GSE15930_NAIVE_VS_72H_IN_VITRO_STIM_IL12_CD8_TCELL_DN	176	-0.54	-1.93	0.000	0.000
GSE1460_NAIVE_CD4_TCELL_ADULT_BLOOD_VS_THYMIC_STROMAL_CELL_DN	186	-0.54	-1.93	0.000	0.000
MORI_MATURE_B_LYMPHOCYTE_DN	68	-0.61	-1.93	0.000	0.000
SCHLOSSER_MYC_TARGETS_AND_SERUM_RESPONSE_UP	46	-0.65	-1.93	0.000	0.000
ZHANG_RESPONSE_TO_IKK_INHIBITOR_AND_TNF_UP	188	-0.54	-1.93	0.000	0.000
DASU_IL6_SIGNALING_UP	55	-0.62	-1.93	0.000	0.000
CYTOKINESIS	15	-0.80	-1.93	0.000	0.000
MATZUK_SPERMATOCYTE	57	-0.63	-1.93	0.000	0.000
REGULATION_OF_CELL_PROLIFERATION	224	-0.53	-1.93	0.000	0.000
KUROZUMI_RESPONSE_TO_ONCOCYTIC_VIRUS	19	-0.77	-1.93	0.000	0.000
VERRECCHIA_RESPONSE_TO_TGFB1_C1	19	-0.76	-1.93	0.000	0.000
SCHLOSSER_MYC_TARGETS_REPRESSED_BY_SERUM	158	-0.54	-1.93	0.000	0.000
GARY_CD5_TARGETS_DN	412	-0.51	-1.93	0.000	0.000
KEGG_COMPLEMENT_AND_COAGULATION_CASCADES	36	-0.67	-1.93	0.000	0.000
CUSTOM_A375_ETV1SH1_DN	377	-0.52	-1.93	0.000	0.000
SESTO_RESPONSE_TO_UV_C3	20	-0.76	-1.92	0.000	0.000
XU_HGF_TARGETS_INDUCED_BY_AKT1_48HR_DN	23	-0.75	-1.92	0.000	0.000
CELL_DIVISION	17	-0.78	-1.92	0.000	0.000
WESTON_VEGFA_TARGETS	79	-0.59	-1.92	0.000	0.000
LI_INDUCED_T_TO_NATURAL_KILLER_UP	240	-0.53	-1.92	0.000	0.000
GSE2706_UNSTIM_VS_8H_R848_DC_DN	155	-0.55	-1.92	0.000	0.000
ATF2_UP.V1_UP	118	-0.56	-1.92	0.000	0.000
SESTO_RESPONSE_TO_UV_C7	63	-0.60	-1.92	0.000	0.000
DAZARD_UV_RESPONSE_CLUSTER_G2	25	-0.72	-1.92	0.001	0.000
HOSHIDA_LIVER_CANCER_SURVIVAL_UP	55	-0.63	-1.92	0.000	0.000
PRC2_EDD_UP.V1_UP	174	-0.54	-1.92	0.000	0.000
MENSSEN_MYC_TARGETS	50	-0.63	-1.92	0.000	0.000
LEE_LIVER_CANCER_MYC_TGFA_UP	48	-0.64	-1.92	0.000	0.000
AMIT_SERUM_RESPONSE_60_MCF10A	55	-0.63	-1.92	0.000	0.000
DORSEY_GAB2_TARGETS	24	-0.71	-1.92	0.000	0.000
REACTOME_CYCLIN_E_ASSOCIATED_EVENTS_DURING_G1_S_TRANSITION_	62	-0.61	-1.92	0.000	0.000
SCHLOSSER_MYC_TARGETS_AND_SERUM_RESPONSE_DN	45	-0.65	-1.92	0.003	0.000
GSE14000_UNSTIM_VS_4H_LPS_DC_DN	174	-0.54	-1.92	0.000	0.000
MCBRYAN_PUBERTAL_BREAST_4_5WK_UP	205	-0.53	-1.91	0.000	0.000
GSE14308_TH2_VS_TH17_UP	182	-0.54	-1.91	0.000	0.000
KRAS.50_UP.V1_UP	25	-0.72	-1.91	0.000	0.000
VIRAL_REPRODUCTIVE_PROCESS	27	-0.69	-1.91	0.000	0.001
STEIN_ESR1_TARGETS	73	-0.60	-1.91	0.000	0.001
SU_PLACENTA	18	-0.77	-1.91	0.000	0.001
DORN_ADENOVIRUS_INFECTION_24HR_DN	40	-0.65	-1.91	0.000	0.001
ICHIBA_GRAFT_VERSUS_HOST_DISEASE_35D_UP	89	-0.58	-1.91	0.000	0.001

ELVIDGE_HIF1A_TARGETS_DN	83	-0.58	-1.91	0.000	0.001
ZUCCHI_METASTASIS_UP	36	-0.67	-1.90	0.000	0.001
GOTZMANN_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_UP	62	-0.60	-1.90	0.000	0.001
SAFFORD_T_LYMPHOCYTE_ANERGY	68	-0.59	-1.90	0.000	0.001
GSE24634_NAIVE_CD4_TCELL_VS_DAY5_IL4_CONV_TREG_DN	196	-0.53	-1.90	0.000	0.001
GSE14350_IL2RB_KO_VS_WT_TEFF_DN	163	-0.54	-1.90	0.000	0.001
PID_UPA_UPAR_PATHWAY	26	-0.71	-1.90	0.000	0.001
SANSOM_APC_TARGETS_UP	103	-0.57	-1.90	0.000	0.001
NUCLEOTIDYLTRANSFERASE_ACTIVITY	46	-0.64	-1.90	0.000	0.001
JOHANSSON_GLIOMAGENESIS_BY_PDGFB_UP	56	-0.62	-1.90	0.000	0.001
MORI_LARGE_PRE_BII_LYMPHOCYTE_DN	48	-0.64	-1.90	0.000	0.001
JEON_SMAD6_TARGETS_DN	16	-0.78	-1.90	0.000	0.001
MALONEY_RESPONSE_TO_17AAG_DN	73	-0.60	-1.90	0.000	0.001
BASSO_B_LYMPHOCYTE_NETWORK	137	-0.55	-1.90	0.000	0.001
GSE28237_FOLLICULAR_VS_EARLY_GC_BCELL_DN	174	-0.54	-1.90	0.000	0.001
GSE39820_CTRL_VS_TGFBETA3_IL6_CD4_TCELL_UP	181	-0.53	-1.90	0.000	0.001
GSE10239_MEMORY_VS_KLRG1HIGH_EFF_CD8_TCELL_DN	193	-0.54	-1.90	0.000	0.001
ALFANO_MYC_TARGETS	214	-0.53	-1.90	0.000	0.001
GSE13484_3H_UNSTIM_VS_YF17D_VACCINE_STIM_PBMC_DN	157	-0.54	-1.90	0.000	0.001
CHIANG_LIVER_CANCER_SUBCLASS_UNANNOTATED_DN	189	-0.53	-1.90	0.000	0.001
WESTON_VEGFA_TARGETS_3HR	53	-0.62	-1.90	0.000	0.001
SCHAEFFER_PROSTATE_DEVELOPMENT_12HR_DN	36	-0.67	-1.90	0.000	0.001
AMIT_EGF_RESPONSE_40_HELA	40	-0.64	-1.90	0.000	0.001
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_MONOCYTE_UP	183	-0.54	-1.89	0.000	0.001
GSE17974_0H_VS_6H_IN_VITRO_ACT_CD4_TCELL_DN	189	-0.53	-1.89	0.000	0.001
REACTOME_CDT1_ASSOCIATION_WITH_THE_CDC6_ORC_ORIGIN_COMPLEX	53	-0.62	-1.89	0.000	0.001
GSE17974_0H_VS_72H_IN_VITRO_ACT_CD4_TCELL_DN	185	-0.54	-1.89	0.000	0.001
SNIJDERS_AMPLIFIED_IN_HEAD_AND_NECK_TUMORS	34	-0.67	-1.89	0.000	0.001
REACTOME_CHOLESTEROL_BIOSYNTHESIS	22	-0.73	-1.89	0.000	0.001
GSE20715_0H_VS_24H_OZONE_LUNG_DN	164	-0.53	-1.89	0.000	0.001
FERRANDO_HOX11_NEIGHBORS	16	-0.78	-1.89	0.000	0.001
CORRE_MULTIPLE_MYELOMA_UP	51	-0.63	-1.89	0.000	0.001
GSE17974_0.5H_VS_72H_UNTREATED_IN_VITRO_CD4_TCELL_DN	188	-0.53	-1.89	0.000	0.001
GSE13485_DAY3_VS_DAY7_YF17D_VACCINE_PBMC_DN	156	-0.53	-1.89	0.000	0.001
SENESE_HDAC2_TARGETS_UP	99	-0.56	-1.89	0.000	0.001
GROSS_HYPOXIA_VIA_ELK3_UP	194	-0.53	-1.89	0.000	0.001
CHROMATIN_BINDING	29	-0.69	-1.88	0.000	0.001
CHEN_ETV5_TARGETS_TESTIS	18	-0.75	-1.88	0.003	0.001
EXTRACELLULAR_SPACE	111	-0.56	-1.88	0.000	0.001
PODAR_RESPONSE_TO_ADAPHOSTIN_DN	16	-0.77	-1.88	0.002	0.001
CUSTOM_A375_ETV1SH1_DN	26	-0.70	-1.88	0.000	0.001
BOQUEST_STEM_CELL_DN	157	-0.54	-1.88	0.000	0.001
GOTZMANN_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_DN	172	-0.53	-1.88	0.000	0.001
SERVITJA_LIVER_HNF1A_TARGETS_DN	84	-0.58	-1.88	0.001	0.001

GSE14000_UNSTIM_VS_4H_LPS_DC_TRANSLATED_RNA_DN	151	-0.54	-1.88	0.000	0.001
NAKAMURA_METASTASIS	41	-0.64	-1.88	0.000	0.001
BOSCO_TH1_CYTOTOXIC_MODULE	59	-0.62	-1.88	0.000	0.001
GSE17974_0H_VS_12H_IN_VITRO_ACT_CD4_TCELL_DN	191	-0.53	-1.88	0.000	0.001
GSE17721_0.5H_VS_24H_POLYIC_BMDM_UP	163	-0.54	-1.88	0.000	0.001
NAKAMURA_ADIPOGENESIS_EARLY_DN	32	-0.67	-1.88	0.000	0.001
KIM_WT1_TARGETS_DN	438	-0.50	-1.88	0.000	0.001
GROSS_HYPOXIA_VIA_ELK3_AND_HIF1A_UP	130	-0.54	-1.88	0.000	0.001
ELVIDGE_HYPOXIA_BY_DMOG_UP	122	-0.54	-1.88	0.000	0.001
DNA_REPAIR	120	-0.55	-1.88	0.000	0.001
GSE14308_TH1_VS_TH17_UP	172	-0.53	-1.88	0.000	0.001
RHODOPSIN_LIKE_RECEPTOR_ACTIVITY	35	-0.66	-1.88	0.000	0.001
GSE36476_CTRL_VS_TSST_ACT_16H_MEMORY_CD4_TCELL_YOUNG_DN	180	-0.53	-1.88	0.000	0.001
RB_P130_DN.V1_UP	103	-0.56	-1.88	0.000	0.001
JIANG_TIP30_TARGETS_UP	44	-0.63	-1.87	0.000	0.001
ALK_DN.V1_UP	80	-0.58	-1.87	0.000	0.001
KIM_WT1_TARGETS_12HR_DN	191	-0.53	-1.87	0.000	0.001
TSAI_RESPONSE_TO_IONIZING_RADIATION	130	-0.54	-1.87	0.000	0.001
KYNG_DNA_DAMAGE_DN	170	-0.53	-1.87	0.000	0.001
HAHTOLA_MYCOSIS_FUNGOIDES_CD4_UP	54	-0.61	-1.87	0.000	0.001
IMMUNE_SYSTEM_PROCESS	187	-0.53	-1.87	0.000	0.001
PID_BARD1PATHWAY	29	-0.68	-1.87	0.000	0.001
SCHUETZ_BREAST_CANCER_DUCTAL_INVASIVE_UP	274	-0.51	-1.87	0.000	0.001
NUNODA_RESPONSE_TO_DASATINIB_IMATINIB_UP	28	-0.69	-1.87	0.000	0.001
BIOCARTA_SPRY_PATHWAY	17	-0.76	-1.87	0.000	0.001
WAKASUGI_HAVE_ZNF143_BINDING_SITES	56	-0.60	-1.87	0.000	0.001
BIOCARTA_P53_PATHWAY	16	-0.77	-1.87	0.000	0.001
REACTOME_TRANSCRIPTION_COUPLED_NER_TC_NER	44	-0.63	-1.87	0.000	0.001
LI_CISPLATIN_RESISTANCE_UP	23	-0.72	-1.87	0.001	0.001
POSITIVE_REGULATION_OF_RESPONSE_TO_STIMULUS	25	-0.70	-1.87	0.000	0.001
SMIRNOV_CIRCULATING_ENDOTHELIOCYTES_IN_CANCER_UP	123	-0.55	-1.87	0.000	0.001
SHETH_LIVER_CANCER_VS_TXNIP_LOSS_PAM1	191	-0.52	-1.87	0.000	0.001
MARTORIATI_MDM4_TARGETS_NEUROEPITHELIUM_UP	151	-0.54	-1.87	0.000	0.001
GROSS_HYPOXIA_VIA_HIF1A_DN	94	-0.57	-1.86	0.000	0.001
LINDGREN_BLADDER_CANCER_CLUSTER_2B	318	-0.51	-1.86	0.000	0.001
FULCHER_INFLAMMATORY_RESPONSE_LECTIN_VS_LPS_UP	493	-0.50	-1.86	0.000	0.001
KEGG_HEMATOPOIETIC_CELL_LINEAGE	38	-0.64	-1.86	0.001	0.001
GSE19825_CD24LOW_VS_IL2RA_HIGH_DAY3_EFF_CD8_TCELL_DN	190	-0.52	-1.86	0.000	0.001
BOYAULT_LIVER_CANCER_SUBCLASS_G56_DN	16	-0.76	-1.86	0.000	0.001
BURTON_ADIPOGENESIS_7	46	-0.62	-1.86	0.000	0.001
KINETOCHORE	25	-0.71	-1.86	0.003	0.001
SMITH_LIVER_CANCER	41	-0.63	-1.86	0.000	0.001
VECCHI_GASTRIC_CANCER_ADVANCED_VS_EARLY_UP	131	-0.54	-1.86	0.000	0.001
GESERICK_TERT_TARGETS_DN	19	-0.74	-1.86	0.000	0.001
NEGATIVE_REGULATION_OF_DNA_METABOLIC_PROCESS	17	-0.74	-1.86	0.002	0.001
GSE39820_CTRL_VS_IL1B_IL6_CD4_TCELL_UP	176	-0.52	-1.86	0.000	0.001
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_RED_UP	17	-0.76	-1.86	0.000	0.001

REGULATION_OF_RESPONSE_TO_STIMULUS	32	-0.67	-1.86	0.000	0.001
AMIT_EGF_RESPONSE_480_MCF10A	41	-0.64	-1.86	0.000	0.001
GSE3982_BASOPHIL_VS_TH2_DN	173	-0.52	-1.86	0.000	0.001
GSE3982_NEUTROPHIL_VS_TH1_DN	189	-0.52	-1.86	0.000	0.001
GSE17721_LPS_VS_CPG_24H_BMDM_DN	155	-0.53	-1.86	0.000	0.001
NUCLEAR_ENVELOPE	69	-0.59	-1.86	0.001	0.001
REACTOME_APC_C_CDC20_MEDIATED_DEGRADATION_OF_ MITOTIC_PROTEINS	64	-0.60	-1.86	0.000	0.001
KEGG_PYRIMIDINE_METABOLISM	89	-0.57	-1.86	0.001	0.001
INTEGRIN_COMPLEX	17	-0.75	-1.86	0.000	0.001
AMIT_EGF_RESPONSE_240_HELA	59	-0.60	-1.86	0.000	0.001
REACTOME_INFLUENZA_LIFE_CYCLE	132	-0.54	-1.86	0.000	0.001
LABBE_TARGETS_OF_TGFB1_AND_WNT3A_UP	87	-0.57	-1.86	0.000	0.001
RASHI_NFKB1_TARGETS	19	-0.73	-1.86	0.000	0.001
LEE_LIVER_CANCER_MYC_UP	48	-0.62	-1.86	0.000	0.001
MICROTUBULE_MOTOR_ACTIVITY	15	-0.79	-1.86	0.000	0.001
REACTOME_P53_INDEPENDENT_G1_S_DNA_DAMAGE_CHEC KPOINT	47	-0.61	-1.85	0.000	0.001
REACTOME_METABOLISM_OF_RNA	248	-0.51	-1.85	0.000	0.001
REACTOME_PEPTIDE_LIGAND_BINDING_RECEPTORS	42	-0.63	-1.85	0.000	0.001
WILLIAMS_ESR1_TARGETS_UP	21	-0.74	-1.85	0.000	0.001
GSE360_T_GONDII_VS_B_MALAYI_HIGH_DOSE_MAC_UP	163	-0.52	-1.85	0.000	0.001
KEGG_BASE_EXCISION_REPAIR	33	-0.66	-1.85	0.000	0.001
HADDAD_T_LYMPHOCYTE_AND_NK_PROGENITOR_DN	29	-0.68	-1.85	0.001	0.001
GENTILE_UV_RESPONSE_CLUSTER_D4	54	-0.61	-1.85	0.000	0.001
IMMUNE_RESPONSE	122	-0.54	-1.85	0.000	0.001
TRANSMEMBRANE_RECEPTOR_ACTIVITY	206	-0.52	-1.85	0.000	0.001
CENTROSOME	55	-0.60	-1.85	0.000	0.001
LENAOUR_DENDRITIC_CELL_MATURATION_DN	99	-0.55	-1.85	0.000	0.001
REACTOME_G_ALPHA_S_SIGNALLING_EVENTS	50	-0.60	-1.85	0.000	0.001
REACTOME_METABOLISM_OF_NON_CODING_RNA	46	-0.62	-1.85	0.000	0.001
GSE28237_FOLLICULAR_VS_LATE_GC_BCELL_DN	174	-0.52	-1.85	0.000	0.001
CYTOKINE_BINDING	28	-0.68	-1.85	0.000	0.001
AMIT_SERUM_RESPONSE_240_MCF10A	52	-0.61	-1.85	0.001	0.001
SPINDLE_MICROTUBULE	16	-0.78	-1.85	0.002	0.001
ENK_UV_RESPONSE_EPIDERMIS_UP	253	-0.51	-1.85	0.000	0.001
GU_PDEF_TARGETS_UP	64	-0.59	-1.85	0.000	0.001
RIBONUCLEOPROTEIN_COMPLEX	138	-0.53	-1.85	0.000	0.001
MUELLER_METHYLATED_IN_GLIOBLASTOMA	23	-0.71	-1.85	0.000	0.001
KARLSSON_TGFB1_TARGETS_UP	120	-0.53	-1.85	0.000	0.001
BOQUEST_STEM_CELL_CULTURED_VS_FRESH_UP	351	-0.50	-1.85	0.000	0.001
MORI_SMALL_PRE_BII_LYMPHOCYTE_DN	67	-0.59	-1.85	0.000	0.001
DORN_ADENOVIRUS_INFECTION_48HR_DN	36	-0.64	-1.85	0.000	0.001
NUCLEAR_CHROMOSOME	49	-0.62	-1.85	0.000	0.001
GSE26669_CTRL_VS_COSTIM_BLOCK_MLR_CD4_TCELL_UP	170	-0.53	-1.85	0.000	0.001
REACTOME_APC_C_CDH1_MEDIATED_DEGRADATION_OF_CD C20_AND_OTHER_APC_C_CDH1_TARGETED_PROTEINS_IN_L ATE_MITOSIS_EARLY_G1	63	-0.59	-1.85	0.000	0.001
GSE14769_UNSTIM_VS_60MIN_LPS_BMDM_DN	176	-0.52	-1.85	0.000	0.001
GSE360_L_DONOVANI_VS_T_GONDII_DC_DN	157	-0.53	-1.85	0.000	0.001
HOSHIDA_LIVER_CANCER_SUBCLASS_S1	208	-0.51	-1.84	0.000	0.001
KRAS.300_UP.V1_UP	81	-0.57	-1.84	0.000	0.001

REACTOME_GLOBAL_GENOMIC_NER_GG_NER	33	-0.66	-1.84	0.000	0.001
HAN_JNK_SINGALING_DN	26	-0.68	-1.84	0.000	0.001
PID_AURORA_A_PATHWAY	30	-0.68	-1.84	0.000	0.001
GSE360_LOW_DOSE_B_MALAYI_VS_M_TUBERCULOSIS_DC_DN	157	-0.52	-1.84	0.000	0.002
ELVIDGE_HYPOXIA_UP	156	-0.53	-1.84	0.000	0.002
REACTOME_G1_PHASE	33	-0.66	-1.84	0.000	0.002
RESPONSE_TO_STRESS	393	-0.49	-1.84	0.000	0.002
DORN_ADENOVIRUS_INFECTION_32HR_DN	36	-0.65	-1.84	0.000	0.002
GRADE_METASTASIS_DN	43	-0.61	-1.84	0.000	0.002
REACTOME_HEMOSTASIS	326	-0.50	-1.84	0.000	0.002
PRC2_EZH2_UP.V1_DN	143	-0.53	-1.84	0.000	0.002
KEGG_RIBOSOME	83	-0.56	-1.84	0.000	0.002
COLLER_MYC_TARGETS_UP	21	-0.71	-1.84	0.006	0.002
GSE2706_LPS_VS_R848_AND_LPS_8H_STIM_DC_DN	143	-0.53	-1.84	0.000	0.002
REACTOME_METABOLISM_OF_NUCLEOTIDES	61	-0.58	-1.84	0.000	0.002
RIZ_ERYTHROID_DIFFERENTIATION_6HR	26	-0.68	-1.84	0.001	0.002
HARRIS_BRAIN_CANCER_PROGENITORS	30	-0.67	-1.84	0.000	0.002
ZHENG_RESPONSE_TO_ARSENITE_DN	16	-0.76	-1.84	0.002	0.002
GSE31082_DN_VS_CD8_SP_THYMOCYTE_UP	191	-0.51	-1.84	0.000	0.002
KORKOLA_EMBRYONAL_CARCINOMA_UP	34	-0.64	-1.84	0.001	0.002
GSE2826_XID_VS_BTK_KO_BCELL_DN	154	-0.52	-1.84	0.000	0.002
GSE12366_GC_BCELL_VS_PLASMA_CELL_UP	183	-0.51	-1.84	0.000	0.002
REACTOME_PROCESSING_OF_CAPPED_INTRON_CONTAINING_PRE_MRNA	134	-0.53	-1.83	0.000	0.002
GSE14769_UNSTIM_VS_80MIN_LPS_BMDM_DN	170	-0.52	-1.83	0.000	0.002
WELCSH_BRCA1_TARGETS_DN	135	-0.53	-1.83	0.000	0.002
DNA_RECOMBINATION	40	-0.64	-1.83	0.000	0.002
FRASOR_RESPONSE_TO_ESTRADIOL_UP	30	-0.67	-1.83	0.000	0.002
CHIARETTI_T_ALL_RELAPSE_PROGNOSIS	16	-0.75	-1.83	0.002	0.002
ZHENG_IL22_SIGNALING_UP	31	-0.66	-1.83	0.000	0.002
KUNINGER_IGF1_VS_PDGFB_TARGETS_DN	40	-0.63	-1.83	0.000	0.002
LEONARD_HYPOXIA	47	-0.60	-1.83	0.001	0.002
HENDRICKS_SMARCA4_TARGETS_UP	50	-0.61	-1.83	0.000	0.002
KEGG_P53_SIGNALING_PATHWAY	61	-0.59	-1.83	0.000	0.002
GSE36476_YOUNG_VS_OLD_DONOR_MEMORY_CD4_TCELL_UP	151	-0.53	-1.83	0.000	0.002
REACTOME_SRP_DEPENDENT_COTRANSLATIONAL_PROTEIN_TARGETING_TO_MEMBRANE	106	-0.54	-1.83	0.000	0.002
BEHAVIOR	59	-0.60	-1.83	0.000	0.002
GSE17721_POLYIC_VS_PAM3CSK4_1H_BMDM_DN	162	-0.52	-1.83	0.000	0.002
HERNANDEZ_ABERRANT_MITOSIS_BY_DOCETACEL_2NM_DN	21	-0.71	-1.83	0.003	0.002
GSE17974_1H_VS_72H_UNTREATED_IN_VITRO_CD4_TCELL_DN	190	-0.52	-1.83	0.000	0.002
AKT_UP.V1_UP	127	-0.53	-1.83	0.000	0.002
WANG_METASTASIS_OF_BREAST_CANCER_ESR1_UP	22	-0.71	-1.83	0.000	0.002
MATSUDA_NATURAL_KILLER_DIFFERENTIATION	393	-0.49	-1.83	0.000	0.002
CHIN_BREAST_CANCER_COPY_NUMBER_UP	21	-0.71	-1.83	0.003	0.002
GSE13411_NAIVE_BCELL_VS_PLASMA_CELL_DN	148	-0.53	-1.83	0.000	0.002
CLASPER_LYMPHATIC_VESSELS_DURING_METASTASIS_UP	17	-0.75	-1.83	0.000	0.002
GSE27786_LIN_NEG_VS_BCELL_UP	168	-0.52	-1.83	0.000	0.002
VIRAL_GENOME_REPLICATION	17	-0.75	-1.83	0.000	0.002

REACTOME_NUCLEOTIDE_EXCISION_REPAIR	49	-0.61	-1.83	0.000	0.002
GSE10325_CD4_TCELL_VS_LUPUS_CD4_TCELL_DN	169	-0.52	-1.83	0.000	0.002
PID_INTEGRIN_CS_PATHWAY	22	-0.71	-1.83	0.004	0.002
REACTOME_MRNA_PROCESSING	152	-0.52	-1.83	0.000	0.002
NAKAMURA_ADIPOGENESIS_LATE_DN	32	-0.66	-1.83	0.003	0.002
STANELLE_E2F1_TARGETS	26	-0.68	-1.83	0.000	0.002
GSE9650_NAIVE_VS_MEMORY_CD8_TCELL_DN	168	-0.52	-1.83	0.000	0.002
CARD_MIR302A_TARGETS	64	-0.58	-1.82	0.000	0.002
PID_PTP1BPATHWAY	40	-0.63	-1.82	0.000	0.002
BIOCARTA_ATRBRCA_PATHWAY	21	-0.72	-1.82	0.000	0.002
GSE1448_CTRL_VS_ANTI_VALPHA2_DP_THYMOCYTE_UP	167	-0.51	-1.82	0.000	0.002
KAECH_NAIVE_VS_MEMORY_CD8_TCELL_DN	166	-0.52	-1.82	0.000	0.002
FRIDMAN_IMMORTALIZATION_DN	30	-0.66	-1.82	0.000	0.002
CHROMOSOME_ORGANIZATION_AND_BIOGENESIS	117	-0.53	-1.82	0.000	0.002
E2F3_UP.V1_UP	156	-0.52	-1.82	0.000	0.002
CUSTOM_GIST-T1_ETV1SH1_DN	194	-0.51	-1.82	0.000	0.002
JECHLINGER_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_UP	59	-0.59	-1.82	0.000	0.002
SANSOM_APC_TARGETS	168	-0.51	-1.82	0.000	0.002
TENEDINI_MEGAKARYOCYTE_MARKERS	53	-0.60	-1.82	0.001	0.002
BROWNE_HCMV_INFECTION_2HR_UP	29	-0.66	-1.82	0.000	0.002
CYTOSKELETAL_PART	197	-0.51	-1.82	0.000	0.002
REACTOME_SCFSKP2_MEDIATED_DEGRADATION_OF_P27_P21	53	-0.60	-1.82	0.000	0.002
YANG_BREAST_CANCER_ESR1_BULK_DN	22	-0.71	-1.82	0.002	0.002
TBK1.DN.48HRS_DN	48	-0.59	-1.82	0.000	0.002
REACTOME_SMAD2_SMAD3_SMAD4_HETEROTRIMER_REGULATES_TRANSCRIPTION	25	-0.68	-1.82	0.000	0.002
REACTOME_3_UTR_MEDIATED_TRANSLATIONAL_REGULATION	100	-0.54	-1.82	0.000	0.002
GSE17721_CTRL_VS_PAM3CSK4_24H_BMDM_DN	166	-0.52	-1.82	0.000	0.002
SECOND_MESSENGER_MEDIATED_SIGNALING	65	-0.57	-1.82	0.000	0.002
BONCI_TARGETS_OF_MIR15A_AND_MIR16_1	81	-0.56	-1.82	0.000	0.002
GROSS_HYPOXIA_VIA_ELK3_AND_HIF1A_DN	94	-0.55	-1.82	0.000	0.002
COULOUARN_TEMPORAL_TGFB1_SIGNATURE_UP	99	-0.54	-1.82	0.000	0.002
G_PROTEIN_COUPLED_RECEPTOR_ACTIVITY	60	-0.58	-1.82	0.000	0.002
REACTOME_PEPTIDE_CHAIN_ELONGATION	82	-0.56	-1.82	0.000	0.002
GSE14769_UNSTIM_VS_120MIN_LPS_BMDM_DN	173	-0.51	-1.82	0.000	0.002
BIOCARTA_NO1_PATHWAY	24	-0.68	-1.82	0.006	0.002
HERNANDEZ_MITOTIC_ARREST_BY_DOCETAXEL_2_UP	50	-0.60	-1.81	0.000	0.002
RPS14_DN.V1_UP	129	-0.53	-1.81	0.000	0.002
PID_CMYB_PATHWAY	66	-0.57	-1.81	0.000	0.002
GOLDRATH_NAIVE_VS_MEMORY_CD8_TCELL_UP	180	-0.51	-1.81	0.000	0.002
REACTOME_FACTORS_INVOLVED_IN_MEGAKARYOCYTE_DEVELOPMENT_AND_PLATELET_PRODUCTION	93	-0.55	-1.81	0.000	0.002
REACTOME_HOST_INTERACTIONS_OF_HIV_FACTORS	111	-0.54	-1.81	0.000	0.002
KEGG_LEISHMANIA_INFECTION	53	-0.59	-1.81	0.000	0.002
PUIFFE_INVASION_INHIBITED_BY_ASCITES_UP	77	-0.56	-1.81	0.000	0.002
GSE7460_CD8_TCELL_VS_TREG_ACT_DN	186	-0.51	-1.81	0.000	0.002
WALLACE_PROSTATE_CANCER_RACE_UP	184	-0.51	-1.81	0.000	0.002
SUZUKI_RESPONSE_TO_TSA_AND_DECITABINE_1A	16	-0.75	-1.81	0.005	0.002
MANTOVANI_NFKB_TARGETS_UP	31	-0.65	-1.81	0.001	0.002
CATION_HOMEOSTASIS	53	-0.60	-1.81	0.000	0.002

CUI_GLUCOSE_DEPRIVATION	51	-0.58	-1.81	0.003	0.002
GSE36392_MAC_VS_NEUTROPHIL_IL25_TREATED_LUNG_DN	132	-0.52	-1.81	0.000	0.002
GSE17974_0H_VS_48H_IN_VITRO_ACT_CD4_TCELL_DN	185	-0.51	-1.81	0.000	0.002
REACTOME_REGULATION_OF_ORNITHINE_DECARBOXYLASE_ODC	47	-0.60	-1.81	0.001	0.002
IZADPANAH_STEM_CELL_ADIPOSE_VS_BONE_UP	112	-0.53	-1.81	0.000	0.002
PRAMOONJAGO_SOX4_TARGETS_DN	47	-0.62	-1.81	0.000	0.002
REACTOME_CDK_MEDIATED_PHOSPHORYLATION_AND_REMOVAL_OF_CDC6	45	-0.61	-1.81	0.000	0.002
HAHTOLA_SEZARY_SYNDROM_UP	74	-0.56	-1.81	0.000	0.002
MOREIRA_RESPONSE_TO_TSA_UP	25	-0.67	-1.81	0.000	0.002
HUMMERICH_SKIN_CANCER_PROGRESSION_UP	70	-0.57	-1.81	0.000	0.002
HEMATOPOIETIN_INTERFERON_CLASSD200_DOMAIN_CYTOKINE_RECEPTOR_ACTIVITY	22	-0.69	-1.81	0.000	0.002
KORKOLA_CORRELATED_WITH_POU5F1	19	-0.72	-1.81	0.000	0.002
MODY_HIPPOCAMPUS_NEONATAL	32	-0.65	-1.81	0.000	0.003
LEE_LIVER_CANCER_DENA_UP	46	-0.61	-1.81	0.000	0.003
KYNG_ENVIRONMENTAL_STRESS_RESPONSE_UP	50	-0.61	-1.81	0.000	0.003
RECEPTOR_BINDING	218	-0.50	-1.81	0.000	0.003
REACTOME_TRANSLATION	141	-0.52	-1.81	0.000	0.003
ION_HOMEOSTASIS	65	-0.57	-1.81	0.001	0.003
PID_DELTANP63PATHWAY	41	-0.62	-1.81	0.001	0.003
CELLULAR_CATION_HOMEOSTASIS	50	-0.60	-1.80	0.000	0.003
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_15	30	-0.65	-1.80	0.000	0.003
ROY_WOUND_BLOOD_VESSEL_UP	44	-0.60	-1.80	0.000	0.003
GSE13485_CTRL_VS_DAY7_YF17D_VACCINE_PBMC_DN	165	-0.51	-1.80	0.000	0.003
FRIDMAN_SENESCENCE_UP	69	-0.57	-1.80	0.000	0.003
GSE24634_NAIVE_CD4_TCELL_VS_DAY10_IL4_CONV_TREG_DN	188	-0.51	-1.80	0.000	0.003
HEDENFALK_BREAST_CANCER_BRCA1_VS_BRCA2	156	-0.52	-1.80	0.000	0.003
REACTOME_HOMOLOGOUS_RECOMBINATION_REPAIR_OF_REPLICATION_INDEPENDENT_DOUBLE_STRAND_BREAKS	16	-0.73	-1.80	0.003	0.003
BHAT_ESR1_TARGETS_NOT_VIA_AKT1_UP	173	-0.51	-1.80	0.000	0.003
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_12H_ACT_CD4_TCELL_DN	112	-0.53	-1.80	0.000	0.003
GSE30962_PRIMARY_VS_SECONDARY_CHRONIC_LCMV_INF_CD8_TCELL_UP	181	-0.51	-1.80	0.000	0.003
VART_KSHV_INFECTION_ANGIOGENIC_MARKERS_UP	116	-0.52	-1.80	0.000	0.003
MARKEY_RB1_ACUTE_LOF_UP	171	-0.51	-1.80	0.000	0.003
KANG_IMMORTALIZED_BY_TERT_DN	72	-0.57	-1.80	0.000	0.003
DAVICIONI_TARGETS_OF_PAX_FOXO1_FUSIONS_UP	226	-0.50	-1.80	0.000	0.003
KEGG_HOMOLOGOUS_RECOMBINATION	28	-0.66	-1.80	0.001	0.003
DORN_ADENOVIRUS_INFECTION_12HR_DN	30	-0.66	-1.80	0.001	0.003
UROSEVIC_RESPONSE_TO_IMIQUIMOD	17	-0.72	-1.80	0.002	0.003
PID_FRA_PATHWAY	31	-0.66	-1.80	0.000	0.003
REGULATION_OF_MITOTIC_CELL_CYCLE	23	-0.69	-1.80	0.000	0.003
NUCLEAR_CHROMOSOME_PART	31	-0.65	-1.80	0.001	0.003
GSE9650_NAIVE_VS_EFF_CD8_TCELL_DN	172	-0.51	-1.80	0.000	0.003
PID_TAP63PATHWAY	47	-0.60	-1.80	0.003	0.003
BOSCO_EPITHELIAL_DIFFERENTIATION_MODULE	29	-0.66	-1.80	0.000	0.003
ZHANG_RESPONSE_TO_CANTHARIDIN_DN	65	-0.57	-1.80	0.000	0.003

HAN_SATB1_TARGETS_DN	389	-0.48	-1.80	0.000	0.003
DING_LUNG_CANCER_MUTATED_SIGNIFICANTLY	21	-0.70	-1.80	0.002	0.003
KRASNOSELSKAYA_ILF3_TARGETS_DN	38	-0.64	-1.80	0.000	0.003
PID_ATM_PATHWAY	34	-0.64	-1.80	0.003	0.003
REGULATION_OF_CATALYTIC_ACTIVITY	215	-0.50	-1.79	0.000	0.003
HELLER_HDAC_TARGETS_DN	237	-0.50	-1.79	0.000	0.003
REACTOME_PROCESSIVE_SYNTHESIS_ON_THE_LAGGING_STRAND	15	-0.77	-1.79	0.005	0.003
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_6H_CD4_TCELL_DN	170	-0.52	-1.79	0.000	0.003
REACTOME_G_ALPHA_I_SIGNALLING_EVENTS	70	-0.56	-1.79	0.000	0.003
GROWTH_FACTOR_BINDING	20	-0.71	-1.79	0.002	0.003
KINASE_REGULATOR_ACTIVITY	37	-0.62	-1.79	0.001	0.003
HUANG_FOXA2_TARGETS_UP	38	-0.62	-1.79	0.001	0.003
GSE3982_DC_VS_MAC_LPS_STIM_DN	150	-0.51	-1.79	0.000	0.003
BECKER_TAMOXIFEN_RESISTANCE_DN	44	-0.60	-1.79	0.001	0.003
CELL_CELL_SIGNALING	203	-0.50	-1.79	0.000	0.003
ZHANG_PROLIFERATING_VS_QUIESCENT	49	-0.59	-1.79	0.000	0.003
CELL_MIGRATION	65	-0.57	-1.79	0.000	0.003
ENGELMANN_CANCER_PROGENITORS_UP	44	-0.61	-1.79	0.001	0.003
REACTOME_INTEGRIN_CELL_SURFACE_INTERACTIONS	63	-0.57	-1.79	0.000	0.003
HENDRICKS_SMARCA4_TARGETS_DN	32	-0.64	-1.79	0.006	0.003
RORIE_TARGETS_OF_EWSR1_FLI1_FUSION_UP	28	-0.64	-1.79	0.000	0.003
SEITZ_NEOPLASTIC_TRANSFORMATION_BY_8P_DELETION_UP	59	-0.57	-1.79	0.000	0.003
ZHOU_TNF_SIGNALING_30MIN	50	-0.59	-1.79	0.003	0.003
RAHMAN_TP53_TARGETS_PHOSPHORYLATED	21	-0.69	-1.79	0.003	0.003
GSE17721_POLYIC_VS_CPG_2H_BMDM_DN	162	-0.51	-1.79	0.000	0.003
MICROTUBULE_ORGANIZING_CENTER	64	-0.57	-1.79	0.001	0.003
GSE360_HIGH_DOSE_B_MALAYI_VS_M_TUBERCULOSIS_DC_DN	151	-0.51	-1.79	0.000	0.003
BROWNE_HCMV_INFECTION_10HR_UP	82	-0.55	-1.79	0.000	0.003
BENPORATH_ES_CORE_NINE_CORRELATED	90	-0.55	-1.79	0.000	0.003
REACTOME_TRANSCRIPTIONAL_ACTIVITY_OF_SMAD2_SMAD3_SMAD4_HETEROTRIMER	36	-0.62	-1.79	0.001	0.003
GSE39820_CTRL_VS_IL1B_IL6_IL23A_CD4_TCELL_UP	175	-0.50	-1.78	0.000	0.003
PROTEIN_KINASE_REGULATOR_ACTIVITY	33	-0.64	-1.78	0.000	0.003
SANSOM_APC_TARGETS_REQUIRE_MYC	192	-0.50	-1.78	0.000	0.003
PID_PRLSIGNALINGEVENTSPATHWAY	23	-0.68	-1.78	0.002	0.003
REACTOME_SIGNALING_BY_GPCR	281	-0.49	-1.78	0.000	0.003
ABRAMSON_INTERACT_WITH_AIRE	43	-0.61	-1.78	0.000	0.003
GSE27786_NKCELL_VS_MONO_MAC_DN	151	-0.51	-1.78	0.000	0.003
LIU_TARGETS_OF_VMYB_VS_CMYB_DN	33	-0.63	-1.78	0.001	0.003
GSE17974_0.5H_VS_72H_IL4_AND_ANTI_IL12_ACT_CD4_TCELL_DN	183	-0.51	-1.78	0.000	0.003
LIANG_HEMATOPOIESIS_STEM_CELL_NUMBER_LARGE_VS_TINY_UP	35	-0.63	-1.78	0.001	0.003
REACTOME_SCF_BETA_TRCP_MEDIATED_DEGRADATION_OF_EMI1	48	-0.58	-1.78	0.003	0.004
GSE13411_SWITCHED_MEMORY_BCELL_VS_PLASMA_CELL_DN	133	-0.52	-1.78	0.000	0.004
PID_WNT_SIGNALING_PATHWAY	18	-0.71	-1.78	0.003	0.004
MOREAUX_B_LYMPHOCYTE_MATURATION_BY_TACI_DN	71	-0.56	-1.78	0.002	0.004

WORSCHECH_TUMOR_REJECTION_UP	30	-0.63	-1.78	0.003	0.004
RAY_TUMORIGENESIS_BY_ERBB2_CDC25A_UP	81	-0.55	-1.78	0.000	0.004
ATF2_S_UP.V1_UP	125	-0.52	-1.78	0.000	0.004
STK33_NOMO_UP	242	-0.48	-1.78	0.000	0.004
GSE29617_CTRL_VS_DAY7_TIV_FLU_VACCINE_PBMC_2008_UP	156	-0.51	-1.78	0.000	0.004
CHROMATIN	31	-0.63	-1.78	0.003	0.004
G_PROTEIN_COUPLED_RECEPTOR_PROTEIN_SIGNALING_PATHWAY	139	-0.51	-1.78	0.000	0.004
HELLEBREKERS_SILENCED_DURING_TUMOR_ANGIOGENESIS	67	-0.56	-1.78	0.000	0.004
BEGUM_TARGETS_OF_PAX3_FOXO1_FUSION_DN	42	-0.59	-1.78	0.004	0.004
SHAFFER_IRF4_TARGETS_IN_ACTIVATED_DENDRITIC_CELL	61	-0.56	-1.78	0.000	0.004
PID_INTEGRIN1_PATHWAY	54	-0.58	-1.77	0.000	0.004
HOELZEL_NF1_TARGETS_UP	104	-0.53	-1.77	0.000	0.004
GRAHAM_CML_DIVIDING_VS_NORMAL_QUIESCENT_DN	74	-0.55	-1.77	0.000	0.004
BURTON_ADIPOGENESIS_PEAK_AT_8HR	37	-0.61	-1.77	0.000	0.004
POMEROY_MEDULLOBLASTOMA_PROGNOSIS_DN	40	-0.61	-1.77	0.003	0.004
MATZUK_MALE_REPRODUCTION_SERTOLI	23	-0.69	-1.77	0.003	0.004
MEINHOLD_OVARIAN_CANCER_LOW_GRADE_DN	20	-0.71	-1.77	0.000	0.004
KEGG_SMALL_CELL_LUNG_CANCER	82	-0.54	-1.77	0.000	0.004
GSE20366_EX_VIVO_VS_DEC205_CONVERSION_NAIVE_CD4_TCELL_UP	163	-0.50	-1.77	0.000	0.004
LYMPHOCYTE_ACTIVATION	33	-0.63	-1.77	0.000	0.004
RESPONSE_TO_DNA_DAMAGE_STIMULUS	154	-0.50	-1.77	0.000	0.004
GSE24634_IL4_VS_CTRL_TREATED_NAIVE_CD4_TCELL_DAY3_DN	160	-0.50	-1.77	0.000	0.004
GSE13411_IGM_MEMORY_BCELL_VS_PLASMA_CELL_DN	144	-0.51	-1.77	0.000	0.004
GROSS_HYPOXIA_VIA_HIF1A_UP	74	-0.55	-1.77	0.000	0.004
LINDSTEDT_DENDRITIC_CELL_MATURATION_D	51	-0.58	-1.77	0.000	0.004
VIRAL_INFECTIOUS_CYCLE	23	-0.69	-1.77	0.001	0.004
DUTTA_APOPTOSIS_VIA_NFKB	28	-0.65	-1.77	0.001	0.004
MATZUK_MEIOTIC_AND_DNA_REPAIR	31	-0.64	-1.77	0.001	0.004
GSE22886_NAIVE_CD4_TCELL_VS_48H_ACT_TH2_DN	189	-0.50	-1.77	0.000	0.004
TAVOR_CEBPA_TARGETS_DN	23	-0.68	-1.77	0.002	0.004
REACTOME_GPCR_DOWNSTREAM_SIGNALING	211	-0.49	-1.77	0.000	0.004
GSE2706_UNSTIM_VS_2H_LPS_AND_R848_DC_DN	150	-0.51	-1.77	0.000	0.004
JECHLINGER_EPITHELIAL_TO_MESENCHYMAL_TRANSITION_DN	55	-0.57	-1.77	0.000	0.004
BIOCARTA_PROTEASOME_PATHWAY	28	-0.66	-1.77	0.000	0.004
PID_HIF1_TFPATHWAY	57	-0.58	-1.77	0.000	0.004
VERRECCHIA_EARLY_RESPONSE_TO_TGFB1	54	-0.58	-1.77	0.000	0.004
DARWICHE_SQUAMOUS_CELL_CARCINOMA_UP	115	-0.52	-1.77	0.000	0.004
VERHAAK_GLIOBLASTOMA_NEURAL	175	-0.50	-1.77	0.000	0.004
VILIMAS_NOTCH1_TARGETS_UP	29	-0.63	-1.77	0.000	0.004
POSITIVE_REGULATION_OF_MAP_KINASE_ACTIVITY	40	-0.60	-1.77	0.000	0.004
WUNDER_INFLAMMATORY_RESPONSE_AND_CHOLESTEROL_UP	43	-0.59	-1.77	0.001	0.004
CHICAS_RB1_TARGETS_CONFLUENT	484	-0.47	-1.76	0.000	0.004
STRUCTURAL_CONSTITUENT_OF_RIBOSOME	76	-0.54	-1.76	0.000	0.004
REACTOME_APC_CDC20_MEDIATED_DEGRADATION_OF_NEK2A	21	-0.69	-1.76	0.002	0.004

DE_YY1_TARGETS_DN	88	-0.54	-1.76	0.000	0.004
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_6HR_DN	32	-0.63	-1.76	0.000	0.004
HUANG_FOXA2_TARGETS_DN	32	-0.63	-1.76	0.001	0.004
GSE8515_CTRL_VS_IL1_4H_STIM_MAC_DN	160	-0.50	-1.76	0.000	0.004
RESPONSE_TO_EXTRACELLULAR_STIMULUS	21	-0.69	-1.76	0.006	0.004
PDGF_UP.V1_UP	133	-0.52	-1.76	0.000	0.004
PID_NFAT_TFPATHWAY	31	-0.64	-1.76	0.001	0.004
B_CELL_ACTIVATION	15	-0.75	-1.76	0.000	0.004
REGULATION_OF_MAP_KINASE_ACTIVITY	59	-0.57	-1.76	0.000	0.004
HOOI_ST7_TARGETS_DN	102	-0.52	-1.76	0.000	0.005
LIU_CDX2_TARGETS_UP	20	-0.69	-1.76	0.005	0.005
KRAS.600_UP.V1_UP	158	-0.50	-1.76	0.000	0.005
KEGG_STEROID_BIOSYNTHESIS	16	-0.72	-1.76	0.006	0.005
ZHAN_MULTIPLE_MYELOMA_SUBGROUPS	30	-0.64	-1.76	0.001	0.005
SMID_BREAST_CANCER_RELAPSE_IN_BRAIN_UP	24	-0.67	-1.76	0.000	0.005
GSE22886_NAIVE_BCELL_VS_BLOOD_PLASMA_CELL_DN	184	-0.50	-1.76	0.000	0.005
GSE20366_TREG_VS_NAIVE_CD4_TCELL_HOMEOSTATIC_CONVERSION_UP	163	-0.50	-1.76	0.000	0.005
ERB2_UP.V1_DN	179	-0.50	-1.76	0.000	0.005
KEGG_REGULATION_OF_ACTIN_CYTOSKELETON	170	-0.50	-1.76	0.000	0.005
SMID_BREAST_CANCER_RELAPSE_IN_BONE_DN	224	-0.48	-1.76	0.000	0.005
GSE17974_0H_VS_1H_IN_VITRO_ACT_CD4_TCELL_DN	179	-0.50	-1.76	0.000	0.005
GSE3982_MAC_VS_TH2_DN	168	-0.50	-1.76	0.000	0.005
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_4	86	-0.54	-1.76	0.001	0.005
GSE27786_LIN_NEG_VS_ERYTHROBLAST_DN	138	-0.51	-1.76	0.000	0.005
XU_HGF_SIGNALING_NOT_VIA_AKT1_48HR_DN	18	-0.71	-1.76	0.000	0.005
VIRAL_REPRODUCTION	30	-0.63	-1.76	0.001	0.005
AZARE_NEOPLASTIC_TRANSFORMATION_BY_STAT3_DN	93	-0.53	-1.76	0.000	0.005
UDAYAKUMAR_MED1_TARGETS_UP	130	-0.51	-1.76	0.000	0.005
PLASARI_TGFB1_SIGNALING_VIA_NFIC_1HR_UP	26	-0.67	-1.76	0.001	0.005
GSE3982_BCELL_VS_EFF_MEMORY_CD4_TCELL_DN	122	-0.51	-1.76	0.000	0.005
FLECHNER_BIOPSY_KIDNEY_TRANSPLANT_REJECTED_VS_OK_UP	54	-0.57	-1.76	0.000	0.005
WU_HBX_TARGETS_2_UP	22	-0.68	-1.76	0.001	0.005
KLEIN_PRIMARY_EFFUSION_LYMPHOMA_UP	43	-0.59	-1.76	0.003	0.005
BIOCARTA_NTHI_PATHWAY	23	-0.66	-1.75	0.003	0.005
NEWMAN_ERCC6_TARGETS_UP	22	-0.67	-1.75	0.002	0.005
GUO_TARGETS_OF_IRS1_AND_IRS2	85	-0.53	-1.75	0.001	0.005
LEE_LIVER_CANCER_MYC_E2F1_UP	45	-0.60	-1.75	0.003	0.005
RICKMAN_TUMOR_DIFFERENTIATED_WELL_VS_MODERATELY_DN	74	-0.55	-1.75	0.000	0.005
MANTOVANI_VIRAL_GPCR_SIGNALING_UP	61	-0.56	-1.75	0.000	0.005
GSE17580_TREG_VS_TEFF_S_MANSONI_INF_UP	162	-0.49	-1.75	0.000	0.005
REACTOME_REGULATION_OF_APOPTOSIS	53	-0.57	-1.75	0.001	0.005
REACTOME_AUTODEGRADATION_OF_THE_E3_UBIQUITIN_LIGASE_COP1	46	-0.59	-1.75	0.001	0.005
G_PROTEIN_COUPLED_RECEPTOR_BINDING	19	-0.69	-1.75	0.003	0.005
CHIANG_LIVER_CANCER_SUBCLASS_CTNNB1_DN	111	-0.52	-1.75	0.000	0.005
AMIT_EGF_RESPONSE_240_MCF10A	20	-0.69	-1.75	0.001	0.005
VALK_AML_CLUSTER_4	24	-0.66	-1.75	0.001	0.005
NOTCH_DN.V1_DN	106	-0.52	-1.75	0.000	0.005

GSE22886_DAY1_VS_DAY7_MONOCYTE_IN_CULTURE_UP	169	-0.50	-1.75	0.000	0.005
RECEPTOR_COMPLEX	39	-0.60	-1.75	0.004	0.005
GSE360_CTRL_VS_M_TUBERCULOSIS_DC_DN	149	-0.50	-1.75	0.000	0.005
SAGIV_CD24_TARGETS_DN	42	-0.59	-1.75	0.000	0.005
TSAI_RESPONSE_TO_RADIATION_THERAPY	27	-0.65	-1.75	0.001	0.005
YAGI_AML_FAB_MARKERS	159	-0.50	-1.75	0.000	0.005
KOKKINAKIS_METHIONINE_DEPRIVATION_96HR_UP	108	-0.52	-1.75	0.000	0.005
INGRAM_SHH_TARGETS_UP	100	-0.52	-1.75	0.000	0.005
SPLICEOSOME	50	-0.59	-1.75	0.000	0.005
BROWNE_HCMV_INFECTION_1HR_UP	42	-0.58	-1.75	0.001	0.005
REACTOME_P53_DEPENDENT_G1_DNA_DAMAGE_RESPONSE	52	-0.57	-1.74	0.003	0.005
GSE26928_NAIVE_VS_EFF_MEMORY_CD4_TCELL_DN	164	-0.50	-1.74	0.000	0.005
CEBALLOS_TARGETS_OF_TP53_AND_MYC_UP	21	-0.69	-1.74	0.003	0.005
SCHLESINGER_METHYLATED_DE_NOVO_IN_CANCER	54	-0.57	-1.74	0.000	0.005
NEGATIVE_REGULATION_OF_PROGRAMMED_CELL_DEATH	130	-0.51	-1.74	0.000	0.005
CYCLIC_NUCLEOTIDE_MEDIATED_SIGNALING	36	-0.61	-1.74	0.003	0.005
GAUSSMANN_MLL_AF4_FUSION_TARGETS_A_DN	75	-0.54	-1.74	0.000	0.006
DAZARD_UV_RESPONSE_CLUSTER_G6	145	-0.50	-1.74	0.000	0.006
SASSON_RESPONSE_TO_FORSKOLIN_DN	85	-0.53	-1.74	0.001	0.006
MOHANKUMAR_TLX1_TARGETS_UP	387	-0.47	-1.74	0.000	0.006
REACTOME_INFLUENZA_VIRAL_RNA_TRANSCRIPTION_AND_REPLICATION	98	-0.52	-1.74	0.000	0.006
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_8D_UP	108	-0.52	-1.74	0.000	0.006
DNA_POLYMERASE_ACTIVITY	18	-0.69	-1.74	0.005	0.006
IGLESIAS_E2F_TARGETS_UP	123	-0.51	-1.74	0.000	0.006
PLASARI_TGFB1_TARGETS_10HR_DN	201	-0.49	-1.74	0.000	0.006
BROWNE_HCMV_INFECTION_20HR_DN	90	-0.53	-1.74	0.001	0.006
HUTTMANN_B_CLL_POOR_SURVIVAL_DN	51	-0.57	-1.74	0.001	0.006
HAN_SATB1_TARGETS_UP	339	-0.47	-1.74	0.000	0.006
ACTIVATION_OF_MAPK_ACTIVITY	34	-0.61	-1.74	0.006	0.006
GSE17721_CPG_VS_GARDIQUIMOD_12H_BMDM_UP	147	-0.50	-1.74	0.000	0.006
GENERATION_OF_A_SIGNAL_INVOLVED_IN_CELL_CELL_SIGNALING	15	-0.73	-1.74	0.002	0.006
NEMETH_INFLAMMATORY_RESPONSE_LPS_UP	75	-0.54	-1.74	0.000	0.006
FARMER_BREAST_CANCER_APOCRINE_VS_BASAL	287	-0.47	-1.74	0.000	0.006
RIBOSOME_BIOGENESIS_AND_ASSEMBLY	18	-0.69	-1.74	0.006	0.006
KEGG_PROTEASOME	41	-0.59	-1.74	0.001	0.006
MOTOR_ACTIVITY	24	-0.66	-1.74	0.001	0.006
HONMA_DOCETAXEL_RESISTANCE	34	-0.62	-1.74	0.001	0.006
GSE2706_UNSTIM_VS_2H_LPS_DC_DN	143	-0.50	-1.74	0.000	0.006
KIM_BIPOLAR_DISORDER_OLIGODENDROCYTE_DENSITY_CORR_DN	36	-0.61	-1.74	0.006	0.006
GSE9988_LOW_LPS_VS_ANTI_TREM1_AND_LPS_MONOCYTE_DN	174	-0.48	-1.74	0.000	0.006
GSE360_HIGH_DOSE_B_MALAYI_VS_M_TUBERCULOSIS_MAC_DN	157	-0.50	-1.74	0.000	0.006
SAMOLS_TARGETS_OF_KHSV_MIRNAS_DN	55	-0.56	-1.74	0.001	0.006
PID_SYNDECAN_4_PATHWAY	26	-0.65	-1.74	0.001	0.006
JOHNSTONE_PARVB_TARGETS_1_DN	57	-0.56	-1.73	0.000	0.006
BCAT_GDS748_UP	37	-0.60	-1.73	0.003	0.006
HEDENFALK_BREAST_CANCER_BRACX_UP	18	-0.71	-1.73	0.000	0.006

REACTOME_MRNA_SPLICING	105	-0.52	-1.73	0.000	0.006
CELL_SURFACE_RECEPTOR_LINKED_SIGNAL_TRANSDUCTION_GO_0007166	360	-0.47	-1.73	0.000	0.006
NEMETH_INFLAMMATORY_RESPONSE_LPS_DN	30	-0.63	-1.73	0.004	0.006
LANDIS_ERBB2_BREAST_PRENEOPLASTIC_UP	18	-0.70	-1.73	0.002	0.006
NIELSEN_LIPOSARCOMA_DN	19	-0.70	-1.73	0.004	0.006
MARSHALL_VIRAL_INFECTION_RESPONSE_DN	24	-0.66	-1.73	0.006	0.006
KEGG_GLYCOLYSIS_GLUCONEOGENESIS	43	-0.58	-1.73	0.003	0.006
HUANG_DASATINIB_RESISTANCE_UP	77	-0.54	-1.73	0.000	0.006
AMIT_SERUM_RESPONSE_120_MCF10A	59	-0.56	-1.73	0.000	0.006
GSE26669_CTRL_VS_COSTIM_BLOCK_MLR_CD8_TCELL_UP	177	-0.49	-1.73	0.000	0.006
BROWNE_HCMV_INFECTION_8HR_DN	40	-0.59	-1.73	0.000	0.006
KIM_WT1_TARGETS_8HR_UP	151	-0.49	-1.73	0.000	0.006
ESC_J1_UP_LATE.V1_DN	147	-0.49	-1.73	0.000	0.006
REACTOME_REGULATION_OF_MRNA_STABILITY_BY_PROTEINS_THAT_BIND_AU_RICH_ELEMENTS	80	-0.53	-1.73	0.001	0.006
HU_ANGIOGENESIS_DN	35	-0.60	-1.73	0.001	0.006
SATO_SILENCED_EPIGENETICALLY_IN_PANCREATIC_CANCER	33	-0.61	-1.73	0.000	0.006
REACTOME_INTERACTIONS_OF_VPR_WITH_HOST_CELLULAR_PROTEINS	31	-0.63	-1.73	0.003	0.006
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_16D_UP	111	-0.51	-1.73	0.000	0.006
CHEMICAL_HOMEOSTASIS	81	-0.53	-1.73	0.001	0.006
RELA_DN.V1_DN	64	-0.55	-1.73	0.001	0.006
MMS_MOUSE_LYMPH_HIGH_4HRS_UP	36	-0.61	-1.73	0.001	0.006
SKELETAL_DEVELOPMENT	67	-0.55	-1.73	0.001	0.006
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_CDC25_UP	98	-0.51	-1.73	0.000	0.006
GSE2826_WT_VS_XID_BCELL_UP	169	-0.49	-1.73	0.000	0.006
VERRECCHIA_DELAYED_RESPONSE_TO_TGFB1	37	-0.60	-1.73	0.001	0.006
GRAHAM_NORMAL_QUIESCENT_VS_NORMAL_DIVIDING_UP	52	-0.56	-1.73	0.001	0.006
BRUNO_HEMATOPOIESIS	56	-0.55	-1.73	0.001	0.006
REACTOME_PHOSPHORYLATION_OF_THE_APC_C	17	-0.71	-1.73	0.002	0.006
MASSARWEH_RESPONSE_TO_ESTRADIOL	54	-0.56	-1.73	0.000	0.007
BIOCARTA_TEL_PATHWAY	18	-0.69	-1.73	0.005	0.007
SENGUPTA_NASOPHARYNGEAL_CARCINOMA_WITH_LMP1_UP	335	-0.47	-1.73	0.000	0.007
PEPPER_CHRONIC_LYMPHOCYTIC_LEUKEMIA_UP	23	-0.65	-1.73	0.003	0.007
ZWANG_CLASS_1_TRANSIENTLY_INDUCED_BY_EGF	407	-0.46	-1.73	0.000	0.007
RHYTHMIC_PROCESS	18	-0.70	-1.73	0.006	0.007
REACTOME_GLUCOSE_TRANSPORT	32	-0.62	-1.73	0.004	0.007
HOFMANN_MYELODYSPLASTIC_SYNDROM_RISK_UP	21	-0.66	-1.73	0.006	0.007
BURTON_ADIPOGENESIS_4	43	-0.59	-1.73	0.000	0.007
GENTILE_UV_HIGH_DOSE_DN	297	-0.47	-1.73	0.000	0.007
GSE10239_MEMORY_VS_DAY4.5_EFF_CD8_TCELL_DN	194	-0.48	-1.73	0.000	0.007
GSE27786_LIN_NEG_VS_NKTCELL_UP	178	-0.49	-1.73	0.000	0.007
REACTOME_CROSS_PRESENTATION_OF_SOLUBLE_EXOGENOUS_ANTIGENS_ENDOSOMES	43	-0.59	-1.73	0.000	0.007
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_GREEN_UP	22	-0.67	-1.72	0.003	0.007
CYCLIN_D1_KE_.V1_UP	153	-0.49	-1.72	0.000	0.007

DASU_IL6_SIGNALING_SCAR_DN	15	-0.73	-1.72	0.002	0.007
NEGATIVE_REGULATION_OF_CELL_PROLIFERATION	117	-0.51	-1.72	0.000	0.007
LIEN_BREAST_CARCINOMA_METAPLASTIC	30	-0.62	-1.72	0.003	0.007
GSE11864_CSF1_VS_CSF1_IFNG_PAM3CYS_IN_MAC_DN	157	-0.49	-1.72	0.000	0.007
ZHU_CMV_24_HR_DN	76	-0.54	-1.72	0.003	0.007
DNA_PACKAGING	31	-0.61	-1.72	0.007	0.007
LIN_SILENCED_BY_TUMOR_MICROENVIRONMENT	66	-0.55	-1.72	0.001	0.007
SENESE_HDAC3_TARGETS_UP	448	-0.46	-1.72	0.000	0.007
GSE17721_CTRL_VS_GARDIQUIMOD_1H_BMDM_DN	153	-0.50	-1.72	0.000	0.007
NEGATIVE_REGULATION_OF_TRANSFERASE_ACTIVITY	31	-0.62	-1.72	0.001	0.007
MEIOTIC_CELL_CYCLE	26	-0.64	-1.72	0.003	0.007
PID_INTEGRIN2_PATHWAY	18	-0.69	-1.72	0.000	0.007
WILSON_PROTEASES_AT_TUMOR_BONE_INTERFACE_UP	16	-0.73	-1.72	0.007	0.007
RRNA_METABOLIC_PROCESS	16	-0.71	-1.72	0.011	0.007
REACTOME_VIF_MEDIATED_DEGRADATION_OF_APOBEC3G	48	-0.58	-1.72	0.000	0.007
GSE9006_1MONTH_VS_4MONTH_POST_TYPE_1_DIABETES_DX_PBMC_UP	155	-0.49	-1.72	0.000	0.007
GSE24634_IL4_VS_CTRL_TREATED_NAIVE_CD4_TCELL_DAY10_DN	178	-0.49	-1.72	0.000	0.007
SHETH_LIVER_CANCER_VS_TXNIP_LOSS_PAM3	52	-0.56	-1.72	0.001	0.007
SMALL_NUCLEAR_RIBONUCLEOPROTEIN_COMPLEX	21	-0.67	-1.72	0.005	0.007
P53_DN.V2_UP	70	-0.54	-1.72	0.001	0.007
GSE360_L_DONOVANI_VS_B_MALAYI_LOW_DOSE_DC_UP	150	-0.49	-1.72	0.000	0.007
HOFMANN_MYELODYSPLASTIC_SYNDROM_LOW_RISK_DN	25	-0.66	-1.72	0.003	0.007
GSE17721_12H_VS_24H_POLYIC_BMDM_UP	176	-0.48	-1.72	0.001	0.007
MISSIAGLIA_REGULATED_BY_METHYLATION_UP	108	-0.51	-1.72	0.000	0.007
LIN_APC_TARGETS	71	-0.54	-1.72	0.000	0.007
GSE7852_LN_VS_FAT_TCONV_DN	169	-0.49	-1.72	0.000	0.007
EXTRACELLULAR_REGION	236	-0.47	-1.72	0.000	0.007
NFE2L2.V2	300	-0.46	-1.72	0.000	0.007
GSE24081_CONTROLLER_VS_PROGRESSOR_HIV_SPECIFIC_CD8_TCELL_DN	153	-0.49	-1.72	0.000	0.007
REACTOME_METABOLISM_OF_MRNA	205	-0.48	-1.72	0.000	0.007
BRUECKNER_TARGETS_OF_MIRLET7A3_UP	94	-0.51	-1.71	0.000	0.007
GSE17721_12H_VS_24H_GARDIQUIMOD_BMDM_UP	171	-0.48	-1.71	0.000	0.007
KARAKAS_TGFB1_SIGNALING	15	-0.72	-1.71	0.006	0.007
TANG_SENESCENCE_TP53_TARGETS_UP	22	-0.66	-1.71	0.009	0.007
BILANGES_SERUM_SENSITIVE_VIA_TSC1	18	-0.69	-1.71	0.002	0.007
GSE17721_0.5H_VS_12H_LPS_BMDM_UP	175	-0.49	-1.71	0.000	0.007
REGULATION_OF_LYMPHOCYTE_ACTIVATION	19	-0.69	-1.71	0.005	0.008
ONDER_CDH1_SIGNALING_VIA_CTNNB1	71	-0.54	-1.71	0.000	0.008
ENDONUCLEASE_ACTIVITY	24	-0.66	-1.71	0.005	0.008
KEGG_PATHWAYS_IN_CANCER	268	-0.47	-1.71	0.000	0.008
G_PROTEIN_SIGNALING_COUPLED_TO_CYCLIC_NUCLEOTIDE_SECOND_MESSENGER	34	-0.61	-1.71	0.004	0.008
FALVELLA_SMOKERS_WITH_LUNG_CANCER	70	-0.54	-1.71	0.001	0.008
HYDROLASE_ACTIVITY_ACTING_ON_ESTER_BONDS	218	-0.47	-1.71	0.000	0.008
SWEET_KRAS_ONCOGENIC_SIGNATURE	81	-0.53	-1.71	0.000	0.008
GAVIN_FOXP3_TARGETS_CLUSTER_P4	73	-0.53	-1.71	0.000	0.008

GSE24142_ADULT_VS_FETAL_EARLY_THYMIC_PROGENITOR_DN	176	-0.48	-1.71	0.000	0.008
DARWICHE_PAPILLOMA_RISK_LOW_UP	121	-0.50	-1.71	0.000	0.008
DARWICHE_PAPILLOMA_RISK_HIGH_UP	109	-0.51	-1.71	0.000	0.008
GEISS_RESPONSE_TO_DSRNA_UP	35	-0.61	-1.71	0.004	0.008
REACTOME_TRANSPORT_OF_RIBONUCLEOPROTEINS_INTO_THE_HOST_NUCLEUS	27	-0.63	-1.71	0.003	0.008
ENZYME_INHIBITOR_ACTIVITY	82	-0.53	-1.71	0.000	0.008
XU_HGF_TARGETS_INDUCED_BY_AKT1_6HR	17	-0.70	-1.71	0.006	0.008
GSE1460_DP_THYMOCYTE_VS_NAIVE_CD4_TCELL_CORD_BLOOD_UP	188	-0.47	-1.71	0.000	0.008
KINASE_INHIBITOR_ACTIVITY	19	-0.68	-1.71	0.003	0.008
SIMBULAN_UV_RESPONSE_IMMORTALIZED_DN	28	-0.63	-1.71	0.003	0.008
FARMER_BREAST_CANCER_CLUSTER_1	16	-0.70	-1.71	0.005	0.008
REACTOME_DOUBLE_STRAND_BREAK_REPAIR	22	-0.67	-1.71	0.004	0.008
NEGATIVE_REGULATION_OF_APOPTOSIS	129	-0.50	-1.71	0.000	0.008
REGULATION_OF_PROTEIN_MODIFICATION_PROCESS	29	-0.63	-1.71	0.008	0.008
GSE3982_MAC_VS_CENT_MEMORY_CD4_TCELL_UP	178	-0.48	-1.71	0.000	0.008
WESTON_VEGFA_TARGETS_6HR	40	-0.58	-1.71	0.006	0.008
BROWNE_HCMV_INFECTION_14HR_DN	255	-0.47	-1.71	0.000	0.008
BROWNE_HCMV_INFECTION_12HR_DN	89	-0.52	-1.71	0.000	0.008
JAEGER_METASTASIS_DN	132	-0.50	-1.71	0.001	0.008
PID_REG_GR_PATHWAY	58	-0.55	-1.71	0.003	0.008
REACTOME_FATTY_ACYL_COA_BIOSYNTHESIS	18	-0.68	-1.71	0.004	0.008
STEGER_ADIPOGENESIS_DN	17	-0.69	-1.71	0.005	0.008
TURASHVILI_BREAST_LOBULAR_CARCINOMA_VS_DUCTAL_NORMAL_UP	55	-0.56	-1.71	0.003	0.008
GSE25087_FETAL_VS_ADULT_TREG_UP	179	-0.48	-1.71	0.000	0.008
REACTOME_FORMATION_OF_THE_TERNARY_COMPLEX_AND_SUBSEQUENTLY_THE_43S_COMPLEX	47	-0.56	-1.71	0.004	0.008
JOHNSTONE_PARVB_TARGETS_2_UP	125	-0.50	-1.71	0.000	0.008
GSE12845_IGD_POS_BLOOD_VS_NAIVE_TONSIL_BCELL_DN	180	-0.48	-1.70	0.000	0.008
GSE13484_12H_UNSTIM_VS_YF17D_VACCINE_STIM_PBMC_DN	156	-0.48	-1.70	0.000	0.008
GSE17974_0H_VS_0.5H_IN_VITRO_ACT_CD4_TCELL_DN	142	-0.49	-1.70	0.000	0.008
BASSO_CD40_SIGNALING_UP	81	-0.52	-1.70	0.000	0.008
REACTOME_TELOMERE_MAINTENANCE	49	-0.56	-1.70	0.003	0.008
DURAND_STROMA_MAX_DN	123	-0.50	-1.70	0.000	0.008
OHM_METHYLATED_IN_ADULT_CANCERS	22	-0.64	-1.70	0.006	0.008
GSE9006_TYPE_1_DIABETES_AT_DX_VS_4MONTH_POST_DX_PBMC_UP	176	-0.48	-1.70	0.000	0.008
GSE3982_NEUTROPHIL_VS_TH2_DN	193	-0.48	-1.70	0.000	0.008
BOYLAN_MULTIPLE_MYELOMA_C_CLUSTER_UP	31	-0.59	-1.70	0.003	0.008
GSE9037_WT_VS_IRAK4_KO_LPS_4H_STIM_BMDM_DN	163	-0.48	-1.70	0.000	0.008
GSE360_L_MAJOR_VS_B_MALAYI_LOW_DOSE_MAC_UP	146	-0.49	-1.70	0.001	0.009
GSE37416_0H_VS_6H_F_TULARENSIS_LVS_NEUTROPHIL_DN	177	-0.48	-1.70	0.001	0.009
BHAT_ESR1_TARGETS_VIA_AKT1_UP	237	-0.46	-1.70	0.000	0.009
OUYANG_PROSTATE_CANCER_PROGRESSION_DN	19	-0.67	-1.70	0.008	0.009
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_11	96	-0.51	-1.70	0.000	0.009
CUSTOM_ICC-MY UP	30	-0.62	-1.70	0.003	0.009
GROSS_HYPOXIA_VIA_ELK3_ONLY_UP	26	-0.63	-1.70	0.006	0.009

GSE17721_POLYIC_VS_PAM3CSK4_24H_BMDM_DN	186	-0.48	-1.70	0.000	0.009
SHAFFER_IRF4_TARGETS_IN_MYELOMA_VS_MATURE_B_LYMPHOCYTE	96	-0.51	-1.70	0.000	0.009
BROWNE_HCMV_INFECTION_30MIN_DN	112	-0.50	-1.70	0.001	0.009
DITTMER_PTHLH_TARGETS_UP	110	-0.50	-1.70	0.000	0.009
POSITIVE_REGULATION_OF_TRANSFERASE_ACTIVITY	71	-0.53	-1.70	0.003	0.009
CRX_DN.V1_DN	96	-0.51	-1.70	0.001	0.009
PETROVA_ENDOTHELIUM_LYMPHATIC_VS_BLOOD_DN	138	-0.49	-1.70	0.000	0.009
REGULATION_OF_PROGRAMMED_CELL_DEATH	286	-0.46	-1.70	0.000	0.009
CAFFAREL_RESPONSE_TO_THC_24HR_5_UP	32	-0.60	-1.70	0.010	0.009
PROTEIN_KINASE_INHIBITOR_ACTIVITY	19	-0.68	-1.70	0.006	0.009
MCBRYAN_PUBERTAL_TGFB1_TARGETS_DN	47	-0.56	-1.69	0.005	0.009
ROVERSI_GLIOMA_COPY_NUMBER_UP	77	-0.53	-1.69	0.002	0.009
KIM_HYPOXIA	24	-0.64	-1.69	0.000	0.009
SINGLE_STRANDED_DNA_BINDING	34	-0.60	-1.69	0.004	0.009
EXTRACELLULAR_REGION_PART	182	-0.47	-1.69	0.000	0.009
ADDYA_ERYTHROID_DIFFERENTIATION_BY_HEMIN	63	-0.54	-1.69	0.000	0.009
RRNA_PROCESSING	15	-0.71	-1.69	0.013	0.009
PROTEIN_TYROSINE_KINASE_ACTIVITY	50	-0.55	-1.69	0.001	0.009
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_24H_ACT_CD4_TCELL_DN	126	-0.50	-1.69	0.000	0.009
DOANE_RESPONSE_TO_ANDROGEN_DN	223	-0.47	-1.69	0.000	0.009
RESPONSE_TO_OTHER_ORGANISM	43	-0.57	-1.69	0.003	0.009
MORI_IMMATURE_B_LYMPHOCYTE_UP	45	-0.57	-1.69	0.005	0.009
GHO_ATF5_TARGETS_DN	16	-0.71	-1.69	0.002	0.009
MARTINEZ_RESPONSE_TO_TRABECTEDIN_DN	263	-0.46	-1.69	0.000	0.009
MCBRYAN_PUBERTAL_BREAST_3_4WK_UP	162	-0.48	-1.69	0.000	0.009
GSE17974_1.5H_VS_72H_IL4_AND_ANTI_IL12_ACT_CD4_TCELL_DN	189	-0.47	-1.69	0.000	0.009
HOQUE_METHYLATED_IN_CANCER	40	-0.57	-1.69	0.003	0.009
SCHRAETS_MLL_TARGETS_UP	28	-0.63	-1.69	0.004	0.010
WANG_BARRETTS_ESOPHAGUS_AND_ESOPHAGUS_CANCER_UP	15	-0.71	-1.69	0.004	0.010
REACTOME_AUTODEGRADATION_OF_CDH1_BY_CDH1_APC_C	56	-0.54	-1.69	0.000	0.010
LI_LUNG_CANCER	32	-0.60	-1.69	0.004	0.010
JAATINEN_HEMATOPOIETIC_STEM_CELL_DN	118	-0.49	-1.69	0.000	0.010
REACTOME_DESTABILIZATION_OF_MRNA_BY_AUF1_HNRNP_D0	49	-0.56	-1.69	0.004	0.010
GRAHAM_CML_QUIESCENT_VS_CML_DIVIDING_UP	16	-0.72	-1.69	0.005	0.010
DORN_ADENOVIRUS_INFECTION_12HR_UP	25	-0.63	-1.69	0.003	0.010
JNK_DN.V1_DN	123	-0.49	-1.69	0.000	0.010
KEGG_SPLICEOSOME	124	-0.50	-1.69	0.001	0.010
CROMER_TUMORIGENESIS_DN	27	-0.62	-1.69	0.004	0.010
AXON_GUIDANCE	15	-0.70	-1.69	0.003	0.010
DAZARD_RESPONSE_TO_UV_NHEK_DN	306	-0.46	-1.69	0.000	0.010
TURASHVILI_BREAST_DUCTAL_CARCINOMA_VS_DUCTAL_NORMAL_DN	141	-0.48	-1.69	0.000	0.010
BENPORATH_MYC_TARGETS_WITH_EBOX	199	-0.47	-1.69	0.000	0.010
HALMOS_CEBPA_TARGETS_UP	42	-0.57	-1.69	0.003	0.010
KUROKAWA_LIVER_CANCER_CHEMOTHERAPY_DN	36	-0.60	-1.69	0.008	0.010
GSE12845_IGD_POS_BLOOD_VS_DARKZONE_GC_TONSIL_BCELL_DN	190	-0.48	-1.68	0.000	0.010
GSE17974_0H_VS_4H_IN_VITRO_ACT_CD4_TCELL_DN	180	-0.48	-1.68	0.000	0.010

BROWN_MYELOID_CELL_DEVELOPMENT_DN	105	-0.50	-1.68	0.000	0.010
BARIS_THYROID_CANCER_DN	49	-0.56	-1.68	0.003	0.010
CYTOSKELETON	301	-0.46	-1.68	0.000	0.010
GSE17974_0H_VS_2H_IN_VITRO_ACT_CD4_TCELL_DN	181	-0.48	-1.68	0.000	0.010
RESPONSE_TO_NUTRIENT_LEVELS	18	-0.67	-1.68	0.014	0.010
RESPONSE_TO_ENDOGENOUS_STIMULUS	180	-0.47	-1.68	0.000	0.010
GSE1460_CD4_THYMOCYTE_VS_THYMIC_STROMAL_CELL_DN	182	-0.47	-1.68	0.000	0.010
BIOCARTA_IL2RB_PATHWAY	33	-0.60	-1.68	0.008	0.010
GAUSSMANN_MLL_AF4_FUSION_TARGETS_E_UP	76	-0.52	-1.68	0.001	0.010
VIETOR_IFRD1_TARGETS	18	-0.68	-1.68	0.003	0.010
POTTI_ETOPOSIDE_SENSITIVITY	35	-0.59	-1.68	0.007	0.010
HUPER_BREAST_BASAL_VS_LUMINAL_DN	48	-0.57	-1.68	0.001	0.010
PHONG_TNF_RESPONSE_NOT_VIA_P38	319	-0.45	-1.68	0.000	0.010
GSE11057_NAIVE_VS_MEMORY_CD4_TCELL_DN	179	-0.47	-1.68	0.000	0.010
RIBONUCLEASE_ACTIVITY	21	-0.67	-1.68	0.007	0.010
LEE_NEURAL_CREST_STEM_CELL_DN	90	-0.51	-1.68	0.000	0.010
REGULATION_OF_DNA_REPLICATION	18	-0.69	-1.68	0.009	0.010
TRAYNOR_RETT_SYNDROM_UP	32	-0.60	-1.68	0.004	0.011
LENAOUR_DENDRITIC_CELL_MATURATION_UP	87	-0.51	-1.68	0.001	0.011
NUCLEASE_ACTIVITY	50	-0.56	-1.68	0.000	0.011
MORI_PLASMA_CELL_UP	47	-0.56	-1.68	0.005	0.011
TIAN_TNF_SIGNALING_NOT_VIA_NFKB	21	-0.65	-1.68	0.006	0.011
VANTVEER_BREAST_CANCER_BRCA1_UP	31	-0.60	-1.68	0.004	0.011
REACTOME_INHIBITION_OF_THE_PROTEOLYTIC_ACTIVITY_OF_APC_C_REQUIRED_FOR_THE_ONSET_OF_ANAPHASE_BY_MITOTIC_SPINDLE_CHECKPOINT_COMPONENTS	18	-0.67	-1.68	0.008	0.011
GSE360_L_MAJOR_VS_B_MALAYI_HIGH_DOSE_DC_UP	159	-0.48	-1.68	0.000	0.011
GSE17580_TREG_VS_TEFF_UP	158	-0.48	-1.68	0.000	0.011
GSE27786_LIN_NEG_VS_CD4_TCELL_UP	176	-0.48	-1.68	0.000	0.011
HECKER_IFNB1_TARGETS	60	-0.54	-1.68	0.000	0.011
HUANG_GATA2_TARGETS_DN	63	-0.53	-1.68	0.000	0.011
RECEPTOR_ACTIVITY	304	-0.45	-1.68	0.000	0.011
REACTOME_TRANSPORT_OF_MATURE_TRANSCRIPT_TO_CYTOPLASM	52	-0.54	-1.68	0.004	0.011
ONO_FOXP3_TARGETS_DN	30	-0.61	-1.68	0.010	0.011
ZHENG_IL22_SIGNALING_DN	29	-0.61	-1.67	0.007	0.011
REACTOME_NEP_NS2_INTERACTS_WITH_THE_CELLULAR_EXPORT_MACHINERY	27	-0.62	-1.67	0.011	0.011
PLASARI_NFIC_TARGETS_BASAL_UP	18	-0.67	-1.67	0.008	0.011
VANASSE_BCL2_TARGETS_UP	25	-0.63	-1.67	0.004	0.011
DANG_REGULATED_BY_MYC_DN	223	-0.46	-1.67	0.000	0.011
ERB2_UP.V1_UP	165	-0.48	-1.67	0.000	0.011
NEGATIVE_REGULATION_OF_DEVELOPMENTAL_PROCESS	160	-0.48	-1.67	0.000	0.011
STK33_UP	237	-0.46	-1.67	0.000	0.011
KEGG_PURINE_METABOLISM	131	-0.49	-1.67	0.000	0.011
E2F3_UP.V1_DN	111	-0.49	-1.67	0.000	0.011
GSE37416_CTRL_VS_3H_F_TULARENSIS_LVS_NEUTROPHIL_DN	160	-0.48	-1.67	0.000	0.011
GSE360_DC_VS_MAC_M_TUBERCULOSIS_UP	150	-0.47	-1.67	0.000	0.011
WHITFIELD_CELL_CYCLE_M_G1	140	-0.48	-1.67	0.001	0.011
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_1H_DN	130	-0.49	-1.67	0.001	0.011

RIZ_ERYTHROID_DIFFERENTIATION_HBZ	29	-0.62	-1.67	0.003	0.011
GROSS_HIF1A_TARGETS_DN	19	-0.67	-1.67	0.007	0.012
TISSUE_REMODELING	18	-0.67	-1.67	0.009	0.012
CUSTOM_GIST882_ETV1SH1_DN	211	-0.47	-1.67	0.000	0.012
GSE27786_ERYTHROBLAST_VS_NEUTROPHIL_UP	158	-0.47	-1.67	0.000	0.012
PORE_COMPLEX	34	-0.59	-1.67	0.004	0.012
KEGG_ECM_RECEPTOR_INTERACTION	68	-0.53	-1.67	0.001	0.012
GSE22886_NAIVE_CD4_TCELL_VS_NEUTROPHIL_DN	126	-0.49	-1.67	0.000	0.012
PARK_TRETINOIN_RESPONSE_AND_RARA_PLZF_FUSION	15	-0.71	-1.67	0.009	0.012
REGULATION_OF_APOPTOSIS	285	-0.45	-1.67	0.000	0.012
DORMOY_ELAVL1_TARGETS	15	-0.71	-1.67	0.008	0.012
GSE3982_EFF_MEMORY_VS_CENT_MEMORY_CD4_TCELL_UP	139	-0.48	-1.67	0.000	0.012
QI_PLASMACYTOMA_UP	182	-0.47	-1.67	0.000	0.012
TAKEDA_TARGETS_OF_NUP98_HOXA9_FUSION_10D_UP	134	-0.48	-1.67	0.000	0.012
GENTILE_UV_HIGH_DOSE_UP	19	-0.66	-1.67	0.004	0.012
GSE2706_UNSTIM_VS_8H_LPS_AND_R848_DC_DN	155	-0.47	-1.67	0.000	0.012
P53_DN.V2_DN	93	-0.51	-1.67	0.001	0.012
SAKAI_TUMOR_INFILTRATING_MONOCYTES_DN	74	-0.52	-1.67	0.001	0.012
DNA_INTEGRITY_CHECKPOINT	23	-0.64	-1.67	0.004	0.012
GSE10325_BCELL_VS_LUPUS_BCELL_DN	184	-0.47	-1.67	0.001	0.012
DAZARD_RESPONSE_TO_UV_SCC_DN	116	-0.49	-1.66	0.001	0.012
HOFMANN_CELL_LYMPHOMA_UP	41	-0.57	-1.66	0.006	0.012
RB_DN.V1_DN	108	-0.49	-1.66	0.001	0.012
LEE_LIVER_CANCER_E2F1_UP	53	-0.54	-1.66	0.003	0.012
CHAUHAN_RESPONSE_TO_METHOXYESTRADIOL_UP	47	-0.56	-1.66	0.004	0.012
DEBIASI_APOPTOSIS_BY_REOVIRUS_INFECTION_UP	294	-0.45	-1.66	0.000	0.012
GSE39820_CTRL_VS_TGFBETA1_IL6_CD4_TCELL_UP	170	-0.47	-1.66	0.000	0.012
LI_AMPLIFIED_IN_LUNG_CANCER	153	-0.48	-1.66	0.000	0.012
CAIRO_PML_TARGETS_BOUND_BY_MYC_UP	22	-0.64	-1.66	0.007	0.012
SASSON_RESPONSE_TO_GONADOTROPHINS_DN	84	-0.51	-1.66	0.004	0.012
PROGRAMMED_CELL_DEATH	358	-0.45	-1.66	0.000	0.012
GSE3982_CTRL_VS_LPS_4H_MAC_DN	166	-0.47	-1.66	0.000	0.012
REGULATION_OF_MOLECULAR_FUNCTION	256	-0.46	-1.66	0.000	0.012
GSE27786_LSK_VS_NKTCELL_UP	181	-0.47	-1.66	0.000	0.012
GSE2197_CPG_DNA_VS_UNTREATED_IN_DC_UP	166	-0.47	-1.66	0.000	0.013
KEGG_PROGESTERONE_MEDIATED_OOCYTE_MATURATION	75	-0.52	-1.66	0.000	0.012
CERVERA_SDHB_TARGETS_2	87	-0.50	-1.66	0.002	0.012
HOEBEKE_LYMPHOID_STEM_CELL_DN	74	-0.52	-1.66	0.001	0.013
SEITZ_NEOPLASTIC_TRANSFORMATION_BY_8P_DELETION_D N	28	-0.62	-1.66	0.015	0.013
MARTORIATI_MDM4_TARGETS_FETAL_LIVER_UP	203	-0.46	-1.66	0.000	0.013
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_1H_CD4_TCEL L_DN	174	-0.47	-1.66	0.000	0.013
P53_DN.V1_UP	146	-0.48	-1.66	0.000	0.013
NIELSEN_GIST_VS_SYNOVIAL_SARCOMA_DN	15	-0.69	-1.66	0.012	0.013
REACTOME_PLATELET_AGGREGATION_PLUG_FORMATION	24	-0.62	-1.66	0.004	0.013
ESC_V6.5_UP_EARLY.V1_DN	133	-0.48	-1.66	0.000	0.013
GSE13485_DAY1_VS_DAY7_YF17D_VACCINE_PBMC_DN	174	-0.47	-1.66	0.000	0.013
IRITANI_MAD1_TARGETS_DN	45	-0.56	-1.66	0.003	0.013

BONE_REMODELING	18	-0.67	-1.66	0.014	0.013
REACTOME_APC_C_CDC20_MEDIATED_DEGRADATION_OF_CYCLIN_B	19	-0.67	-1.66	0.003	0.013
REGULATION_OF_CELL_ADHESION	25	-0.63	-1.66	0.009	0.013
POSITIVE_REGULATION_OF_PHOSPHORYLATION	15	-0.69	-1.66	0.016	0.013
GSE17721_LPS_VS_CPG_6H_BMDM_DN	169	-0.46	-1.66	0.000	0.013
CREIGHTON_ENDOCRINE_THERAPY_RESISTANCE_1	457	-0.44	-1.66	0.000	0.013
GSE17721_CTRL_VS_CPG_2H_BMDM_DN	150	-0.47	-1.66	0.000	0.013
VANDESLUIS_COMMD1_TARGETS_GROUP_3_UP	60	-0.53	-1.66	0.001	0.013
CELLULAR_HOMEOSTASIS	75	-0.52	-1.66	0.001	0.013
PID_P53DOWNSTREAMPATHWAY	123	-0.48	-1.66	0.000	0.013
ESC_V6.5_UP_LATE.V1_DN	147	-0.47	-1.66	0.000	0.013
MURAKAMI_UV_RESPONSE_6HR_UP	30	-0.60	-1.66	0.010	0.013
BILANGES_SERUM_SENSITIVE_VIA_TSC2	34	-0.59	-1.66	0.013	0.013
KONDO_EZH2_TARGETS	190	-0.47	-1.65	0.000	0.013
KEGG_TYPE_I_DIABETES_MELLITUS	27	-0.61	-1.65	0.006	0.013
VART_KSHV_INFECTION_ANGIOGENIC_MARKERS_DN	95	-0.50	-1.65	0.001	0.013
SIMBULAN_PARP1_TARGETS_UP	26	-0.62	-1.65	0.007	0.013
PID_S1P_S1P1_PATHWAY	20	-0.64	-1.65	0.019	0.013
REACTOME_INTEGRIN_ALPHAIIB_BETA3_SIGNALING	22	-0.62	-1.65	0.012	0.013
REACTOME_FORMATION_OF_TUBULIN_FOLDING_INTERMEDIATES_BY_CCT_TRIC	19	-0.67	-1.65	0.005	0.013
MAYBURD_RESPONSE_TO_L663536_DN	54	-0.54	-1.65	0.003	0.014
KIM_ALL_DISORDERS_CALB1_CORR_DN	16	-0.69	-1.65	0.008	0.014
PROVENZANI_METASTASIS_UP	180	-0.46	-1.65	0.000	0.014
HELLER_HDAC_TARGETS_SILENCED_BY_METHYLATION_DN	237	-0.45	-1.65	0.000	0.014
KEGG_PROSTATE_CANCER	82	-0.51	-1.65	0.000	0.014
GSE9006_TYPE_1_DIABETES_AT_DX_VS_1MONTH_POST_DX_PBMC_UP	186	-0.46	-1.65	0.000	0.014
RADAEVA_RESPONSE_TO_IFNA1_UP	44	-0.56	-1.65	0.001	0.014
REACTOME_NONSENSE_MEDIATED_DECAY_ENHANCED_BY_THE_EXON_JUNCTION_COMPLEX	103	-0.49	-1.65	0.002	0.014
CHANG_IMMORTALIZED_BY_HPV31_DN	46	-0.55	-1.65	0.005	0.014
KEGG_OOCYTE_MEIOSIS	96	-0.50	-1.65	0.000	0.014
RELA_DN.V1_UP	107	-0.49	-1.65	0.000	0.014
GSE13738_RESTING_VS_BYSTANDER_ACTIVATED_CD4_TCELL_DN	178	-0.47	-1.65	0.000	0.014
GSE22886_NAIVE_CD8_TCELL_VS_NEUTROPHIL_DN	123	-0.48	-1.65	0.001	0.014
AMIT_EGF_RESPONSE_40_MCF10A	19	-0.66	-1.65	0.009	0.014
ROZANOV_MMP14_TARGETS_SUBSET	29	-0.60	-1.65	0.014	0.014
RASHI_RESPONSE_TO_IONIZING_RADIATION_2	113	-0.49	-1.65	0.000	0.014
PID_AP1_PATHWAY	55	-0.53	-1.65	0.005	0.014
MICROTUBULE_ORGANIZING_CENTER_ORGANIZATION_AND_BIOGENESIS	15	-0.69	-1.65	0.009	0.014
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_4H_CD4_TCELL_DN	187	-0.46	-1.65	0.000	0.014
LE_EGR2_TARGETS_DN	91	-0.51	-1.65	0.002	0.014
REACTOME_PREFOLDIN_MEDIATED_TRANSFER_OF_SUBSTRATE_TO_CCT_TRIC	25	-0.61	-1.65	0.007	0.014
GSE17721_POLYIC_VS_GARDIQUIMOD_1H_BMDM_DN	173	-0.46	-1.65	0.000	0.014
REACTOME_DEPOSITION_OF_NEW_CENPA_CONTAINING_NUCLEOSOMES_AT_THE_CENTROMERE	37	-0.58	-1.65	0.012	0.014
APOPTOSIS_GO	357	-0.44	-1.65	0.000	0.014

STEIN_ESRRA_TARGETS_RESPONSIVE_TO_ESTROGEN_UP	26	-0.61	-1.65	0.010	0.014
DACOSTA_ERCC3_ALLELE_XPCS_VS_TTD_UP	23	-0.63	-1.64	0.009	0.015
GSE3982_CTRL_VS_LPS_48H_DC_DN	156	-0.47	-1.64	0.000	0.015
GSE1460_INTRATHYMIC_T_PROGENITOR_VS_CD4_THYMOCYTE_UP	179	-0.47	-1.64	0.000	0.015
ANTI_APOPTOSIS	103	-0.49	-1.64	0.000	0.015
WANG_ESOPHAGUS_CANCER_VS_NORMAL_UP	96	-0.49	-1.64	0.001	0.015
NUCLEAR_MEMBRANE	48	-0.54	-1.64	0.007	0.015
REACTOME_HIV_INFECTION	183	-0.47	-1.64	0.000	0.015
SANA_TNF_SIGNALING_DN	75	-0.51	-1.64	0.006	0.015
ZHANG_RESPONSE_TO_IKK_INHIBITOR_AND_TNF_DN	97	-0.50	-1.64	0.002	0.015
OZANNE_AP1_TARGETS_UP	15	-0.70	-1.64	0.013	0.015
GSE10325_MYELOID_VS_LUPUS_MYELOID_DN	176	-0.46	-1.64	0.000	0.015
GSE16755_CTRL_VS_IFNA_TREATED_MAC_DN	170	-0.47	-1.64	0.000	0.015
TRANSMEMBRANE_RECEPTOR_PROTEIN_TYROSINE_KINASE_ACTIVITY	33	-0.58	-1.64	0.006	0.015
RESPONSE_TO_VIRUS	29	-0.60	-1.64	0.013	0.015
HANN_RESISTANCE_TO_BCL2_INHIBITOR_DN	32	-0.59	-1.64	0.010	0.015
NUCLEAR_PORE	31	-0.59	-1.64	0.013	0.015
NUCLEAR_MEMBRANE_PART	40	-0.57	-1.64	0.007	0.015
NAKAYAMA_SOFT_TISSUE_TUMORS_PCA2_DN	55	-0.53	-1.64	0.003	0.015
REACTOME_ACTIVATION_OF_THE_MRNA_UPON_BINDING_OF_THE_CAP_BINDING_COMPLEX_AND_EIFS_AND_SUBSEQUENT_BINDING_TO_43S	54	-0.54	-1.64	0.001	0.015
GSE14769_UNSTIM_VS_20MIN_LPS_BMDM_DN	161	-0.47	-1.64	0.000	0.015
LIU_VAV3_PROSTATE_CARCINOGENESIS_UP	59	-0.53	-1.64	0.004	0.015
KEGG_PANCREATIC_CANCER	68	-0.52	-1.64	0.004	0.015
PHOSPHORIC_ESTER_HYDROLASE_ACTIVITY	126	-0.48	-1.64	0.000	0.015
NEGATIVE_REGULATION_OF_CATALYTIC_ACTIVITY	52	-0.54	-1.64	0.005	0.015
DAIRKEE_CANCER_PRONE_RESPONSE_BPA_E2	101	-0.49	-1.64	0.000	0.015
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLUE_UP	125	-0.48	-1.64	0.000	0.015
GSE6566_STRONG_VS_WEAK_DC_STIMULATED_CD4_TCELL_UP	110	-0.48	-1.64	0.000	0.015
WAMUNYOKOLI_OVARIAN_CANCER_GRADES_1_2_UP	119	-0.48	-1.64	0.000	0.015
MARIADASON_RESPONSE_TO_CURCUMIN_SULINDAC_5	22	-0.62	-1.64	0.018	0.016
BIOCARTA_MPR_PATHWAY	31	-0.59	-1.64	0.008	0.016
LI_WILMS_TUMOR_VS_FETAL_KIDNEY_2_UP	26	-0.61	-1.64	0.013	0.016
GSE7460_TREG_VS_TCONV_ACT_UP	166	-0.47	-1.64	0.000	0.016
JI_METASTASIS_REPRESSED_BY_STK11	20	-0.65	-1.64	0.012	0.016
GSE339_CD4POS_VS_CD8POS_DC_UP	174	-0.46	-1.63	0.000	0.016
GSE2706_UNSTIM_VS_8H_LPS_DC_DN	162	-0.46	-1.63	0.001	0.016
FARMER_BREAST_CANCER_BASAL_VS_LULMINAL	287	-0.44	-1.63	0.000	0.016
GRAHAM_CML_QUIESCENT_VS_NORMAL_QUIESCENT_DN	34	-0.59	-1.63	0.010	0.016
DAZARD_RESPONSE_TO_UV_NHEK_UP	199	-0.46	-1.63	0.000	0.016
BOSCO_ALLERGEN_INDUCED_TH2_ASSOCIATED_MODULE	108	-0.48	-1.63	0.004	0.016
REGULATION_OF_PROTEIN_AMINO_ACID_PHOSPHORYLATION	16	-0.67	-1.63	0.014	0.016
MANALO_HYPOXIA_UP	185	-0.46	-1.63	0.000	0.016

REACTOME_TRANSPORT_OF_MATURE_MRNA_DERIVED_FROM_AN_INTRONLESS_TRANSCRIPT	32	-0.59	-1.63	0.008	0.016
BERTUCCI_MEDULLARY_VS_DUCTAL_BREAST_CANCER_UP	182	-0.46	-1.63	0.000	0.016
BROWNE_INTERFERON_RESPONSIVE_GENES	61	-0.52	-1.63	0.001	0.016
BIOCARTA_TNFR2_PATHWAY	17	-0.66	-1.63	0.009	0.016
GSE29617_CTRL_VS_TIV_FLU_VACCINE_PBMC_2008_UP	153	-0.47	-1.63	0.000	0.016
LIN_NPAS4_TARGETS_DN	53	-0.53	-1.63	0.001	0.017
KOYAMA_SEMA3B_TARGETS_UP	246	-0.45	-1.63	0.000	0.017
GSE9037_WT_VS_IRAK4_KO_BMDM_DN	138	-0.47	-1.63	0.001	0.017
FOSTER_TOLERANT_MACROPHAGE_DN	359	-0.44	-1.63	0.000	0.017
BROCKE_APOPTOSIS_REVERSED_BY_IL6	131	-0.47	-1.63	0.000	0.017
WANG_RESPONSE_TO_FORSKOLIN_UP	20	-0.65	-1.63	0.014	0.017
GSE360_L_MAJOR_VS_B_MALAYI_HIGH_DOSE_MAC_UP	147	-0.47	-1.63	0.001	0.017
SANA_RESPONSE_TO_IFNG_UP	63	-0.51	-1.63	0.000	0.017
BOYAULT_LIVER_CANCER_SUBCLASS_G2	25	-0.61	-1.63	0.014	0.017
BIOCARTA_CASPASE_PATHWAY	22	-0.63	-1.63	0.018	0.017
DELLA_RESPONSE_TO_TSA_AND_BUTYRATE	21	-0.63	-1.63	0.010	0.017
GSE15750_WT_VS_TRAF6KO_DAY10_EFF_CD8_TCELL_DN	126	-0.47	-1.63	0.000	0.017
KEGG_MELANOMA	54	-0.53	-1.63	0.001	0.017
HELLER_SILENCED_BY_METHYLATION_UP	205	-0.46	-1.63	0.000	0.017
GSE360_T_GONDII_VS_B_MALAYI_LOW_DOSE_DC_UP	153	-0.46	-1.63	0.000	0.017
ZHAN_MULTIPLE_MYELOMA_CD1_UP	36	-0.57	-1.63	0.004	0.017
GSE29618_PRE_VS_DAY7_FLU_VACCINE_MDC_UP	130	-0.47	-1.63	0.001	0.017
CHARAFE_BREAST_CANCER_BASAL_VS_MESENCHYMAL_UP	75	-0.51	-1.63	0.004	0.017
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_5	20	-0.64	-1.63	0.012	0.017
GSE13493_DP_VS_CD4INTCD8POS_THYMOCYTE_DN	165	-0.46	-1.63	0.000	0.017
GSE14000_UNSTIM_VS_16H_LPS_DC_TRANSLATED_RNA_DN	167	-0.46	-1.63	0.000	0.017
GSE8384_CTRL_VS_B_ABORTUS_4H_MAC_CELL_LINE_DN	168	-0.46	-1.63	0.000	0.017
ZHOU_INFLAMMATORY_RESPONSE_FIMA_UP	366	-0.44	-1.63	0.000	0.017
DAZARD_RESPONSE_TO_UV_SCC_UP	110	-0.48	-1.63	0.001	0.017
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_0.5H_CD4_TCELL_DN	160	-0.46	-1.63	0.000	0.017
PROTEIN_FOLDING	53	-0.53	-1.63	0.004	0.017
PID_IL12_2PATHWAY	37	-0.57	-1.63	0.008	0.017
WANG_MLL_TARGETS	200	-0.45	-1.63	0.000	0.017
GSE1432_CTRL_VS_IFNG_24H_MICROGLIA_DN	174	-0.46	-1.62	0.000	0.017
RICKMAN_HEAD_AND_NECK_CANCER_C	42	-0.55	-1.62	0.008	0.017
GSE11864_CSF1_VS_CSF1_IFNG_IN_MAC_DN	168	-0.46	-1.62	0.000	0.017
VERHAAK_AML_WITH_NPM1_MUTATED_UP	126	-0.47	-1.62	0.000	0.017
HOMEOSTATIC_PROCESS	120	-0.47	-1.62	0.001	0.017
WANG_TUMOR_INVASIVENESS_UP	353	-0.44	-1.62	0.000	0.017
KAECH_DAY15_EFF_VS_MEMORY_CD8_TCELL_DN	178	-0.46	-1.62	0.000	0.018
BOHN_PRIMARY_IMMUNODEFICIENCY_SYNDROM_UP	43	-0.55	-1.62	0.012	0.018
SMID_BREAST_CANCER_NORMAL_LIKE_UP	286	-0.44	-1.62	0.000	0.018
LOPEZ_MESOTHELIOMA_SURVIVAL_OVERALL_DN	16	-0.66	-1.62	0.011	0.018
GSE360_L_DONOVANI_VS_B_MALAYI_HIGH_DOSE_DC_UP	155	-0.47	-1.62	0.000	0.018

SATO_SILENCED_BY_DEACETYLATION_IN_PANCREATIC_CANCER	36	-0.57	-1.62	0.006	0.018
ZHONG_SECRETOME_OF_LUNG_CANCER_AND_ENDOTHELIUM	60	-0.52	-1.62	0.012	0.018
LANDIS_BREAST_CANCER_PROGRESSION_UP	41	-0.56	-1.62	0.005	0.018
LANDIS_ERBB2_BREAST_TUMORS_65_UP	21	-0.63	-1.62	0.007	0.018
SIMBULAN_UV_RESPONSE_NORMAL_DN	31	-0.58	-1.62	0.010	0.018
STRUCTURE_SPECIFIC_DNA_BINDING	53	-0.53	-1.62	0.009	0.018
REACTOME_POST_CHAPERONIN_TUBULIN_FOLDING_PATHWAY	16	-0.67	-1.62	0.012	0.018
LTE2_UP.V1_UP	164	-0.46	-1.62	0.000	0.018
TSUNODA_CISPLATIN_RESISTANCE_DN	39	-0.56	-1.62	0.010	0.018
NAKAMURA_METASTASIS_MODEL_UP	37	-0.56	-1.62	0.014	0.018
CELLULAR_RESPONSE_TO_STIMULUS	16	-0.67	-1.62	0.016	0.018
WIERENGA_STAT5A_TARGETS_UP	164	-0.46	-1.62	0.000	0.018
BIOCARTA_VEGF_PATHWAY	27	-0.59	-1.62	0.009	0.018
BOYLAN_MULTIPLE_MYELOMA_D_UP	82	-0.50	-1.62	0.004	0.018
GSE29617_CTRL_VS_DAY7_TIV_FLU_VACCINE_PBMC_2008_DN	167	-0.46	-1.62	0.000	0.018
GSE9988_LPS_VS_LPS_AND_ANTI_TREM1_MONOCYTE_DN	174	-0.45	-1.62	0.000	0.018
LABBE_TGFB1_TARGETS_UP	80	-0.50	-1.62	0.004	0.018
PID_EPHA_FWDPATHWAY	21	-0.64	-1.62	0.012	0.019
GUILLAUMOND_KLF10_TARGETS_UP	40	-0.55	-1.62	0.012	0.019
SEQUENCE_SPECIFIC_DNA_BINDING	47	-0.54	-1.62	0.008	0.019
PID_TELOMERASEPATHWAY	65	-0.52	-1.62	0.004	0.019
WALLACE_JAK2_TARGETS_UP	22	-0.62	-1.62	0.012	0.019
GSE27786_NEUTROPHIL_VS_MONO_MAC_DN	178	-0.46	-1.62	0.000	0.019
GSE17721_POLYIC_VS_CPG_12H_BMDM_DN	180	-0.45	-1.62	0.001	0.019
GSE30083_SP2_VS_SP4_THYMOCYTE_DN	142	-0.47	-1.62	0.001	0.019
TRANSFERASE_ACTIVITY_TRANSFERRING_ONE_CARBON_GROUPS	32	-0.58	-1.62	0.007	0.019
PARK_TRETINOIN_RESPONSE_AND_PML_RARA_FUSION	22	-0.62	-1.62	0.017	0.019
REACTOME_LOSS_OF_NLP_FROM_MITOTIC_CENTROSOMES	56	-0.53	-1.61	0.003	0.019
REACTOME_EGFR_DOWNREGULATION	23	-0.62	-1.61	0.013	0.019
CHIARETTI_T_ALL_REFRACTORY_TO_THERAPY	23	-0.62	-1.61	0.010	0.019
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_72H_CD4_TCELL_DN	183	-0.46	-1.61	0.001	0.019
GSE24142_DN2_VS_DN3_THYMOCYTE_FETAL_UP	164	-0.46	-1.61	0.001	0.019
GERHOLD_ADIPOGENESIS_DN	55	-0.52	-1.61	0.008	0.019
VERRECCHIA_RESPONSE_TO_TGFB1_C2	21	-0.62	-1.61	0.024	0.019
NOUSHMEHR_GBM_SILENCED_BY_METHYLATION	30	-0.58	-1.61	0.004	0.019
MUELLER_COMMON_TARGETS_OF_AML_FUSIONS_DN	23	-0.62	-1.61	0.021	0.019
GSE24142_DN2_VS_DN3_THYMOCYTE_UP	158	-0.46	-1.61	0.000	0.019
REN_ALVEOLAR_RHABDOMYOSARCOMA_DN	392	-0.43	-1.61	0.000	0.019
MICROTUBULE_CYTOSKELETON_ORGANIZATION_AND_BIOGENESIS	35	-0.57	-1.61	0.011	0.019
BROWNE_HCMV_INFECTION_4HR_UP	43	-0.55	-1.61	0.007	0.020
KEGG_GAP_JUNCTION	69	-0.51	-1.61	0.005	0.020
REACTOME_DIABETES_PATHWAYS	113	-0.48	-1.61	0.000	0.020
MCBRYAN_PUBERTAL_BREAST_5_6WK_UP	94	-0.49	-1.61	0.005	0.020
GSE17721_LPS_VS_PAM3CSK4_12H_BMDM_DN	180	-0.45	-1.61	0.000	0.020

KEGG_NOD_LIKE_RECEPTOR_SIGNALING_PATHWAY	48	-0.53	-1.61	0.004	0.020
REACTOME_PLATELET_ACTIVATION_SIGNALING_AND_AGGRE GATION	150	-0.46	-1.61	0.000	0.020
GSE9037_CTRL_VS_LPS_1H_STIM_BMDM_DN	149	-0.46	-1.61	0.000	0.020
PID_INTEGRIN3_PATHWAY	37	-0.55	-1.61	0.013	0.020
REACTOME_PYRIMIDINE_METABOLISM	18	-0.65	-1.61	0.018	0.020
SAKAI_CHRONIC_HEPATITIS_VS_LIVER_CANCER_UP	81	-0.50	-1.61	0.004	0.020
GRAESSMANN_APOPTOSIS_BY_SERUM_DEPRIVATION_UP	457	-0.43	-1.61	0.000	0.020
PROTEIN_HETERODIMERIZATION_ACTIVITY	64	-0.51	-1.61	0.004	0.020
POSITIVE_REGULATION_OF_PHOSPHATE_METABOLIC_PROCE SS	17	-0.66	-1.61	0.005	0.020
GSE17721_POLYIC_VS_CPG_16H_BMDM_DN	178	-0.46	-1.61	0.000	0.020
CONDENSED_NUCLEAR_CHROMOSOME	16	-0.66	-1.61	0.025	0.021
LI_WILMS_TUMOR	20	-0.62	-1.61	0.013	0.021
NEGATIVE_REGULATION_OF_MULTICELLULAR_ORGANISMAL _PROCESS	17	-0.65	-1.61	0.019	0.021
GSE11864_CSF1_IFNG_VS_CSF1_PAM3CYS_IN_MAC_DN	161	-0.46	-1.61	0.000	0.021
REACTOME_REGULATION_OF_GLUCOKINASE_BY_GLUCOKIN ASE_REGULATORY_PROTEIN	25	-0.63	-1.60	0.018	0.021
PICCALUGA_ANGIOIMMUNOBLASTIC_LYMPHOMA_UP	157	-0.46	-1.60	0.000	0.021
NAKAYAMA_SOFT_TISSUE_TUMORS_PCA1_UP	43	-0.55	-1.60	0.008	0.021
YAMASHITA_LIVER_CANCER_WITH_EPCAM_UP	45	-0.54	-1.60	0.009	0.021
NUCLEOLUS	119	-0.47	-1.60	0.000	0.022
VALK_AML_CLUSTER_10	27	-0.60	-1.60	0.022	0.022
REGULATION_OF_IMMUNE_SYSTEM_PROCESS	36	-0.56	-1.60	0.012	0.022
DANG_MYC_TARGETS_DN	30	-0.58	-1.60	0.013	0.022
TGFB_UP.V1_DN	153	-0.46	-1.60	0.001	0.022
GSE3337_4H_VS_16H_IFNG_IN_CD8POS_DC_UP	180	-0.45	-1.60	0.000	0.022
GSE18791_UNSTIM_VS_NEWCATSLE_VIRUS_DC_10H_DN	156	-0.46	-1.60	0.000	0.022
TSENG_IRS1_TARGETS_UP	101	-0.48	-1.60	0.002	0.022
CROONQUIST_NRAS_VS_STROMAL_STIMULATION_UP	29	-0.59	-1.60	0.009	0.022
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINDE D_IN_ERYTHROCYTE_UP	37	-0.56	-1.60	0.012	0.022
KYNG_DNA_DAMAGE_BY_4NQO	34	-0.56	-1.60	0.007	0.022
GSE2706_2H_VS_8H_R848_AND_LPS_STIM_DC_DN	169	-0.45	-1.60	0.001	0.022
MCBRYAN_PUBERTAL_TGFB1_TARGETS_UP	157	-0.46	-1.60	0.000	0.022
LI_WILMS_TUMOR_VS_FETAL_KIDNEY_2_DN	46	-0.53	-1.60	0.015	0.022
RODWELL_AGING_KIDNEY_UP	379	-0.43	-1.60	0.000	0.022
GSE17721_4_VS_24H_GARDIQUIMOD_BMDM_UP	169	-0.45	-1.60	0.000	0.022
KOKKINAKIS_METHIONINE_DEPRIVATION_48HR_DN	61	-0.51	-1.60	0.007	0.022
FARMER_BREAST_CANCER_APOCRINE_VS_LUMINAL	272	-0.44	-1.60	0.000	0.022
KIM_WT1_TARGETS_8HR_DN	105	-0.47	-1.60	0.005	0.022
BOYAULT_LIVER_CANCER_SUBCLASS_G5_DN	26	-0.60	-1.60	0.012	0.022
POSITIVE_REGULATION_OF_PROTEIN_MODIFICATION_PROCE SS	19	-0.63	-1.60	0.016	0.022
STK33_SKM_DN	209	-0.44	-1.60	0.000	0.022
JI_RESPONSE_TO_FSH_DN	56	-0.52	-1.60	0.008	0.022
CHIARADONNA_NEOPLASTIC_TRANSFORMATION_KRAS_CDC 25_DN	39	-0.55	-1.60	0.015	0.022
GSE20366_EX_VIVO_VS_HOMEOSTATIC_CONVERSION_NAIVE _CD4_TCELL_DN	145	-0.46	-1.60	0.002	0.022
LU_IL4_SIGNALING	72	-0.50	-1.60	0.004	0.022

KIM_MYC_AMPLIFICATION_TARGETS_UP	177	-0.45	-1.60	0.000	0.022
GSE13306_RA_VS_UNTREATED_MEM_CD4_TCELL_UP	162	-0.45	-1.60	0.000	0.022
LU_EZH2_TARGETS_DN	357	-0.43	-1.60	0.000	0.022
STOSSI_RESPONSE_TO_ESTRADIOL	35	-0.57	-1.60	0.011	0.022
BREDEMEYER_RAG_SIGNALING_NOT_VIA_ATM_UP	50	-0.52	-1.60	0.007	0.022
REGULATION_OF_SECRETION	23	-0.60	-1.60	0.012	0.022
HEIDENBLAD_AMPLICON_12P11_12_UP	29	-0.59	-1.60	0.008	0.022
PROVENZANI_METASTASIS_DN	119	-0.47	-1.60	0.004	0.022
YAMASHITA_METHYLATED_IN_PROSTATE_CANCER	28	-0.59	-1.60	0.012	0.022
REPRODUCTIVE_PROCESS	85	-0.48	-1.60	0.002	0.023
LAU_APOPTOSIS_CDKN2A_UP	53	-0.51	-1.60	0.011	0.023
NEGATIVE_REGULATION_OF_METABOLIC_PROCESS	221	-0.44	-1.60	0.000	0.023
HEMOSTASIS	29	-0.57	-1.60	0.009	0.023
FARDIN_HYPOXIA_11	32	-0.56	-1.59	0.014	0.023
PEART_HDAC_PROLIFERATION_CLUSTER_UP	56	-0.52	-1.59	0.012	0.023
RNA_PROCESSING	168	-0.46	-1.59	0.000	0.023
KEGG_FOCAL_ADHESION	171	-0.44	-1.59	0.000	0.023
GSE17721_POLYIC_VS_GARDIQUIMOD_8H_BMDM_DN	189	-0.45	-1.59	0.000	0.023
KORKOLA_YOLK_SAC_TUMOR	42	-0.54	-1.59	0.014	0.023
CELL_SUBSTRATE_ADHESION	34	-0.56	-1.59	0.011	0.023
GSE27786_CD4_TCELL_VS_MONO_MAC_DN	169	-0.45	-1.59	0.002	0.023
PEPTIDE_BINDING	37	-0.56	-1.59	0.013	0.023
GSE22886_NAIVE_CD4_TCELL_VS_12H_ACT_TH2_DN	192	-0.44	-1.59	0.001	0.023
GOLDRATH_NAIVE_VS_MEMORY_CD8_TCELL_DN	168	-0.46	-1.59	0.001	0.023
GSE339_CD4POS_VS_CD4CD8DN_DC_DN	175	-0.45	-1.59	0.001	0.023
MANN_RESPONSE_TO_AMIFOSTINE_UP	20	-0.63	-1.59	0.021	0.023
GSE360_CTRL_VS_B_MALAYI_LOW_DOSE_DC_UP	152	-0.45	-1.59	0.000	0.023
RAMASWAMY_METASTASIS_UP	62	-0.51	-1.59	0.004	0.023
COAGULATION	25	-0.59	-1.59	0.017	0.023
GSE11864_CSF1_IFNG_VS_CSF1_IFNG_PAM3CYS_IN_MAC_D N	154	-0.46	-1.59	0.000	0.023
SMIRNOV_RESPONSE_TO_IR_2HR_DN	48	-0.54	-1.59	0.005	0.023
GSE360_L_MAJOR_VS_T_GONDII_MAC_DN	169	-0.45	-1.59	0.000	0.023
NEGATIVE_REGULATION_OF_CELLULAR_METABOLIC_PROCES S	220	-0.44	-1.59	0.000	0.023
HEIDENBLAD_AMPLICON_8Q24_UP	34	-0.56	-1.59	0.011	0.023
GSE3982_MAC_VS_NKCELL_UP	179	-0.45	-1.59	0.000	0.023
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_72H_ACT_C D4_TCELL_DN	156	-0.45	-1.59	0.000	0.024
ENK_UV_RESPONSE_EPIDERMIS_DN	444	-0.42	-1.59	0.000	0.024
GSE27786_LIN_NEG_VS_CD8_TCELL_UP	179	-0.44	-1.59	0.000	0.024
TSENG_ADIPOGENIC_POTENTIAL_DN	38	-0.56	-1.59	0.008	0.024
UEDA_PERIFERAL_CLOCK	153	-0.46	-1.59	0.000	0.024
GSE360_L_DONOVANI_VS_B_MALAYI_HIGH_DOSE_MAC_UP	160	-0.45	-1.59	0.000	0.024
COULOUARN_TEMPORAL_TGFB1_SIGNATURE_DN	122	-0.46	-1.59	0.002	0.024
SERVITJA_ISLET_HNF1A_TARGETS_UP	118	-0.47	-1.59	0.000	0.024
GSE17721_0.5H_VS_24H_LPS_BMDM_UP	166	-0.45	-1.59	0.000	0.024
KENNY_CTNNB1_TARGETS_UP	43	-0.55	-1.59	0.008	0.024
ZHANG_INTERFERON_RESPONSE	20	-0.62	-1.59	0.023	0.024
PETROVA_PROX1_TARGETS_DN	56	-0.52	-1.59	0.005	0.024
GSE13484_UNSTIM_VS_YF17D_VACCINE_STIM_PBMC_DN	166	-0.45	-1.59	0.000	0.024

BANDRES_RESPONSE_TO_CARMUSTIN_MGMT_48HR_DN	107	-0.48	-1.59	0.001	0.024
ZHAN_MULTIPLE_MYELOMA_LB_DN	35	-0.56	-1.59	0.008	0.024
LEE_TARGETS_OF_PTCH1_AND_SUFU_UP	39	-0.55	-1.59	0.014	0.024
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_SUSTAINED_IN_MONOCYTE_UP	18	-0.64	-1.59	0.024	0.024
CHOW_RASSF1_TARGETS_UP	27	-0.59	-1.59	0.012	0.024
MENSE_HYPOXIA_UP	95	-0.48	-1.59	0.006	0.024
RIGGI_EWING_SARCOMA_PROGENITOR_UP	309	-0.43	-1.59	0.000	0.024
CASTELLANO_NRAS_TARGETS_UP	52	-0.52	-1.59	0.012	0.024
CELL_DEVELOPMENT	465	-0.42	-1.59	0.000	0.024
GSE17721_LPS_VS_CPG_12H_BMDM_DN	163	-0.45	-1.59	0.000	0.024
GSE17580_UNINFECTED_VS_S_MANSONI_INF_TREG_DN	175	-0.44	-1.59	0.000	0.025
DAMAGED_DNA_BINDING	21	-0.62	-1.59	0.018	0.025
SESTO_RESPONSE_TO_UV_C6	34	-0.55	-1.58	0.006	0.025
RESPONSE_TO_RADIATION	44	-0.54	-1.58	0.014	0.025
PASINI_SUZ12_TARGETS_DN	281	-0.43	-1.58	0.000	0.025
DELACROIX_RAR_TARGETS_UP	34	-0.56	-1.58	0.012	0.025
LIM_MAMMARY_STEM_CELL_UP	389	-0.43	-1.58	0.000	0.025
GSE37416_CTRL_VS_48H_F_TULARENSIS_LVS_NEUTROPHIL_UP	131	-0.46	-1.58	0.001	0.025
BRIDEAU_IMPRINTED_GENES	35	-0.56	-1.58	0.015	0.025
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_6H_ACT_CD4_TCELL_DN	160	-0.45	-1.58	0.000	0.025
WONG_PROTEASOME_GENE_MODULE	49	-0.53	-1.58	0.008	0.025
SHETH_LIVER_CANCER_VS_TXNIP_LOSS_PAM2	129	-0.46	-1.58	0.002	0.025
STONER_ESOPHAGEAL_CARCINOGENESIS_UP	31	-0.56	-1.58	0.024	0.025
REACTOME_RESOLUTION_OF_AP_SITES_VIA_THE_MULTIPLE_NUCLEOTIDE_PATCH_REPLACEMENT_PATHWAY	17	-0.65	-1.58	0.012	0.025
GSE9006_HEALTHY_VS_TYPE_2_DIABETES_PBMC_AT_DX_DN	165	-0.45	-1.58	0.001	0.025
PAL_PRMT5_TARGETS_DN	18	-0.64	-1.58	0.019	0.025
GSE17721_LPS_VS_CPG_2H_BMDM_UP	166	-0.45	-1.58	0.000	0.025
SHAFFER_IRF4_TARGETS_IN_PLASMA_CELL_VS_MATURE_B_LYMPHOCYTE	62	-0.51	-1.58	0.003	0.025
ATP_DEPENDENT_RNA_HELICASE_ACTIVITY	16	-0.65	-1.58	0.035	0.026
GSE17721_CTRL_VS_LPS_1H_BMDM_DN	151	-0.45	-1.58	0.000	0.026
DOUGLAS_BMI1_TARGETS_UP	499	-0.42	-1.58	0.000	0.026
GSE3982_MAC_VS_BCELL_UP	167	-0.44	-1.58	0.000	0.026
WANG_ADIPOGENIC_GENES_REPRESSED_BY_SIRT1	22	-0.61	-1.58	0.017	0.026
RESPONSE_TO_UV	22	-0.60	-1.58	0.026	0.026
SARTIPY_BLUNTED_BY_INSULIN_RESISTANCE_UP	19	-0.63	-1.58	0.030	0.026
CERVERA_SDHB_TARGETS_1_DN	20	-0.62	-1.58	0.012	0.026
KEGG_NON_SMALL_CELL_LUNG_CANCER	52	-0.52	-1.58	0.005	0.026
RAF_UP.V1_DN	170	-0.45	-1.58	0.001	0.026
KYNG_WERNER_SYNDROM_AND_NORMAL_AGING_UP	78	-0.49	-1.58	0.004	0.026
KERLEY_RESPONSE_TO_CISPLATIN_UP	39	-0.55	-1.58	0.012	0.026
GSE10239_KLRG1INT_VS_KLRG1HIGH_EFF_CD8_TCELL_DN	158	-0.45	-1.58	0.001	0.026
NUCLEOTIDE_BIOSYNTHETIC_PROCESS	16	-0.66	-1.58	0.016	0.026
LINDSTEDT_DENDRITIC_CELL_MATURATION_B	47	-0.52	-1.58	0.011	0.027
LINDVALL_IMMORTALIZED_BY_TERT_DN	63	-0.51	-1.58	0.004	0.027
DNA_BINDING	494	-0.42	-1.58	0.001	0.027

GSE339_EX_VIVO_VS_IN_CULTURE_CD4POS_DC_UP	182	-0.44	-1.57	0.000	0.027
GSE37416_CTRL_VS_6H_F_TULARENSIS_LVS_NEUTROPHIL_DN	170	-0.44	-1.57	0.001	0.027
BOSCO_INTERFERON_INDUCED_ANTIVIRAL_MODULE	63	-0.50	-1.57	0.008	0.027
PID_SHP2_PATHWAY	46	-0.53	-1.57	0.012	0.027
KAECH_NAIVE_VS_DAY15_EFF_CD8_TCELL_DN	165	-0.45	-1.57	0.000	0.027
QI_PLASMACYTOMA_DN	76	-0.48	-1.57	0.012	0.027
GSE360_L_DONOVANI_VS_T_GONDII_MAC_DN	176	-0.44	-1.57	0.001	0.027
CUSTOM_G48_siETV1_DN	220	-0.43	-1.57	0.000	0.027
RNA_BINDING	232	-0.43	-1.57	0.000	0.027
MACLACHLAN_BRCA1_TARGETS_UP	20	-0.62	-1.57	0.025	0.027
MRNA_PROCESSING_GO_0006397	72	-0.49	-1.57	0.008	0.027
METHYLTRANSFERASE_ACTIVITY	31	-0.57	-1.57	0.008	0.027
YOSHIMURA_MAPK8_TARGETS_DN	318	-0.42	-1.57	0.000	0.027
REACTOME_HIV_LIFE_CYCLE	112	-0.46	-1.57	0.002	0.027
STAMBOLSKY_TARGETS_OF_MUTATED_TP53_UP	42	-0.53	-1.57	0.014	0.027
PRC2_SUZ12_UP.V1_UP	105	-0.47	-1.57	0.001	0.027
GSE11057_NAIVE_VS_EFF_MEMORY_CD4_TCELL_DN	169	-0.44	-1.57	0.000	0.027
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_HSC_UP	155	-0.45	-1.57	0.000	0.027
GSE6269_FLU_VS_STREP_PNEUMO_INF_PBMC_UP	157	-0.45	-1.57	0.001	0.027
GSE360_L_DONOVANI_VS_M_TUBERCULOSIS_DC_DN	157	-0.45	-1.57	0.002	0.028
GSE9037_CTRL_VS_LPS_1H_STIM_IRAK4_KO_BMDM_DN	161	-0.45	-1.57	0.000	0.028
GSE3982_DC_VS_CENT_MEMORY_CD4_TCELL_UP	170	-0.44	-1.57	0.000	0.028
MONNIER_POSTRADIATION_TUMOR_ESCAPE_DN	338	-0.42	-1.57	0.000	0.028
MISHRA_CARCINOMA_ASSOCIATED_FIBROBLAST_UP	17	-0.64	-1.57	0.029	0.028
RUTELLA_RESPONSE_TO_HGF_VS_CSF2RB_AND_IL4_UP	335	-0.42	-1.57	0.000	0.028
DELACROIX_RAR_TARGETS_DN	17	-0.64	-1.57	0.028	0.028
ROZANOV_MMP14_TARGETS_UP	229	-0.44	-1.57	0.000	0.028
COLDREN_GEFITINIB_RESISTANCE_UP	83	-0.48	-1.57	0.005	0.028
YUAN_ZNF143_PARTNERS	21	-0.62	-1.57	0.021	0.028
YORDY_RECIPROCAL_REGULATION_BY_ETS1_AND_SP100_DN	66	-0.49	-1.57	0.007	0.028
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_4H_ACT_CD4_TCELL_DN	106	-0.46	-1.57	0.002	0.028
BCAT.100_UP.V1_UP	30	-0.58	-1.57	0.013	0.028
BOYLAN_MULTIPLE_MYELOMA_C_D_UP	126	-0.45	-1.57	0.001	0.028
LINSLEY_MIR16_TARGETS	201	-0.44	-1.57	0.002	0.028
GSE13493_DP_VS_CD8POS_THYMOCYTE_DN	171	-0.44	-1.57	0.001	0.028
ZHENG_BOUND_BY_FOXP3	400	-0.42	-1.57	0.000	0.028
GSE5463_CTRL_VS_DEXAMETHASONE_TREATED_THYMOCYTE_DN	168	-0.45	-1.57	0.000	0.028
GSE2706_R848_VS_LPS_2H_STIM_DC_DN	112	-0.46	-1.57	0.004	0.028
WEST_ADRENOCORTICAL_CARCINOMA_VS_ADENOMA_UP	17	-0.64	-1.57	0.026	0.029
SPIRA_SMOKERS_LUNG_CANCER_UP	31	-0.56	-1.57	0.014	0.029
EXONUCLEASE_ACTIVITY	19	-0.62	-1.57	0.021	0.029
CHEN_LVAD_SUPPORT_OF_FAILING_HEART_DN	26	-0.58	-1.57	0.022	0.029
LABBE_TGFB1_TARGETS_DN	64	-0.50	-1.57	0.008	0.029
NUCLEOLAR_PART	18	-0.63	-1.57	0.025	0.029
MAPKKK_CASCADE_GO_0000165	89	-0.48	-1.57	0.004	0.029
CORRE_MULTIPLE_MYELOMA_DN	46	-0.52	-1.57	0.009	0.029
IMMUNE_EFFECTOR_PROCESS	21	-0.61	-1.57	0.019	0.029

GAUSSMANN_MLL_AF4_FUSION_TARGETS_F_DN	23	-0.61	-1.57	0.027	0.029
BARRIER_CANCER_RELAPSE_TUMOR_SAMPLE_UP	15	-0.66	-1.56	0.029	0.029
NEGATIVE_REGULATION_OF_CELL_CYCLE	72	-0.49	-1.56	0.005	0.029
SMIRNOV_RESPONSE_TO_IR_2HR_UP	49	-0.52	-1.56	0.013	0.029
REACTOME_GASTRIN_CREB_SIGNALLING_PATHWAY_VIA_PK C_AND_MAPK	106	-0.46	-1.56	0.002	0.029
NEWMAN_ERCC6_TARGETS_DN	24	-0.59	-1.56	0.025	0.029
DNA_DEPENDENT_ATPASE_ACTIVITY	22	-0.61	-1.56	0.021	0.029
GSE17721_LPS_VS_PAM3CSK4_1H_BMDM_DN	162	-0.44	-1.56	0.002	0.029
SESTO_RESPONSE_TO_UV_C1	65	-0.50	-1.56	0.004	0.029
REACTOME_RECRUITMENT_OF_MITOTIC_CENTROSOME_PRO TEINS_AND_COMPLEXES	63	-0.51	-1.56	0.009	0.029
MOREAUX_MULTIPLE_MYELOMA_BY_TACI_DN	169	-0.44	-1.56	0.001	0.029
GSE360_CTRL_VS_T_GONDII_DC_DN	149	-0.45	-1.56	0.002	0.029
BURTON_ADIPOGENESIS_1	30	-0.56	-1.56	0.033	0.029
PROTEIN_DIMERIZATION_ACTIVITY	145	-0.44	-1.56	0.001	0.029
DARWICHE_SKIN_TUMOR_PROMOTER_UP	110	-0.46	-1.56	0.002	0.029
KORKOLA_SEMINOMA_UP	40	-0.53	-1.56	0.020	0.029
GSE14308_TH2_VS_NAIVE_CD4_TCELL_UP	179	-0.44	-1.56	0.000	0.029
ZHAN_VARIABLE_EARLY_DIFFERENTIATION_GENES_DN	30	-0.56	-1.56	0.020	0.029
E2F1_UP.V1_DN	160	-0.45	-1.56	0.004	0.029
PHONG_TNF_RESPONSE_VIA_P38_COMPLETE	214	-0.44	-1.56	0.000	0.029
HILLION_HMGA1B_TARGETS	74	-0.49	-1.56	0.007	0.029
PTEN_DN.V2_UP	94	-0.47	-1.56	0.006	0.029
GSE17721_0.5H_VS_4H_LPS_BMDM_UP	190	-0.44	-1.56	0.001	0.029
PID_AR_PATHWAY	56	-0.51	-1.56	0.009	0.030
PEDRIOLI_MIR31_TARGETS_UP	140	-0.45	-1.56	0.006	0.029
GSE22886_DC_VS_MONOCYTE_DN	162	-0.44	-1.56	0.000	0.029
SCHAEFFER_PROSTATE_DEVELOPMENT_12HR_UP	89	-0.48	-1.56	0.005	0.029
NGUYEN_NOTCH1_TARGETS_DN	78	-0.48	-1.56	0.007	0.029
RUTELLA_RESPONSE_TO_CSF2RB_AND_IL4_DN	249	-0.43	-1.56	0.000	0.030
SCHAEFFER_PROSTATE_DEVELOPMENT_48HR_UP	351	-0.42	-1.56	0.000	0.030
CAHOY_ASTROGLIAL	71	-0.49	-1.56	0.009	0.030
LYMPHOCYTE_DIFFERENTIATION	15	-0.65	-1.56	0.020	0.030
CYCLIN_D1_UP.V1_UP	137	-0.45	-1.56	0.005	0.030
GSE22045_TREG_VS_TCONV_UP	135	-0.46	-1.56	0.005	0.030
PROTEASOME_COMPLEX	23	-0.60	-1.56	0.032	0.030
SASSON_RESPONSE_TO_GONADOTROPHINS_UP	84	-0.48	-1.56	0.004	0.030
CERIBELLI_PROMOTERS_INACTIVE_AND_BOUND_BY_NFY	20	-0.60	-1.56	0.022	0.030
ENK_UV_RESPONSE_KERATINOCYTE_UP	450	-0.42	-1.56	0.000	0.030
KEGG_NEUROACTIVE_LIGAND_RECEPTOR_INTERACTION	85	-0.48	-1.56	0.006	0.030
GSE17721_4H_VS_24H_POLYIC_BMDM_UP	172	-0.44	-1.56	0.001	0.030
GSE29617_CTRL_VS_TIV_FLU_VACCINE_PBMC_2008_DN	174	-0.44	-1.56	0.001	0.030
ZIRN_TRETINOIN_RESPONSE_UP	18	-0.63	-1.56	0.025	0.030
SNF5_DN.V1_DN	110	-0.47	-1.56	0.004	0.030
GSE22886_TH1_VS_TH2_48H_ACT_UP	140	-0.45	-1.56	0.001	0.030
CEBALLOS_TARGETS_OF_TP53_AND_MYC_DN	30	-0.56	-1.56	0.025	0.030
GILDEA_METASTASIS	23	-0.59	-1.56	0.019	0.030
GSE15930_STIM_VS_STIM_AND_IFNAB_72H_CD8_T_CELL_D N	182	-0.44	-1.56	0.000	0.030
OUTER_MEMBRANE	23	-0.60	-1.56	0.028	0.030

POSITIVE_REGULATION_OF_CATALYTIC_ACTIVITY	122	-0.46	-1.56	0.002	0.030
ENZYME_REGULATOR_ACTIVITY	264	-0.43	-1.56	0.000	0.030
RADMACHER_AML_PROGNOSIS	65	-0.50	-1.56	0.014	0.030
GSE22886_NEUTROPHIL_VS_DC_UP	114	-0.46	-1.56	0.005	0.030
TRACEY_RESISTANCE_TO_IFNA2_DN	29	-0.56	-1.56	0.021	0.030
GSE17721_POLYIC_VS_CPG_6H_BMDM_DN	174	-0.44	-1.56	0.001	0.030
GSE17721_LPS_VS_POLYIC_1H_BMDM_UP	161	-0.44	-1.56	0.000	0.030
GSE15930_STIM_VS_STIM_AND_IFNAB_48H_CD8_T_CELL_D N	169	-0.44	-1.56	0.001	0.030
BEGUM_TARGETS_OF_PAX3_FOXO1_FUSION_UP	48	-0.52	-1.56	0.016	0.030
BOWIE_RESPONSE_TO_TAMOXIFEN	17	-0.62	-1.56	0.032	0.030
ANASTASSIOU_CANCER_MESENCHYMAL_TRANSITION_SIGNA TURE	50	-0.51	-1.56	0.011	0.030
REGULATION_OF_BODY_FLUID_LEVELS	34	-0.54	-1.56	0.014	0.030
KORKOLA_YOLK_SAC_TUMOR_UP	19	-0.62	-1.56	0.027	0.030
GSE15930_STIM_VS_STIM_AND_IFNAB_48H_CD8_T_CELL_U P	183	-0.43	-1.56	0.000	0.030
GSE17721_CTRL_VS_PAM3CSK4_6H_BMDM_DN	171	-0.44	-1.56	0.000	0.030
CELL_CYCLE_ARREST_GO_0007050	52	-0.51	-1.56	0.009	0.031
GSE7460_CTRL_VS_TGFB_TREATED_ACT_CD8_TCELL_UP	170	-0.44	-1.56	0.000	0.031
GSE7852_TREG_VS_TCONV_LN_UP	163	-0.44	-1.55	0.001	0.031
DAUER_STAT3_TARGETS_UP	39	-0.54	-1.55	0.014	0.031
REGULATION_OF_DEVELOPMENTAL_PROCESS	356	-0.42	-1.55	0.000	0.031
GSE12845_NAIVE_VS_DARKZONE_GC_TONSIL_BCELL_DN	190	-0.43	-1.55	0.001	0.031
GSE2197_IMMUNOSUPPRESSIVE_DNA_VS_UNTREATED_IN_D C_UP	166	-0.44	-1.55	0.001	0.031
REACTOME_ANTIGEN_PROCESSING_CROSS_PRESENTATION	65	-0.50	-1.55	0.008	0.031
GSE360_T_GONDII_VS_B_MALAYI_HIGH_DOSE_DC_UP	157	-0.44	-1.55	0.002	0.031
HOFFMANN_SMALL_PRE_BII_TO_IMMATURE_B_LYMPHOCYT E_DN	42	-0.53	-1.55	0.018	0.031
BIOCARTA_NFKB_PATHWAY	22	-0.60	-1.55	0.019	0.031
GSE1448_ANTI_VALPHA2_VS_VBETA5_DP_THYMOCYTE_DN	157	-0.44	-1.55	0.000	0.031
BENNETT_SYSTEMIC_LUPUS_ERYTHEMATOSUS	22	-0.60	-1.55	0.028	0.031
POSITIVE_REGULATION_OF_CELLULAR_PROTEIN_METABOLIC _PROCESS	43	-0.52	-1.55	0.020	0.031
BIOCARTA_KERATINOCYTE_PATHWAY	41	-0.54	-1.55	0.019	0.031
BIOCARTA_UCALPAIN_PATHWAY	16	-0.64	-1.55	0.032	0.032
CHIBA_RESPONSE_TO_TSA_DN	23	-0.60	-1.55	0.026	0.032
PEPTIDYL_TYROSINE_MODIFICATION	18	-0.62	-1.55	0.028	0.032
ZHOU_INFLAMMATORY_RESPONSE_LIVE_UP	344	-0.42	-1.55	0.001	0.032
TURASHVILI_BREAST_LOBULAR_CARCINOMA_VS_LOBULAR_ NORMAL_DN	61	-0.50	-1.55	0.012	0.032
SESTO_RESPONSE_TO_UV_C4	18	-0.63	-1.55	0.024	0.032
KEGG_GRAFT_VERSUS_HOST_DISEASE	20	-0.62	-1.55	0.021	0.032
SAKAI_TUMOR_INFILTRATING_MONOCYTES_UP	24	-0.60	-1.55	0.027	0.032
GSE360_DC_VS_MAC_T_GONDII_DN	160	-0.44	-1.55	0.002	0.032
GSE12845_IGD_NEG_BLOOD_VS_DARKZONE_GC_TONSIL_BC ELL_DN	193	-0.44	-1.55	0.000	0.032
MCCLUNG_COCAIN_REWARD_4WK	55	-0.51	-1.55	0.004	0.032
MULLIGAN_NTF3_SIGNALING_VIA_INSR_AND_IGF1R_UP	22	-0.60	-1.55	0.027	0.032

DER_IFN_BETA_RESPONSE_UP	99	-0.46	-1.55	0.013	0.032
BLOOD_COAGULATION	25	-0.59	-1.55	0.024	0.032
CELL_MATRIX_ADHESION	33	-0.55	-1.55	0.017	0.032
DAVICIONI_TARGETS_OF_PAX_FOXO1_FUSIONS_DN	53	-0.51	-1.55	0.011	0.033
STAEGE_EWING_FAMILY_TUMOR	17	-0.62	-1.55	0.036	0.033
MULTI_ORGANISM_PROCESS	83	-0.47	-1.55	0.010	0.033
GSE17721_12H_VS_24H_PAM3CSK4_BMDM_UP	165	-0.44	-1.55	0.002	0.033
REACTOME_RIP_MEDIATED_NFKB_ACTIVATION_VIA_DAI	15	-0.65	-1.55	0.036	0.033
BIOCARTA_IL1R_PATHWAY	28	-0.57	-1.55	0.031	0.033
WNT_UP.V1_UP	108	-0.46	-1.55	0.007	0.033
WIERENGA_STAT5A_TARGETS_DN	159	-0.44	-1.55	0.002	0.033
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_BLACK_UP	34	-0.55	-1.55	0.014	0.033
BILD_SRC_ONCOGENIC_SIGNATURE	58	-0.49	-1.55	0.014	0.033
REACTOME_INTERFERON_ALPHA_BETA_SIGNALING	45	-0.52	-1.55	0.028	0.033
DELASERNA_MYOD_TARGETS_DN	48	-0.51	-1.55	0.018	0.033
CLIMENT_BREAST_CANCER_COPY_NUMBER_UP	17	-0.63	-1.54	0.036	0.033
GSE22886_CTRL_VS_LPS_24H_DC_DN	181	-0.44	-1.54	0.000	0.033
BOQUEST_STEM_CELL_UP	202	-0.43	-1.54	0.002	0.033
REACTOME_ER_PHAGOSOME_PATHWAY	57	-0.50	-1.54	0.020	0.033
RUAN_RESPONSE_TO_TNF_TROGLITAZONE_DN	36	-0.54	-1.54	0.025	0.034
LIAO_HAVE_SOX4_BINDING_SITES	36	-0.54	-1.54	0.019	0.034
BERENJENO_ROCK_SIGNALING_NOT_VIA_RHOA_DN	46	-0.51	-1.54	0.013	0.034
HEDENFALK_BREAST_CANCER_HEREDITARY_VS_SPORADIC	50	-0.51	-1.54	0.020	0.034
BURTON_ADIPOGENESIS_9	86	-0.47	-1.54	0.004	0.034
CERVERA_SDHB_TARGETS_1_UP	82	-0.47	-1.54	0.010	0.034
TOMIDA_METASTASIS_UP	22	-0.60	-1.54	0.042	0.034
MICROTUBULE	31	-0.55	-1.54	0.023	0.034
GSE17721_LPS_VS_PAM3CSK4_2H_BMDM_UP	164	-0.44	-1.54	0.002	0.034
PID_HEDGEHOG_2PATHWAY	19	-0.62	-1.54	0.030	0.034
GSE17721_LPS_VS_GARDIQUIMOD_2H_BMDM_UP	156	-0.44	-1.54	0.002	0.034
TURASHVILI_BREAST_DUCTAL_CARCINOMA_VS_DUCTAL_NORMAL_UP	38	-0.53	-1.54	0.020	0.034
PIGF_UP.V1_DN	126	-0.45	-1.54	0.002	0.034
PEDERSEN_METASTASIS_BY_ERBB2_ISOFORM_6	18	-0.63	-1.54	0.030	0.034
UNFOLDED_PROTEIN_BINDING	40	-0.53	-1.54	0.015	0.034
BRACHAT_RESPONSE_TO_CAMPTOTHECIN_DN	44	-0.52	-1.54	0.015	0.034
MUNSHI_MULTIPLE_MYELOMA_UP	74	-0.48	-1.54	0.011	0.034
GSE14769_UNSTIM_VS_240MIN_LPS_BMDM_UP	190	-0.43	-1.54	0.000	0.035
GSE14000_TRANSLATED_RNA_VS_MRNA_DC_UP	197	-0.43	-1.54	0.001	0.035
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_14	139	-0.45	-1.54	0.001	0.035
BROWNE_HCMV_INFECTION_24HR_UP	130	-0.44	-1.54	0.001	0.035
CHIANG_LIVER_CANCER_SUBCLASS_POLYSOMY7_DN	20	-0.60	-1.54	0.030	0.035
GSE17974_2H_VS_72H_UNTREATED_IN_VITRO_CD4_TCELL_DN	183	-0.43	-1.54	0.000	0.035
GSE17721_POLYIC_VS_GARDIQUIMOD_24H_BMDM_DN	183	-0.43	-1.54	0.000	0.035
REACTOME_ANTIVIRAL_MECHANISM_BY_IFN_STIMULATED_GENES	63	-0.50	-1.54	0.017	0.035
SCHEIDEREIT_IKK_INTERACTING_PROTEINS	53	-0.50	-1.54	0.019	0.035
SASSON_RESPONSE_TO_FORSKOLIN_UP	83	-0.47	-1.54	0.005	0.035
CYTOKINE_PRODUCTION	37	-0.54	-1.54	0.018	0.035

POSITIVE_REGULATION_OF_PROTEIN_METABOLIC_PROCESS	44	-0.52	-1.54	0.012	0.035
ALCOHOL_METABOLIC_PROCESS	65	-0.49	-1.54	0.012	0.036
MURAKAMI_UV_RESPONSE_24HR	15	-0.63	-1.54	0.029	0.036
LEE_METASTASIS_AND_RNA_PROCESSING_UP	17	-0.62	-1.54	0.036	0.036
KAYO_AGING_MUSCLE_UP	165	-0.44	-1.54	0.002	0.036
PHOSPHOPROTEIN_PHOSPHATASE_ACTIVITY	70	-0.48	-1.54	0.016	0.036
GSE37416_CTRL_VS_12H_F_TULARENSIS_LVS_NEUTROPHIL_DN	177	-0.43	-1.54	0.000	0.036
RESPONSE_TO_LIGHT_STIMULUS	31	-0.55	-1.54	0.026	0.036
REACTOME_LIPID_DIGESTION_MOBILIZATION_AND_TRANSPORT	28	-0.56	-1.54	0.028	0.036
REACTOME_REGULATION_OF_INSULIN_SECRETION_BY_GLUCAGON_LIKE_PEPTIDE1	31	-0.56	-1.54	0.028	0.036
MARIADASON_RESPONSE_TO_BUTYRATE_SULINDAC_4	21	-0.61	-1.53	0.026	0.036
GSE15930_STIM_VS_STIM_AND_TRICHOSTATINA_24H_CD8_T_CELL_UP	132	-0.44	-1.53	0.003	0.036
BROWN_MYELOID_CELL_DEVELOPMENT_UP	112	-0.45	-1.53	0.002	0.036
QI_HYPOXIA	130	-0.44	-1.53	0.006	0.036
REACTOME_SYNTHESIS_AND_INTERCONVERSION_OF_NUCLEOTIDE_DI_AND_TRIPHOSPHATES	18	-0.63	-1.53	0.031	0.036
GSE8868_SPLEEN_VS_INTESTINE_CD11B_POS_CD11C_NEG_DC_DN	172	-0.43	-1.53	0.002	0.036
BIOCARTA_ARF_PATHWAY	17	-0.63	-1.53	0.030	0.036
FERRARI_RESPONSE_TO_FENRETINIDE_UP	20	-0.61	-1.53	0.022	0.037
TONKS_TARGETS_OF_RUNX1_RUNX1T1_FUSION_ERYTHROCYTE_UP	126	-0.45	-1.53	0.002	0.037
GAURNIER_PSMD4_TARGETS	42	-0.52	-1.53	0.017	0.037
FLECHNER_PBL_KIDNEY_TRANSPLANT_OK_VS_DONOR_DN	41	-0.53	-1.53	0.027	0.037
ZHU_SKIL_TARGETS_UP	19	-0.62	-1.53	0.030	0.037
CUSTOM_EXPO-GIST	60	-0.49	-1.53	0.013	0.037
BROWNE_HCMV_INFECTION_48HR_UP	152	-0.44	-1.53	0.001	0.037
AIYAR_COBRA1_TARGETS_DN	26	-0.58	-1.53	0.027	0.037
SCHAEFFER_PROSTATE_DEVELOPMENT_48HR_DN	298	-0.42	-1.53	0.000	0.037
SPIELMAN_LYMPHOBLAST_EUROPEAN_VS_ASIAN_UP	460	-0.41	-1.53	0.000	0.037
GSE3337_CTRL_VS_4H_IFNG_IN_CD8POS_DC_DN	168	-0.44	-1.53	0.002	0.037
DIGESTION	17	-0.62	-1.53	0.033	0.037
NUCLEOTIDE_METABOLIC_PROCESS	36	-0.53	-1.53	0.030	0.037
REACTOME_CLEAVAGE_OF_GROWING_TRANSCRIPT_IN_THE_TERMINATION_REGION_	42	-0.52	-1.53	0.020	0.037
JAK_STAT_CASCADE	23	-0.58	-1.53	0.025	0.038
CLASPER_LYMPHATIC_VESSELS_DURING_METASTASIS_DN	28	-0.56	-1.53	0.029	0.038
BRUINS_UVC_RESPONSE_VIA_TP53_GROUP_B	438	-0.41	-1.53	0.000	0.038
ATP_DEPENDENT_HELICASE_ACTIVITY	26	-0.57	-1.53	0.022	0.038
PHOSPHORIC_DIESTER_HYDROLASE_ACTIVITY	29	-0.57	-1.53	0.027	0.038
PLASARI_TGFB1_SIGNALING_VIA_NFIC_1HR_DN	90	-0.47	-1.53	0.009	0.038
RUTELLA_RESPONSE_TO_HGF_UP	356	-0.41	-1.53	0.000	0.038
REACTOME_PURINE_METABOLISM	28	-0.56	-1.53	0.031	0.038
KEGG_GLIOMA	61	-0.49	-1.53	0.013	0.038
POSITIVE_REGULATION_OF_CELLULAR_METABOLIC_PROCESS	180	-0.43	-1.53	0.001	0.038
STEARMAN_TUMOR_FIELD_EFFECT_UP	28	-0.56	-1.53	0.033	0.038

THEODOROU_MAMMARY_TUMORIGENESIS	16	-0.63	-1.53	0.036	0.039
LINDVALL_IMMORTALIZED_BY_TERT_UP	68	-0.48	-1.53	0.019	0.039
FERNANDEZ_BOUND_BY_MYC	154	-0.44	-1.53	0.003	0.039
LTE2_UP.V1_DN	172	-0.43	-1.53	0.000	0.039
CUI_TCF21_TARGETS_DN	23	-0.58	-1.52	0.028	0.039
MOSERLE_IFNA_RESPONSE	27	-0.56	-1.52	0.029	0.039
GSE12845_IGD_POS_VS_NEG_BLOOD_BCELL_DN	176	-0.43	-1.52	0.001	0.039
NEGATIVE_REGULATION_OF_TRANSCRIPTION_FROM_RNA_POLYMERASE_II_PROMOTER	73	-0.47	-1.52	0.011	0.039
REACTOME_THROMBIN_SIGNALLING_THROUGH_PROTEINASE_ACTIVATED_RECEPTORS_PARS	24	-0.58	-1.52	0.018	0.039
GSE2826_WT_VS_BTK_KO_BCELL_DN	148	-0.43	-1.52	0.006	0.039
LIAO_METASTASIS	495	-0.41	-1.52	0.000	0.039
REACTOME_INTERFERON_SIGNALING	125	-0.45	-1.52	0.001	0.039
CHEN_LUNG_CANCER_SURVIVAL	20	-0.60	-1.52	0.056	0.039
SESTO_RESPONSE_TO_UV_C5	46	-0.51	-1.52	0.018	0.039
ABBUD_LIF_SIGNALING_1_UP	32	-0.54	-1.52	0.029	0.039
GSE17974_CTRL_VS_ACT_IL4_AND_ANTI_IL12_2H_CD4_TCELL_DN	186	-0.43	-1.52	0.001	0.039
GSE1460_NAIVE_CD4_TCELL_CORD_BLOOD_VS_THYMIC_STROMAL_CELL_DN	193	-0.43	-1.52	0.002	0.040
GROWTH_FACTOR_ACTIVITY	27	-0.56	-1.52	0.029	0.040
PEPTIDYL_TYROSINE_PHOSPHORYLATION	16	-0.64	-1.52	0.028	0.040
SHETH_LIVER_CANCER_VS_TXNIP_LOSS_PAM6	35	-0.53	-1.52	0.021	0.040
TAVAZOIE_METASTASIS	75	-0.47	-1.52	0.016	0.040
PASQUALUCCI_LYMPHOMA_BY_GC_STAGE_DN	138	-0.44	-1.52	0.003	0.040
RNA_SPLICING	89	-0.47	-1.52	0.006	0.040
GSE17721_LPS_VS_PAM3CSK4_4H_BMDM_UP	172	-0.43	-1.52	0.001	0.041
GSE3982_CTRL_VS_LPS_48H_DC_UP	159	-0.43	-1.52	0.000	0.041
PHOSPHOLIPASE_ACTIVITY	26	-0.57	-1.52	0.027	0.041
DOUBLE_STRAND_BREAK_REPAIR	23	-0.57	-1.52	0.032	0.041
VALK_AML_CLUSTER_11	32	-0.54	-1.52	0.028	0.041
NAM_FXYD5_TARGETS_DN	18	-0.61	-1.52	0.039	0.041
MEISSNER_NPC_HCP_WITH_H3K4ME2_AND_H3K27ME3	160	-0.43	-1.52	0.001	0.041
GOLUB_ALL_VS_AML_DN	21	-0.59	-1.52	0.035	0.041
PTEN_DN.V1_DN	91	-0.46	-1.52	0.007	0.041
KANG_GIST_WITH_PDGFRA_UP	38	-0.53	-1.52	0.026	0.042
GSE27786_LSK_VS_CD8_TCELL_UP	181	-0.43	-1.52	0.002	0.042
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_12H_DN	162	-0.42	-1.52	0.002	0.042
GSE37416_0H_VS_3H_F_TULARENSIS_LVS_NEUTROPHIL_DN	178	-0.43	-1.52	0.001	0.042
GSE2706_2H_VS_8H_R848_STIM_DC_UP	159	-0.43	-1.52	0.005	0.042
RHEIN_ALL_GLUCOCORTICOID_THERAPY_UP	55	-0.49	-1.52	0.017	0.042
GSE339_CD8POS_VS_CD4CD8DN_DC_IN_CULTURE_UP	175	-0.43	-1.52	0.003	0.042
GSE39820_CTRL_VS_TGFBETA3_IL6_IL23A_CD4_TCELL_UP	194	-0.42	-1.51	0.004	0.042
KEGG_RNA_DEGRADATION	56	-0.49	-1.51	0.027	0.042
MODY_HIPPOCAMPUS_PRENATAL	39	-0.53	-1.51	0.029	0.042
GSE36392_TYPE_2_MYELOID_VS_NEUTROPHIL_IL25_TREATED_LUNG_DN	173	-0.42	-1.51	0.000	0.042
ZHOU_INFLAMMATORY_RESPONSE_LPS_UP	275	-0.41	-1.51	0.001	0.042
AKT_UP_MTOR_DN.V1_UP	138	-0.43	-1.51	0.006	0.042
DEOXYRIBONUCLEASE_ACTIVITY	21	-0.59	-1.51	0.038	0.042
GSE29618_BCELL_VS_PDC_UP	161	-0.43	-1.51	0.002	0.042

APPIERTO_RESPONSE_TO_FENRETINIDE_DN	48	-0.50	-1.51	0.026	0.042
PID_ILK_PATHWAY	43	-0.51	-1.51	0.021	0.042
KRASNOSELSKAYA_ILF3_TARGETS_UP	32	-0.54	-1.51	0.029	0.042
NING_CHRONIC_OBSTRUCTIVE_PULMONARY_DISEASE_UP	128	-0.44	-1.51	0.005	0.042
GSE22886_CD8_TCELL_VS_BCELL_NAIVE_DN	141	-0.43	-1.51	0.003	0.043
EINAV_INTERFERON_SIGNATURE_IN_CANCER	25	-0.57	-1.51	0.046	0.043
POSITIVE_REGULATION_OF_SIGNAL_TRANSDUCTION	111	-0.44	-1.51	0.002	0.043
WOUND_HEALING	31	-0.55	-1.51	0.018	0.043
GSE1460_CORD_VS_ADULT_BLOOD_NAIVE_CD4_TCELL_UP	160	-0.43	-1.51	0.002	0.043
KEGG_LEUKOCYTE_TRANSENDOTHELIAL_MIGRATION	78	-0.47	-1.51	0.016	0.043
PID_EPHRINBREVPATHWAY	23	-0.59	-1.51	0.027	0.043
GSE17721_PAM3CSK4_VS_GADIQUIMOD_1H_BMDM_UP	144	-0.44	-1.51	0.004	0.043
EMBRYONIC_DEVELOPMENT	38	-0.52	-1.51	0.024	0.043
MAINA_VHL_TARGETS_DN	17	-0.63	-1.51	0.035	0.043
REACTOME_ACTIVATION_OF_NF_KAPPAB_IN_B_CELLS	59	-0.48	-1.51	0.013	0.043
REACTOME_RESPONSE_TO_ELEVATED_PLATELET_CYTOSOLIC _CA2_	59	-0.48	-1.51	0.027	0.043
GAUSSMANN_MLL_AF4_FUSION_TARGETS_A_UP	168	-0.43	-1.51	0.002	0.043
CHARAFE_BREAST_CANCER_BASAL_VS_MESENCHYMAL_DN	48	-0.51	-1.51	0.020	0.043
REACTOME_MHC_CLASS_II_ANTIGEN_PRESENTATION	84	-0.46	-1.51	0.010	0.043
LEE_RECENT_THYMIC_EMIGRANT	196	-0.42	-1.51	0.000	0.043
GSE13484_UNSTIM_VS_3H_YF17D_VACCINE_STIM_PBMC_D N	171	-0.43	-1.51	0.000	0.043
GAUSSMANN_MLL_AF4_FUSION_TARGETS_B_UP	18	-0.61	-1.51	0.038	0.043
WESTON_VEGFA_TARGETS_12HR	25	-0.56	-1.51	0.032	0.043
GSE17721_LPS_VS_POLYIC_16H_BMDM_UP	172	-0.43	-1.51	0.000	0.043
LIPASE_ACTIVITY	28	-0.55	-1.51	0.036	0.043
LIPID_BIOSYNTHETIC_PROCESS	84	-0.46	-1.51	0.007	0.043
BENPORATH_NOS_TARGETS	154	-0.44	-1.51	0.000	0.043
GSE1448_CTRL_VS_ANTI_VBETA5_DP_THYMOCYTE_DN	171	-0.42	-1.51	0.001	0.043
GSE17974_2.5H_VS_72H_IL4_AND_ANTI_IL12_ACT_CD4_TCE LL_DN	182	-0.43	-1.51	0.002	0.043
XU_RESPONSE_TO_TRETINOIN_AND_NSC682994_UP	17	-0.62	-1.51	0.040	0.044
JIANG_HYPOXIA_VIA_VHL	33	-0.53	-1.51	0.030	0.044
NELSON_RESPONSE_TO_ANDROGEN_UP	77	-0.47	-1.51	0.009	0.044
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_12H_ACT_C D4_TCELL_UP	159	-0.43	-1.51	0.003	0.044
PENG_GLUCOSE_DEPRIVATION_DN	145	-0.43	-1.51	0.005	0.044
ZHU_CMV_ALL_DN	110	-0.45	-1.51	0.005	0.044
CYTOKINE_METABOLIC_PROCESS	18	-0.60	-1.51	0.034	0.044
DAIRKEE_TERT_TARGETS_UP	346	-0.41	-1.51	0.000	0.044
ZHANG_GATA6_TARGETS_DN	49	-0.51	-1.51	0.020	0.045
MASSARWEH_TAMOXIFEN_RESISTANCE_DN	217	-0.42	-1.51	0.002	0.045
GSE17721_CTRL_VS_GARDIQUIMOD_12H_BMDM_DN	169	-0.43	-1.51	0.004	0.045
GSE17721_LPS_VS_GARDIQUIMOD_24H_BMDM_DN	175	-0.43	-1.51	0.002	0.045
GSE7460_CTRL_VS_TGFB_TREATED_ACT_FOXP3_HET_TCONV _UP	184	-0.43	-1.51	0.001	0.045
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_4H_DN	159	-0.43	-1.51	0.002	0.045
REACTOME_PROCESSING_OF_CAPPED_INTRONLESS_PRE_MR NA	23	-0.57	-1.50	0.043	0.045

SU_LIVER	20	-0.60	-1.50	0.043	0.045
ZHONG_RESPONSE_TO_AZACITIDINE_AND_TSA_DN	66	-0.48	-1.50	0.018	0.045
GARGALOVIC_RESPONSE_TO_OXIDIZED_PHOSPHOLIPIDS_MAGENTA_UP	27	-0.56	-1.50	0.035	0.045
REACTOME_CLASS_B_2_SECRETIN_FAMILY_RECEPTORS	41	-0.51	-1.50	0.032	0.046
LINDSTEDT_DENDRITIC_CELL_MATURATION_C	54	-0.49	-1.50	0.012	0.046
CRX_NRL_DN.V1_UP	105	-0.45	-1.50	0.006	0.046
GSE20366_TREG_VS_NAIVE_CD4_TCELL_DEC205_CONVERSION_UP	164	-0.43	-1.50	0.004	0.046
GSE7852_LN_VS_THYMUS_TREG_DN	180	-0.42	-1.50	0.001	0.046
GSE27786_NKTCELL_VS_ERYTHROBLAST_DN	135	-0.44	-1.50	0.007	0.047
FOSTER_KDM1A_TARGETS_UP	144	-0.43	-1.50	0.002	0.047
GSE9650_NAIVE_VS_MEMORY_CD8_TCELL_UP	172	-0.42	-1.50	0.003	0.047
CYTOKINE_BIOSYNTHETIC_PROCESS	18	-0.60	-1.50	0.050	0.047
PROTEIN_KINASE_BINDING	54	-0.48	-1.50	0.024	0.047
GSE18791_CTRL_VS_NEWCASTLE_VIRUS_DC_2H_DN	132	-0.44	-1.50	0.008	0.047
GSE17721_POLYIC_VS_GARDIQUIMOD_6H_BMDM_DN	190	-0.42	-1.50	0.000	0.047
GSE2706_R848_VS_LPS_2H_STIM_DC_UP	117	-0.44	-1.50	0.007	0.047
GSE3982_DC_VS_BASOPHIL_UP	173	-0.42	-1.50	0.002	0.047
RESPONSE_TO_ABIOTIC_STIMULUS	68	-0.47	-1.50	0.024	0.047
KEGG_PATHOGENIC_ESCHERICHIA_COLI_INFECTION	49	-0.50	-1.50	0.020	0.047
GSE2706_R848_VS_R848_AND_LPS_8H_STIM_DC_DN	147	-0.43	-1.50	0.007	0.047
KINASE_BINDING	60	-0.48	-1.50	0.012	0.047
MARKEY_RB1_CHRONIC_LOF_DN	85	-0.46	-1.50	0.010	0.047
MRNA_METABOLIC_PROCESS	83	-0.46	-1.50	0.020	0.047
VALK_AML_WITH_CEBPA	24	-0.56	-1.50	0.039	0.047
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_2H_ACT_CD4_TCELL_DN	120	-0.44	-1.50	0.005	0.048
ROESSLER_LIVER_CANCER_METASTASIS_UP	88	-0.46	-1.50	0.012	0.048
YAO_TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_10	66	-0.47	-1.50	0.016	0.048
DASU_IL6_SIGNALING_SCAR_UP	29	-0.56	-1.50	0.034	0.048
GSE17974_IL4_AND_ANTI_IL12_VS_UNTREATED_48H_ACT_CD4_TCELL_DN	125	-0.44	-1.50	0.003	0.048
SANSOM_APC_MYC_TARGETS	200	-0.42	-1.50	0.006	0.048
GSE26928_NAIVE_VS_CENT_MEMORY_CD4_TCELL_DN	165	-0.43	-1.50	0.004	0.048
REGULATION_OF_MULTICELLULAR_ORGANISMAL_PROCESS	80	-0.46	-1.50	0.014	0.048
BECKER_TAMOXIFEN_RESISTANCE_UP	43	-0.50	-1.50	0.033	0.048
MARSON_FOXP3_TARGETS_DN	43	-0.50	-1.50	0.031	0.048
FAELT_B_CLL_WITH_VH3_21_UP	41	-0.52	-1.50	0.028	0.048
PID_INTEGRIN_A9B1_PATHWAY	17	-0.61	-1.50	0.042	0.048
SIRNA_EIF4GI_DN	83	-0.46	-1.50	0.016	0.048
IVANOVSKA_MIR106B_TARGETS	85	-0.45	-1.50	0.012	0.048
ZHAN_MULTIPLE_MYELOMA_HP_DN	40	-0.52	-1.50	0.025	0.048
JIANG_VHL_TARGETS	130	-0.44	-1.50	0.003	0.048
ACOSTA_PROLIFERATION_INDEPENDENT_MYC_TARGETS_DN	100	-0.45	-1.49	0.007	0.049
JIANG_AGING_CEREBRAL_CORTEX_DN	48	-0.49	-1.49	0.015	0.049
CYCLIN_D1_KE_.V1_DN	112	-0.44	-1.49	0.011	0.049
TRANSFERASE_ACTIVITY_TRANSFERRING_PHOSPHORUS_CONTAINING_GROUPS	389	-0.40	-1.49	0.000	0.049
GSE31082_DN_VS_CD4_SP_THYMOCYTE_UP	191	-0.42	-1.49	0.002	0.049
RNA_POLYMERASE_ACTIVITY	16	-0.62	-1.49	0.042	0.049

ESC_J1_UP_EARLY.V1_DN	138	-0.43	-1.49	0.011	0.049
GSE20366_TREG_VS_NAIVE_CD4_TCELL_UP	175	-0.43	-1.49	0.000	0.049
JACKSON_DNMT1_TARGETS_DN	21	-0.58	-1.49	0.040	0.049
PKCA_DN.V1_UP	106	-0.44	-1.49	0.009	0.049
REACTOME_G_ALPHA_Q_SIGNALLING_EVENTS	85	-0.46	-1.49	0.012	0.050
GSE17721_LPS_VS_POLYIC_24H_BMDM_DN	171	-0.42	-1.49	0.007	0.050
GSE7460_CTRL_VS_FOXP3_OVEREXPR_TCONV_1_UP	152	-0.43	-1.49	0.005	0.050
KEGG_PRION_DISEASES	25	-0.57	-1.49	0.046	0.050
PID_AMB2_NEUTROPHILS_PATHWAY	26	-0.55	-1.49	0.043	0.050
GSE37416_CTRL_VS_0H_F_TULARENSIS_LVS_NEUTROPHIL_DN	92	-0.45	-1.49	0.016	0.050
GSE7460_FOXP3_MUT_VS_WT_ACT_WITH_TGFB_TCONV_UP	161	-0.42	-1.49	0.002	0.050
REGULATION_OF_BIOLOGICAL_QUALITY	272	-0.41	-1.49	0.000	0.050
GUANYL_NUCLEOTIDE_EXCHANGE_FACTOR_ACTIVITY	41	-0.51	-1.49	0.025	0.050
BIOCARTA_ERK_PATHWAY	26	-0.55	-1.49	0.035	0.050
MICROTUBULE_BASED_PROCESS	77	-0.46	-1.49	0.017	0.050
KIM_RESPONSE_TO_TSA_AND_DECITABINE_UP	90	-0.45	-1.49	0.011	0.050

Supplemental Table 9: DNA Primer Sequences

PCR Primer Pairs for Cloning		
miRE-Xho-short-fw	IDT	5’-AGAAGGCTCGAGAAGGTATATTGC-3’
miRE-EcoPlasmid-rev	IDT	5’-GCTCGAATTCTAGCCCCTTGAAGTCCGAGG-3’
COP1casrescuF	eurofins	tgctttgatatgattgaagaggcctatatgaccaagtgtggccacagcttttgctac
COP1casrescuR	eurofins	gtagcaaaagctgtggccacacttggtcatataggcctcttcaatcatatcaaagca
COP1C159YF	IDT	agcttttgctacaagtatattcatcagagtttg
COP1C159YR	IDT	caaactctgatgaatatacttgtagcaaaagct
COP1N168IF	IDT	agtttggaggacaatattagatgtcccaagtgt
COP1N168IR	IDT	acacttgggacatctaatattgtcctccaaact
COP1F205LF	eurofins	tttgaggaaaagaggttaaaattggaccactca
COP1F205LR	eurofins	tgagtggtccaattttaacctcttttcctcaaa
COP1R356KF	eurofins	agcacgttagcatcaaaacgaaaacgacttact
COP1R356KR	eurofins	agtaagtcgttttcgttttgatgctaacgtgct
COP1R375SF	IDT	tgttacttttctacaagcatgtctcgtatctca
COP1R375SR	IDT	tgagatacgagacatgcttgtagaaaagtaaca
COP1W517CF	IDT	catgagaagaggtgttgtagtgttgactttaat
COP1W517CR	IDT	attaaagtcaacactacaacacctcttctcatg
COP1P526SF	eurofins	tttaatttgatggattctaaactcttggcttca
COP1P526SR	eurofins	tgaagccaagagtttagaatccatcaaattaaa
COP1N557SF	IDT	attgaggcaaaggctagtgtgtgctgtgttaaa
COP1N557SR	IDT	tttaacacagcacacactagcctttgcctcaat
COP1C560RF	IDT	aaggctaatgtgtgccgtgttaaattcagcccc
COP1C560RR	IDT	ggggctgaatttaacacggcacacattagcctt
COP1R586CF	eurofins	cactactatgatctttgtaacactaaacagcca
COP1R586CR	eurofins	tggctgtttagtgttacaaagatcatagtagtg
COP1W625SF	IDT	agtcagctaaaactgtcgaatgtagggaaacca
COP1W625SR	IDT	tggtttccctacattcgacagttttagctgact
COP1P630LF	IDT	tggaatgtagggaaactatactgcctacgttcc
COP1P630LR	IDT	ggaacgtaggcagtatagtttccctacattcca
COP1G658EF	IDT	gattatatagcttgtgaaagtgaaaataactct
COP1G658ER	IDT	agagttattttcactttcacaagctatataatc
COP1D690NF	IDT	agtgttctcgacaaaaaccgaaaagaagatgat
COP1D690NR	IDT	atcatcttcttttcggtttttgtcgagaacact
DET1SMNEWF	eurofins	ccaaaatgtcattcatcgcttggaacgccggcgcatcagttcaggcaag
DET1SMNEWR	eurofins	cttgcctgaactgatgcgccggcgttccaagcgatgaatgacattttgg
DET1A429GF	eurofins	tctagcaacaattttggaaggcagatccagcgc

DET1A429GR	eurofins	gcgctggatctgccttccaaaattgttgctaga
DET1P535FF	eurofins	gccttcacctttcacttttttgagcctttcgct
DET1P535FR	eurofins	agcgaaaggctcaaaaaagtgaaaggtgaaggc
mir30 shRNA sequences		
PSMD-sh1	Transomics	TGCTGTTGACAGTGAGCGCCTCATCAGTTCTCCGATTTTATAGTGAAGCCACAGATGTATAAAATCGGAGAACTGATGAGATGCCTACTGCCTCGGA
PSMD-sh2	Transomics	TGCTGTTGACAGTGAGCGCGCCAGTGACTTTGAATTTGGATAGTGAAGCCACAGATGTATCCAAATTCAAAGTCACTGGCATGCCTACTGCCTCGGA
UBE2G1-sh1	Transomics	TGCTGTTGACAGTGAGCGAAAGATAGAAATGGAGAATTTATAGTGAAGCCACAGATGTATAAATTCTCCATTTCTATCTTCTGCCTACTGCCTCGGA
UBE2G1-sh2	Transomics	TGCTGTTGACAGTGAGCGACAGGTTTAATAGATGACAATATAGTGAAGCCACAGATGTATATTGTCATCTATTAAACCTGCTGCCTACTGCCTCGGA
DDB1-sh1	Transomics	TGCTGTTGACAGTGAGCGCCCTACTATTTGCTTTGTCTAATAGTGAAGCCACAGATGTATTAGACAAAGCAAATAGTAGGTTGCCTACTGCCTCGGA
DDB1-sh2	Transomics	TGCTGTTGACAGTGAGCGCCCCCTCAATTCAGATGGCTATTAGTGAAGCCACAGATGTAATAGCCATCTGAATTGAGGGGATGCCTACTGCCTCGGA
COPS2-sh1	Transomics	TGCTGTTGACAGTGAGCGCGACCTATATTCGGAGTGCAGTTAGTGAAGCCACAGATGTAACTGCACTCCGAATATAGGTCATGCCTACTGCCTCGGA
COPS2-sh2	Transomics	TGCTGTTGACAGTGAGCGCGCTTATGAAATCGGGAATAAATAGTGAAGCCACAGATGTATTTATTCCCGATTTCATAAGCATGCCTACTGCCTCGGA
UBE3C-sh1	Transomics	TGCTGTTGACAGTGAGCGACAGAAGTTCGAGAAGAATATATAGTGAAGCCACAGATGTATATATTCTTCTCGAACTTCTGGTGCCTACTGCCTCGGA
UBE3C-sh2	Transomics	TGCTGTTGACAGTGAGCGCGCTAGAGAATGTTCTAAAACATAGTGAAGCCACAGATGTATGTTTTAGAACATTCTCTAGCATGCCTACTGCCTCGGA
COP1-sh1	Transomics	TGCTGTTGACAGTGAGCGACTGGAGTTACAAAGAAGATTATAGTGAAGCCACAGATGTATAATCTTCTTTGTAACTCCAGCTGCCTACTGCCTCGGA
COP1-sh2	Transomics	TGCTGTTGACAGTGAGCGACAGCTGACAATGAGAGAAGAATAGTGAAGCCACAGATGTATTCTTCTCTCATTGTCAGCTGCTGCCTACTGCCTCGGA
DET1-sh1	Transomics	TGCTGTTGACAGTGAGCGACTCGAAGAATCCAAAACCAAATAGTGAAGCCACAGATGTATTTGGTTTTGGATTCTTCGAGGTGCCTACTGCCTCGGA

DET1-sh2	Transomics	TGCTGTTGACAGTGAGCGCAGGGCTGTACTTGTACA AAAATAGTGAAGCCACAGATGTATTTTTGTACAAGT ACAGCCCTTTGCCTACTGCCTCGGA
SCR	MSKCC RNAi Core	TGCTGTTGACAGTGAGCGCCCTACTATTTGCTTTGTC TAATAGTGAAGCCACAGATGTATTAGACAAAGCAA ATAGTAGGTTGCCTACTGCCTCGGA

pLKO shRNA Sequences		
ETV1sh1	TRCN0000013925	CGACCCAGTGTATGAACACAA
ETV1sh2	TRCN0000013923	GTGGGAGTAATCTAAACATTT
pLKO-SCR	Addgene	CCTAAGGTTAAGTCGCCCTCG

CRISPR/Cas9 Guide Sequences		
COP1 EXON2	IDT	CACCGGAAGCATACATGACAAAATG
	IDT	AAACCATTTTGTCATGTATGCTTCC
GFP guide RNA	IDT	CACCGAGCTGGACGGCGACGTAAA
	IDT	AAACTTTACGTCGCCGTCCAGCTC
sgDET1-1F	eurofins	CACCGGGTCCGGGCTCAAAGAGCCA
sgDET1-1R	eurofins	AAACTGGCTCTTTGAGCCCGGACCC
sgDET1-2F	eurofins	CACCGGGAGTCCTGGGGCATGGCGG
sgDET1-2R	eurofins	AAACCCGCCATGCCCCAGGACTCCC

mir30 Screen Library Construction Primers		
PCR1 primers		
Mir5-F	IDT	C AGA ATC GTT GCC TGC ACA TCT TGG AAA C
PGKpro-R	IDT	CTGCT AAA GCG CAT GCT CCA GAC TGC
PCR2 primers		
P5_Ext3_N6_mir30 Loop_F	IDT	AAT GAT ACG GCG ACC ACC GAG ATC TAC AC ACAC TCT TTC CCT ACA CGA CGC TCT TCC GAT C NN NNN N TAG TGA AGC CAC AGA TGT A
P7_Index5_Truseq_ N2_PGKpro-R	IDT	CAAGCAGAAGACGGCATACGAGAT CACTGT GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT NN CTGCT AAA GCG CAT GCT CCA GAC TGC
P7_Index6_Truseq_ N2_PGKpro-R	IDT	CAAGCAGAAGACGGCATACGAGAT ATTGGC GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT NN CTGCT AAA GCG CAT GCT CCA GAC TGC
P7_Index7_Truseq_ N2_PGKpro-R	IDT	CAAGCAGAAGACGGCATACGAGAT GATCTG GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT NN CTGCT AAA GCG CAT GCT CCA GAC TGC
P7_Index8_Truseq_ N2_PGKpro-R	IDT	CAAGCAGAAGACGGCATACGAGAT TCAAGT GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT NN CTGCT AAA GCG CAT GCT CCA GAC TGC

P7_Index9_Truseq_N2_PGKpro-R	IDT	CAAGCAGAAGACGGCATACGAGAT CTGATC GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT NN CTGCT AAA GCG CAT GCT CCA GAC TGC
P7_Index10_Truseq_N2_PGKpro-R	IDT	CAAGCAGAAGACGGCATACGAGAT AAGCTA GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT NN CTGCT AAA GCG CAT GCT CCA GAC TGC
P7_Index11_Truseq_N2_PGKpro-R	IDT	CAAGCAGAAGACGGCATACGAGAT GTAGCC GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT NN CTGCT AAA GCG CAT GCT CCA GAC TGC
P7_Index12_Truseq_N2_PGKpro-R	IDT	CAAGCAGAAGACGGCATACGAGAT TACAAG GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCT NN CTGCT AAA GCG CAT GCT CCA GAC TGC