

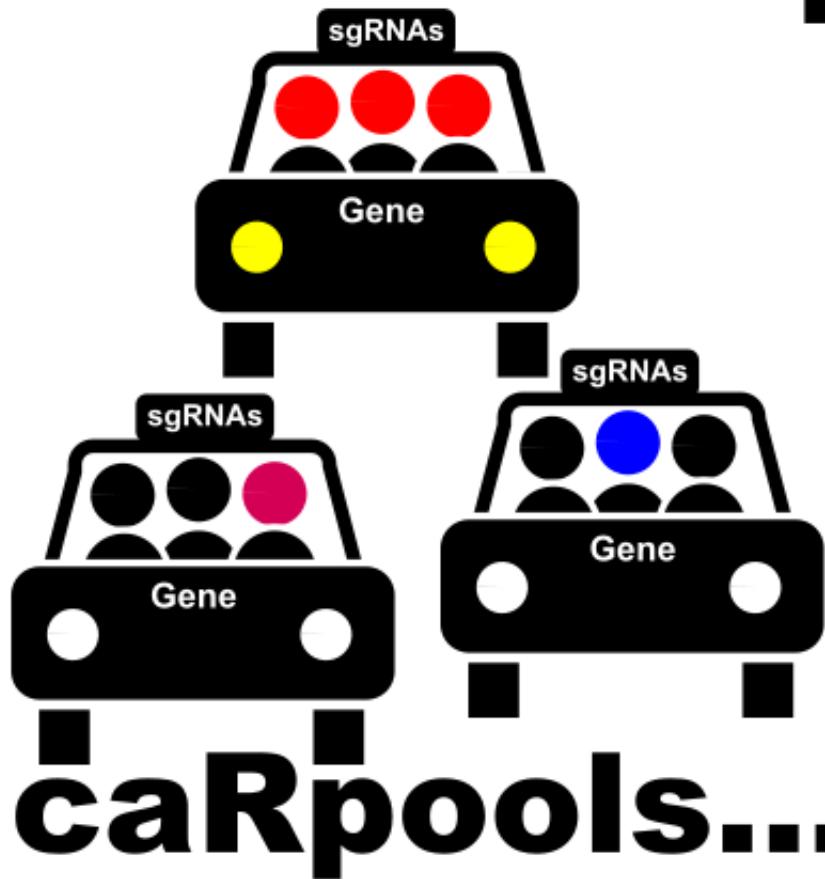
CaRpools Report - CRISPR Screen Analysis

Contents

Screen	4
Plasmid Overview	6
Plasmid Overview	7
Plasmid Overview	8
Experimental Setup	9
Load Data	10
FASTQ Data Quality	11
Stats	12
Basic Statistics	12
Missing sgRNAs in Datasets	14
Heatmap: missing sgRNAs	16
Clustered Heatmap	17
Quality Control	21
Read Distribution	21
Read Depth	25
Designs per Gene	27
Controls	28
Non-Targeting	28
Positive Controls	29
Hit Analysis	30
Wilcox	31
P-Value Distribution	31
Enriched	31
Depleted	33
DESeq2	34
P-Value Distribution	34
Enriched	34

Depleted	37
MAGeCK	38
P-Value Distribution	38
Enriched	38
Depleted	40
sgRSEA	41
P-Value Distribution	41
Enriched	42
Depleted	44
EdgeR	45
P-Value Distribution	45
Enriched	45
Depleted	47
Hit Candidate Overview	50
Overview	50
Overlaps in Enrichment Analysis	54
Overlaps in Depletion Analysis	55
Enriched Overlapping Hit Candidates	56
Depleted Overlapping Hit Candidates	58
Hit Candidates	61
Enriched	62
BAX	62
CASP8	66
Depleted	70
CSF1R	71
Compare Analysis	75
Enriched	75
Depleted	91
Final Gene Table	107
Annotate Hit Candidates	108
Data Extraction, Mapping and Files	108

CRISPR-AnalyzeR for Pooled Screens



Transparent. Reproducible.

caRpools...

Exploratory data analysis of CRISPR/CAS screens

Screen

Screen	Information
Screen ID	PILOT001
Screening Date	2013-11-11 to 2013-11-23
Organism	Homo sapiens
Cell Line	HCT116, HCT116 cells were stably transfected with CAS9-GFP (vector: LOTTA). This was done via lentiviral transduction (MOI not determined). Cells were then selected with puromycin. Cells were FACS sorted 2X for homogenous and high GFP, i.e. CAS9 expression.
Drug	KillerTRAIL 50 ng / mL
Control	DMSO 0,001%
Number of Target Designs per Gene	ca. 800 varies: 10-20

Screen	Information
Library	12K lib, see annotation file (fasta); sgRNA design was based on very simple design rules (G_N19; before NGG PAM) since parameters that can predict efficacy were not known when the oligo library was designed and ordered.
Library Reference File NGS	pilot-screen-library.fasta MiSeq, 100 bp single end, Miseq V2 Kit

MIACCS

The MIACCS-file can be found at

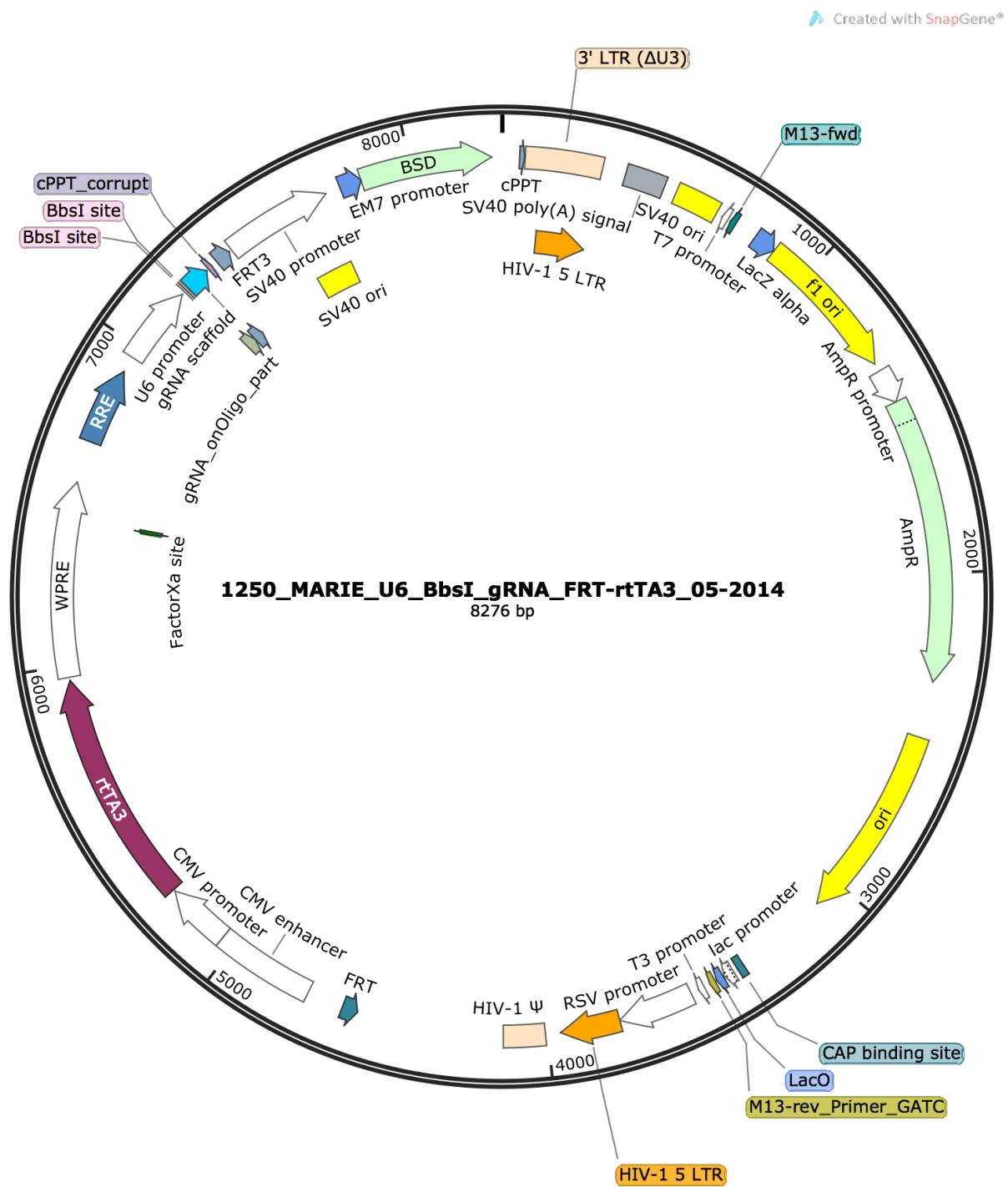
./data/

MIACCS.xls

Description

Apoptosis related genes/Kinome Library in HCT116 Cas9-GFP cells. TRAIL resistance screen.

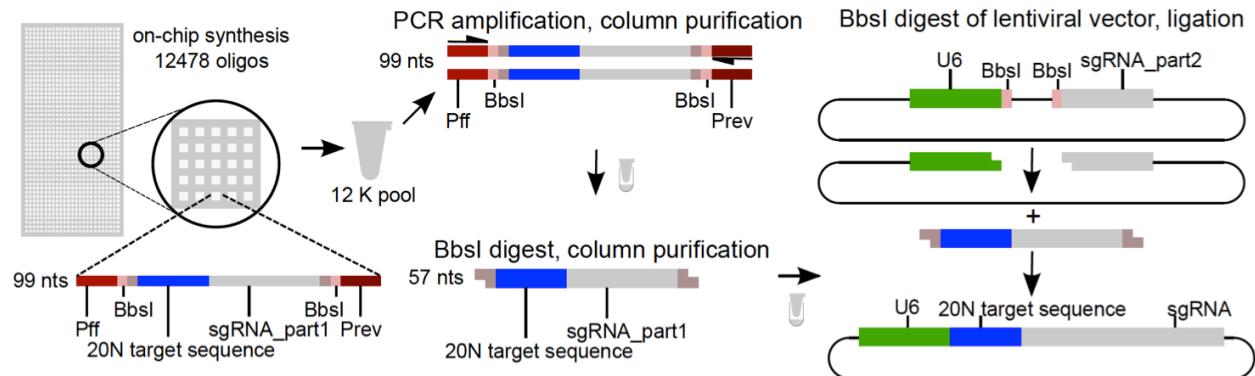
Plasmid Overview



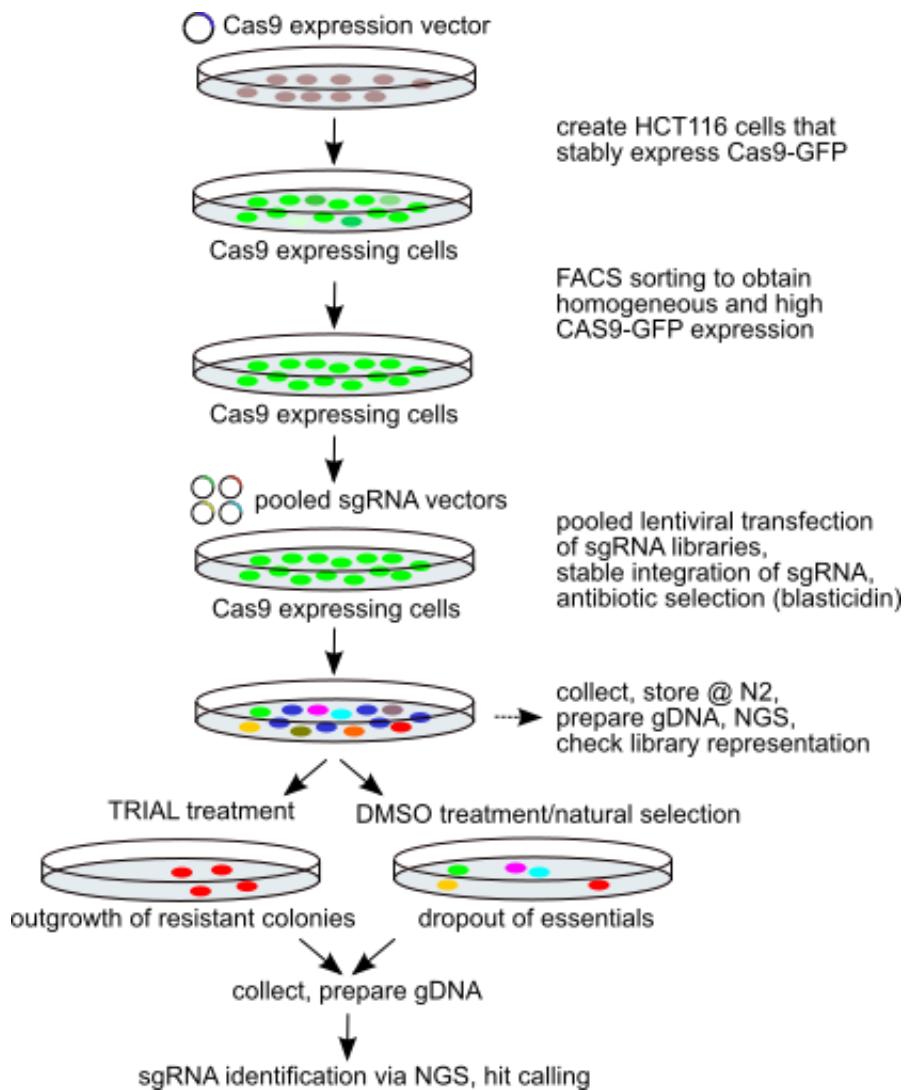
Plasmid Overview



Plasmid Overview



Experimental Setup



Load Data

FASTQ Data Quality

No fastq files were provided.

Stats

All file-based output (e.g. tables) is stored in:
`./data.`

Basic Statistics

General stats can be found in
TRAILscreen-STATS.xlsx.

The following read count statistics were calculated for the single datasets.

	Mean	Median	Min	Max	SD	# sgRNA not present
TRAIL1	109	41	0	6819	244	1563
TRAIL2	109	39	0	8257	260	1573
DMSO1	79	51	0	1141	90	934
DMSO2	108	74	0	1304	115	817

	Mean	Median	Min	Max	SD	# Genes not present
TRAIL1	1676	1387	7	56494	2265	0
TRAIL2	1669	1342	0	65006	2548	1
DMSO1	1219	1140	2	37864	1363	0
DMSO2	1665	1565	8	50186	1795	0

In depth dataset read count stats can be found in

`./data/`

TRAILscreen-STATS.xlsx

In brief, the basic statistics for each dataset are shown on the next pages.

Some basic statistics of the genes specified as non-targeting controls:

[1] “TRAIL1”

Name	MEAN	MEDIAN	SD	MIN	MAX
random	136	45	390	0	5811

[1] “TRAIL2”

Name	MEAN	MEDIAN	SD	MIN	MAX
random	157	43	519	0	6962

[1] “DMSO1”

Name	MEAN	MEDIAN	SD	MIN	MAX
random	91	62	102	0	655

[1] "DMSO2"

Name	MEAN	MEDIAN	SD	MIN	MAX
random	121	84	129	0	1016

Some basic statistics of the genes specified as targeting controls:

[1] "TRAIL1"

Name	MEAN	MEDIAN	SD	MIN	MAX
BAX	859	405	1023	119	2952
CASP8	1572	450	2106	0	6164
FADD	1319	840	1939	2	6819

[1] "TRAIL2"

Name	MEAN	MEDIAN	SD	MIN	MAX
BAX	770	401	799	137	2466
CASP8	1647	438	2258	0	6977
FADD	1398	746	2263	0	8257

[1] "DMSO1"

Name	MEAN	MEDIAN	SD	MIN	MAX
BAX	143	107	96	20	299
CASP8	153	96	155	0	513
FADD	154	114	131	5	477

[1] "DMSO2"

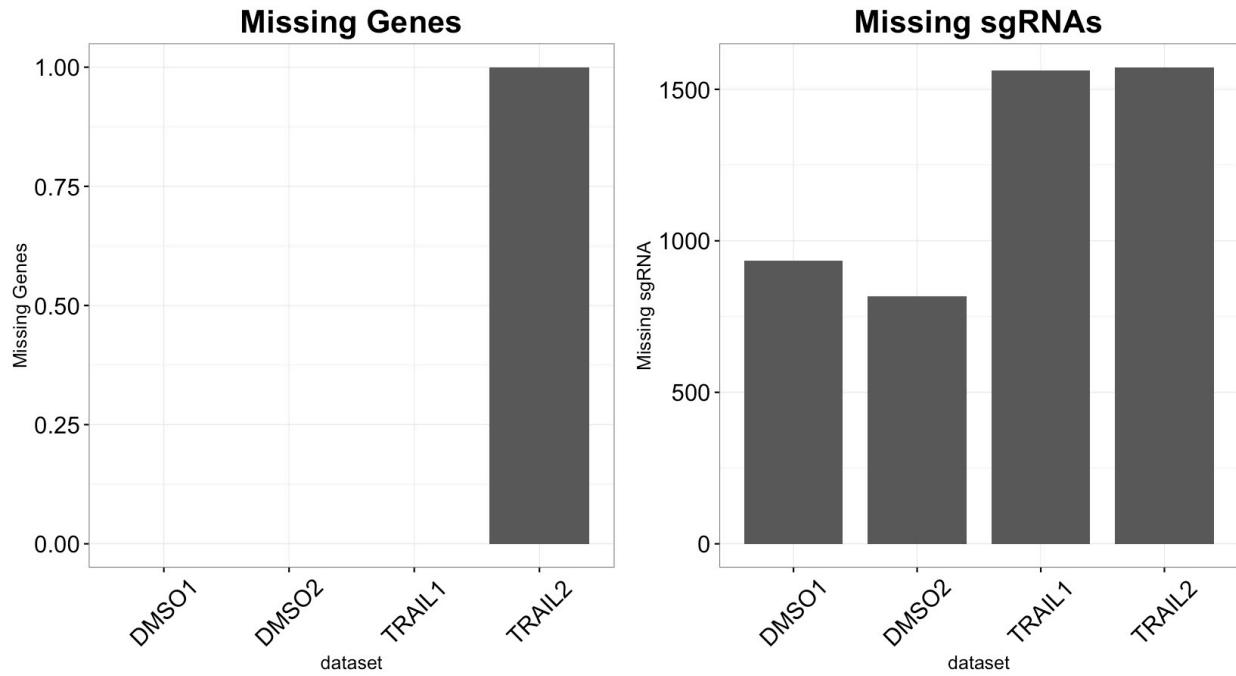
Name	MEAN	MEDIAN	SD	MIN	MAX
BAX	200	161	117	51	443
CASP8	227	130	237	0	769
FADD	186	156	146	5	563

Missing sgRNAs in Datasets

Information of how many sgRNA per gene were not present in the mapped datasets is stored in:

`./data/`

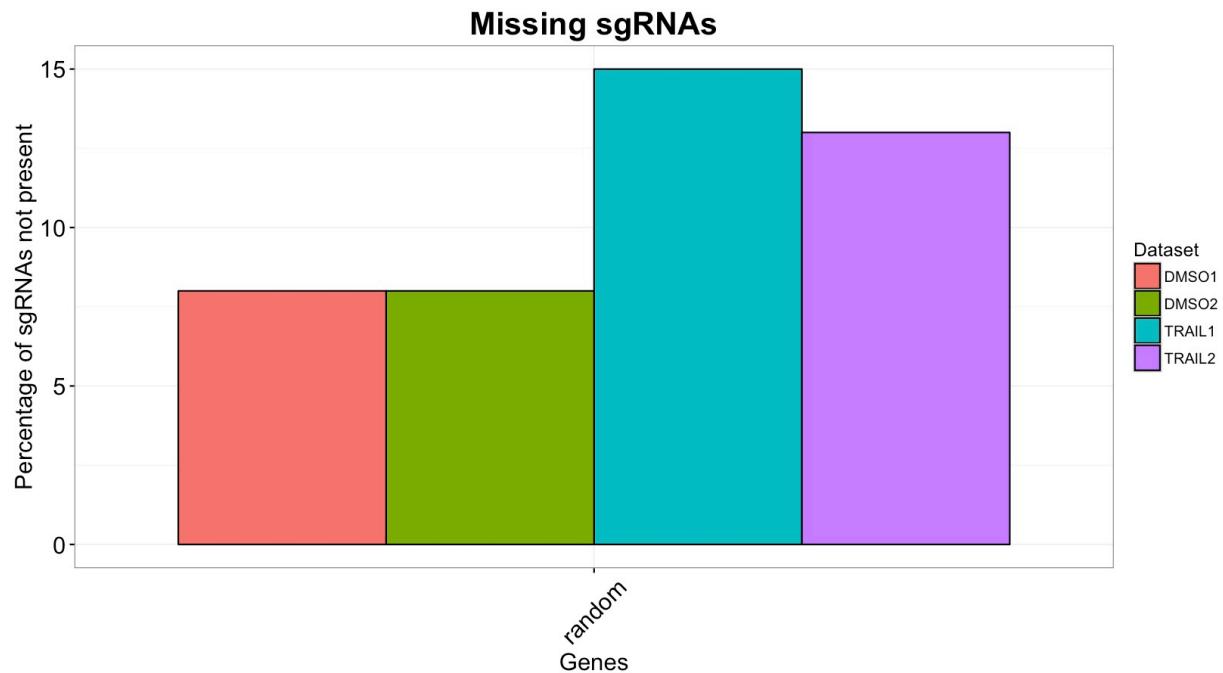
`TRAILscreen_DROPOUT.xlsx`



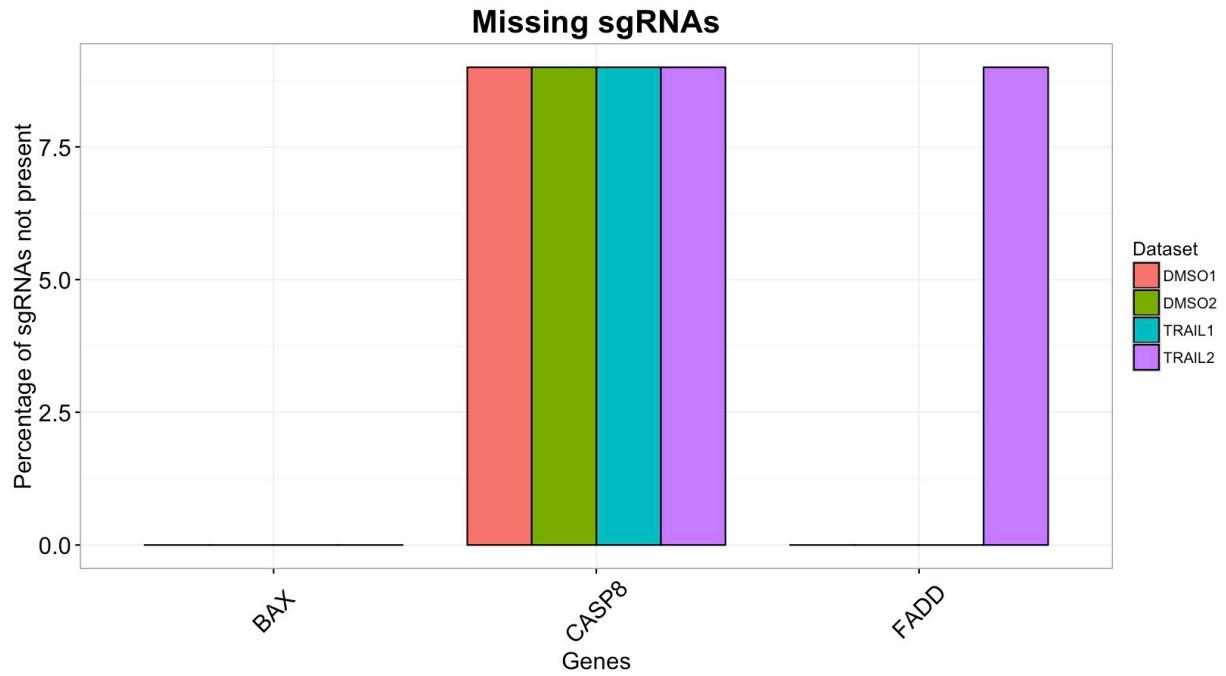
In brief, the following number of genes or sgRNAs had a *read count of 0* in the datasets, and are thus considered missing:

	dataset	gene	sgRNA
TRAIL1	TRAIL1	0	1563
TRAIL2	TRAIL2	1	1573
DMSO1	DMSO1	0	934
DMSO2	DMSO2	0	817

ewpage nAmong the genes specified as non-targeting controls, the percentage of sgRNAs missing in each dataset is shown below:



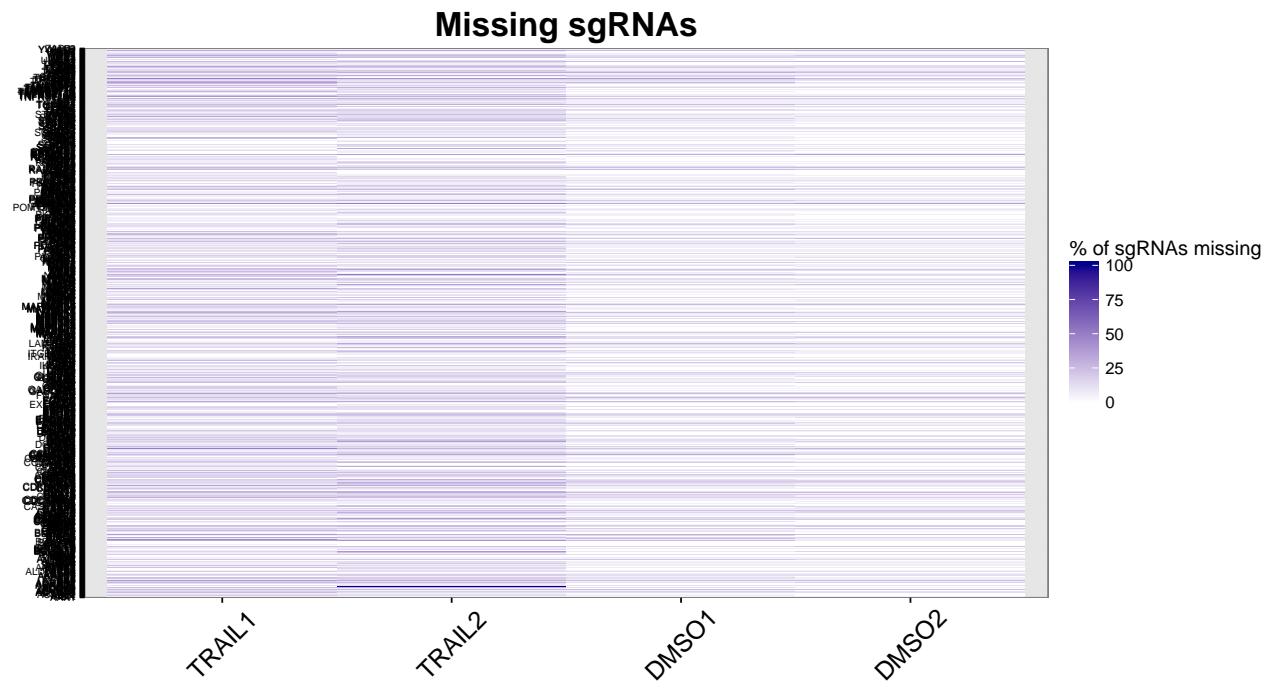
Among the genes specified as targeting controls, the percentage of sgRNAs missing in each dataset is shown



below:

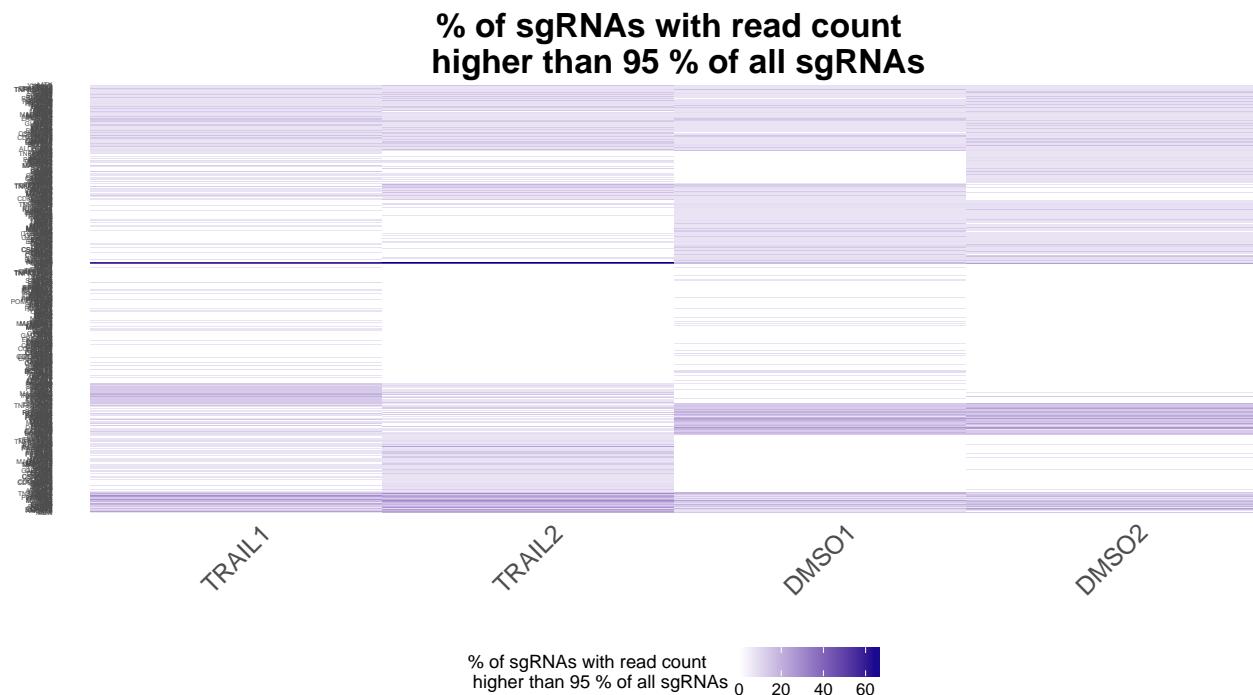
Heatmap: missing sgRNAs

The following heatmap visualizes the absence of sgRNAs per gene.

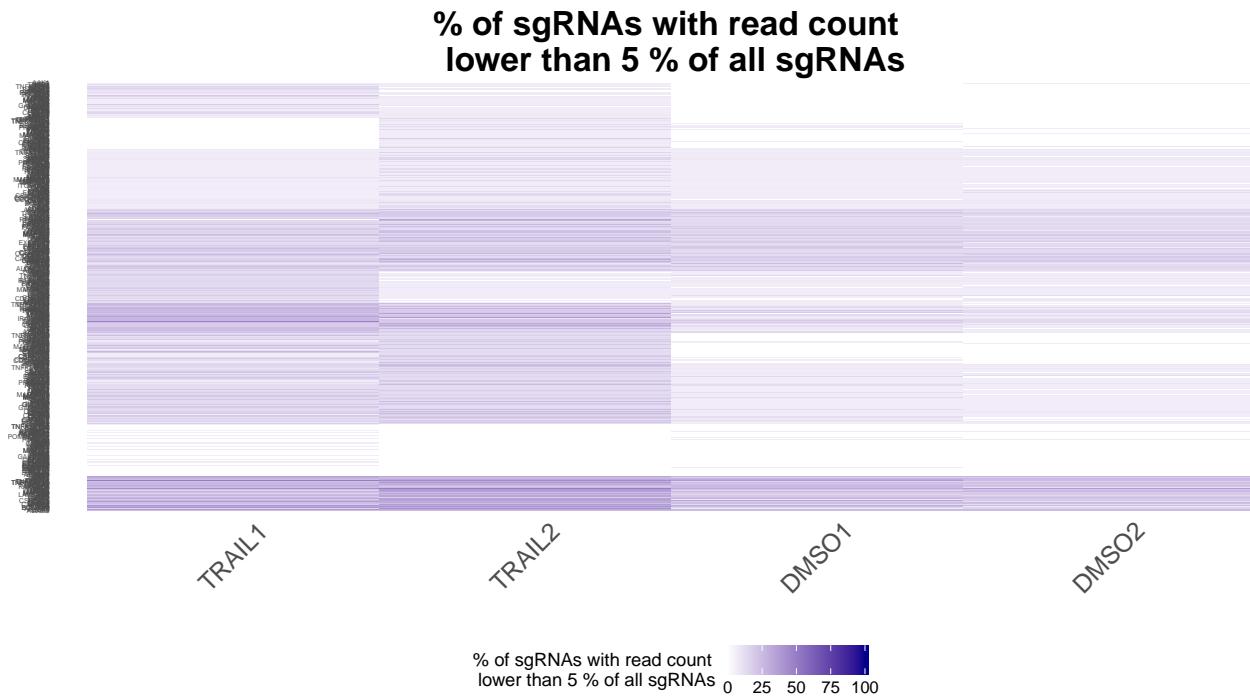


Clustered Heatmap

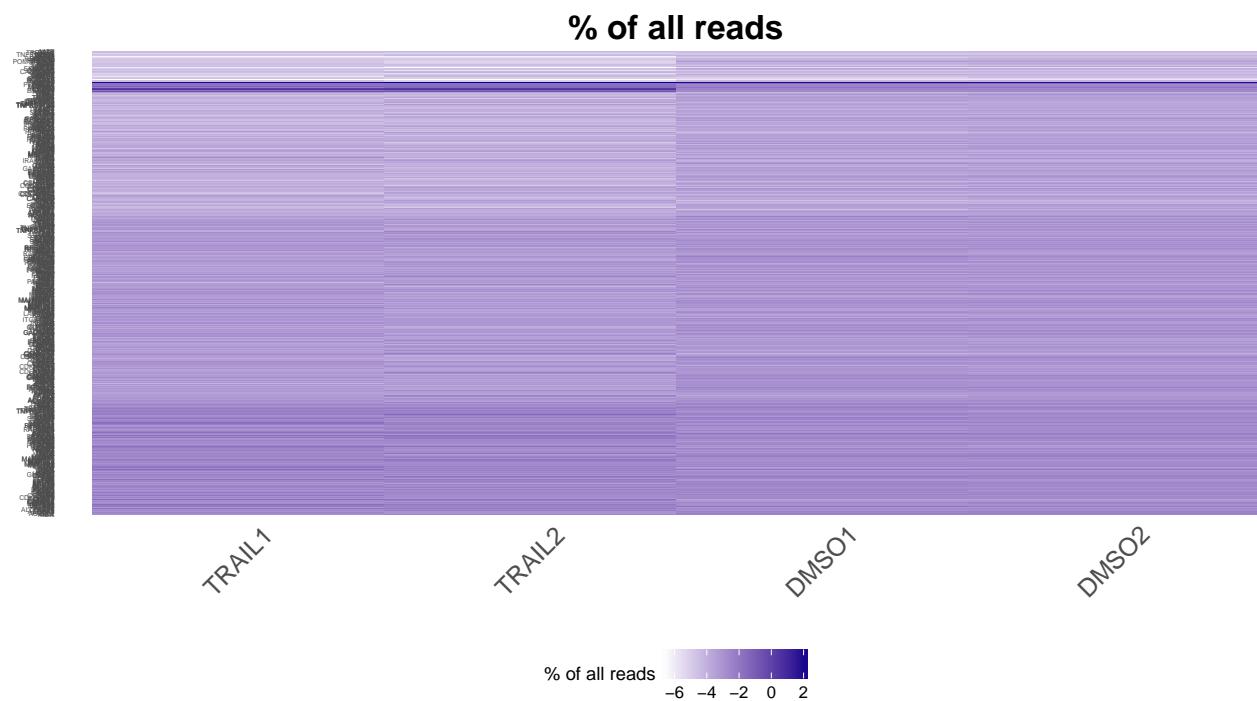
This clustered heatmap shows the percentage of sgRNAs per gene, that revealed a read count within the highest 5 % of all sgRNAs.



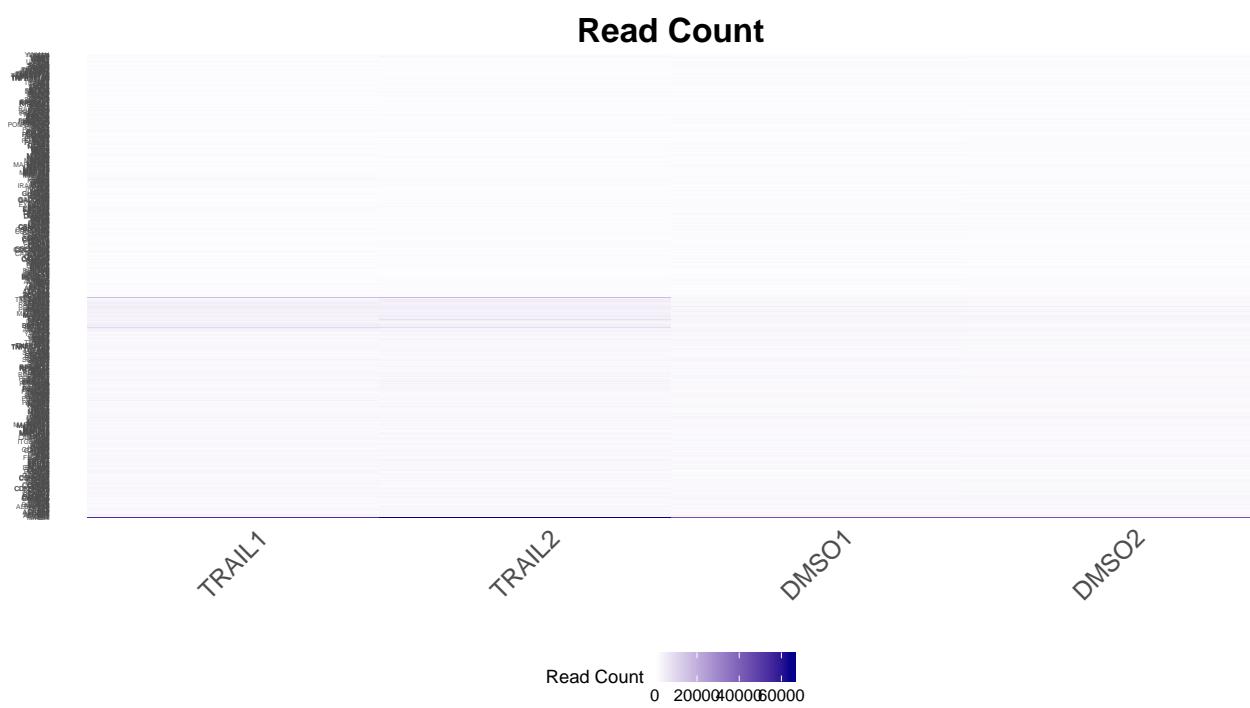
This clustered heatmap shows the percentage of sgRNAs per gene, that revealed a read count within the lowest 5 % of all sgRNAs.



This clustered heatmap shows the percentage of read counts per gene, compared to all reads.



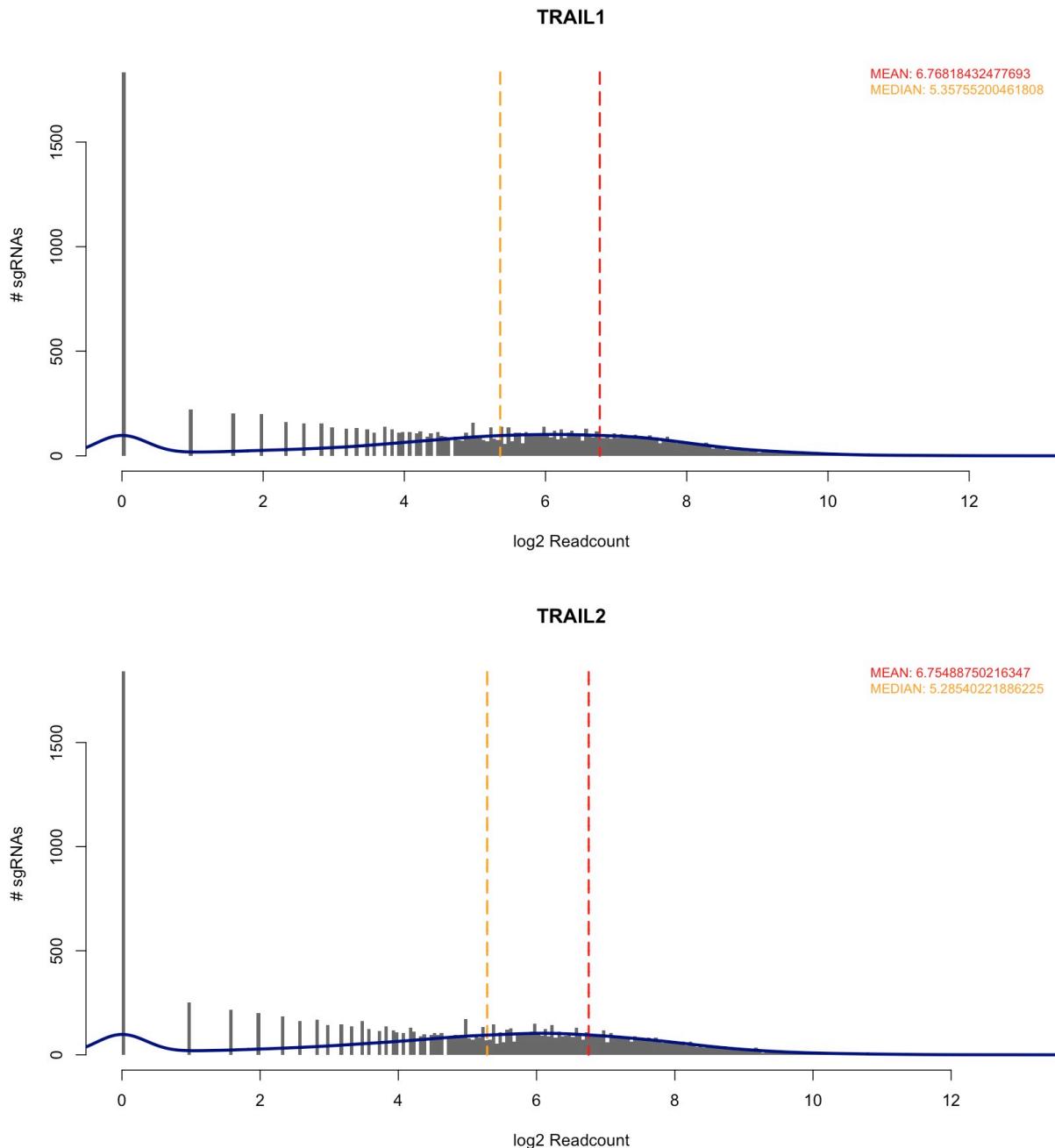
This clustered heatmap shows the normalized read counts per gene.



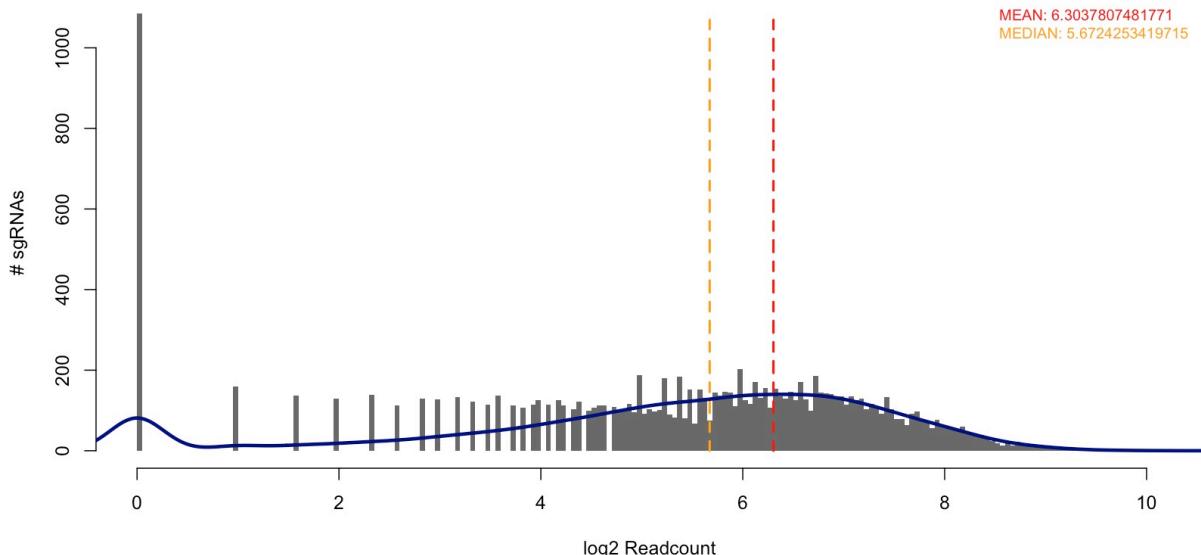
Quality Control

Read Distribution

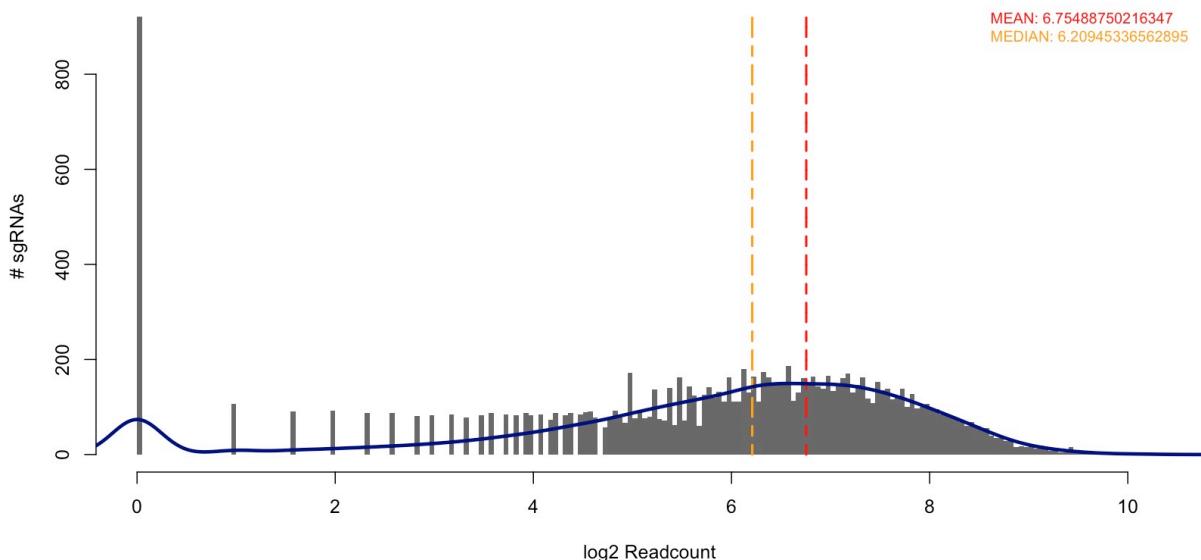
These plots show how the read count of the sgRNAs for each dataset is distributed. Depending on the treatment stringency, e.g. in resistance or dropout screens, the data can show asymmetry. However, the major population should be more or less normally distributed.



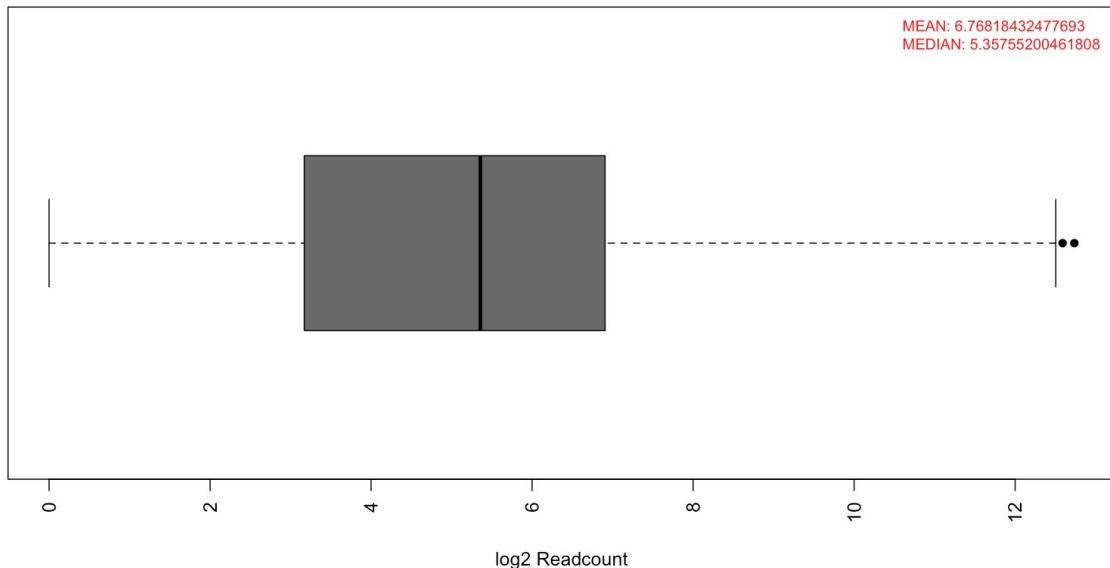
DMSO1



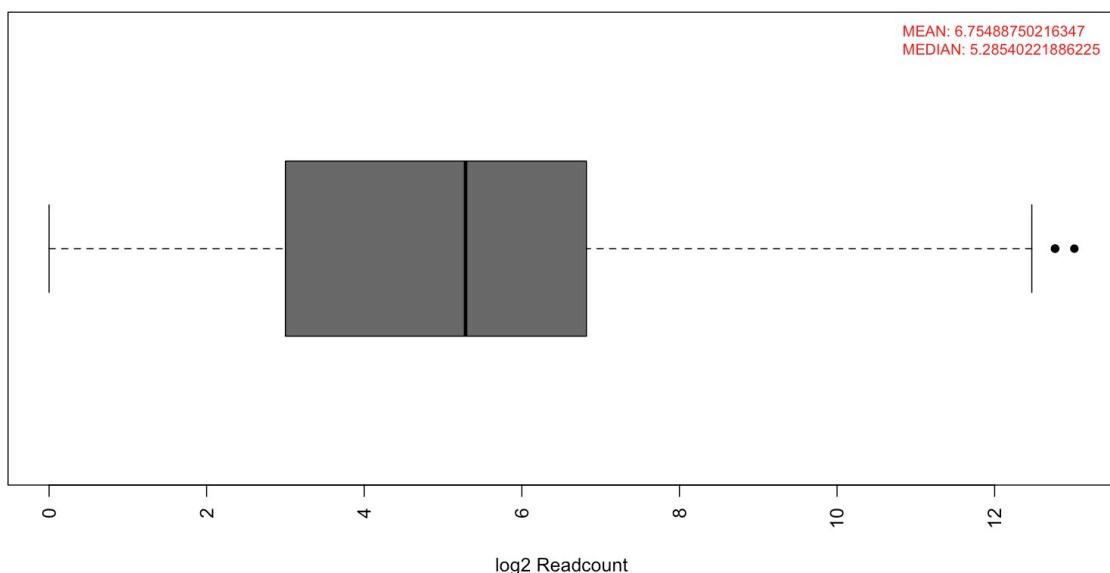
DMSO2



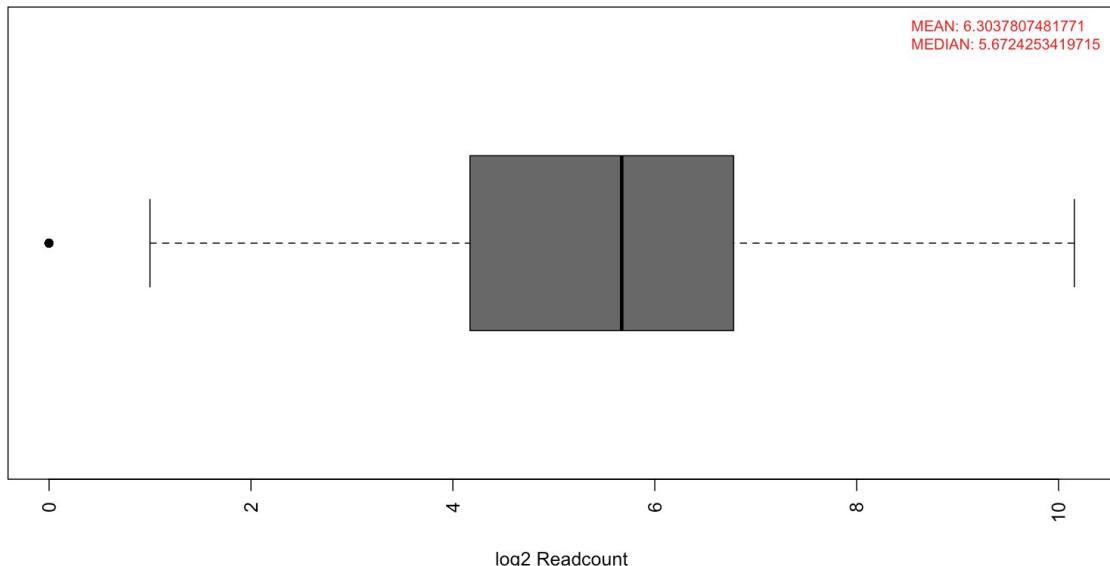
TRAIL1



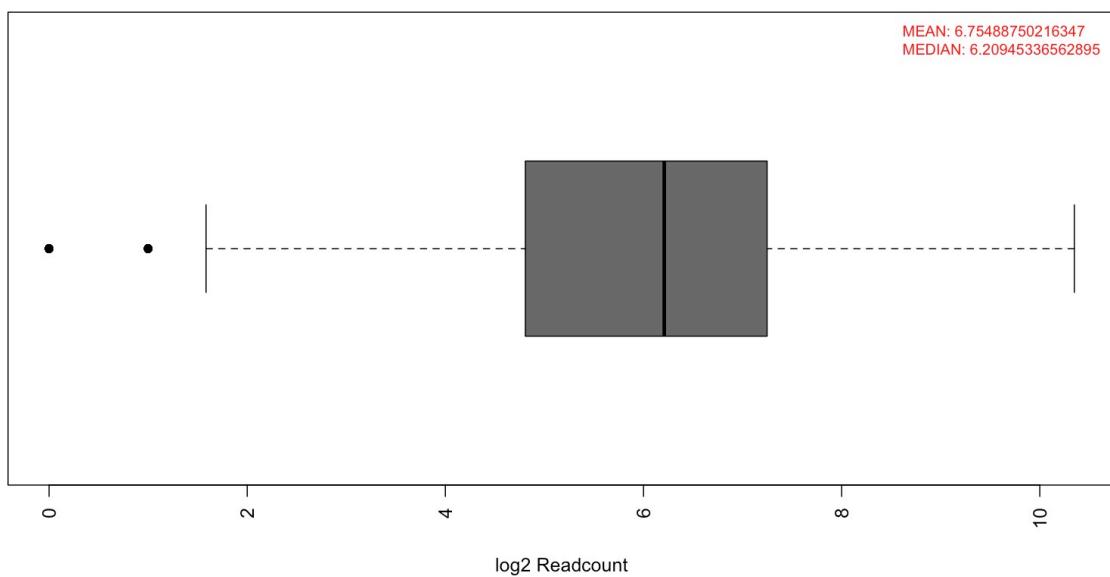
TRAIL2



DMSO1



DMSO2

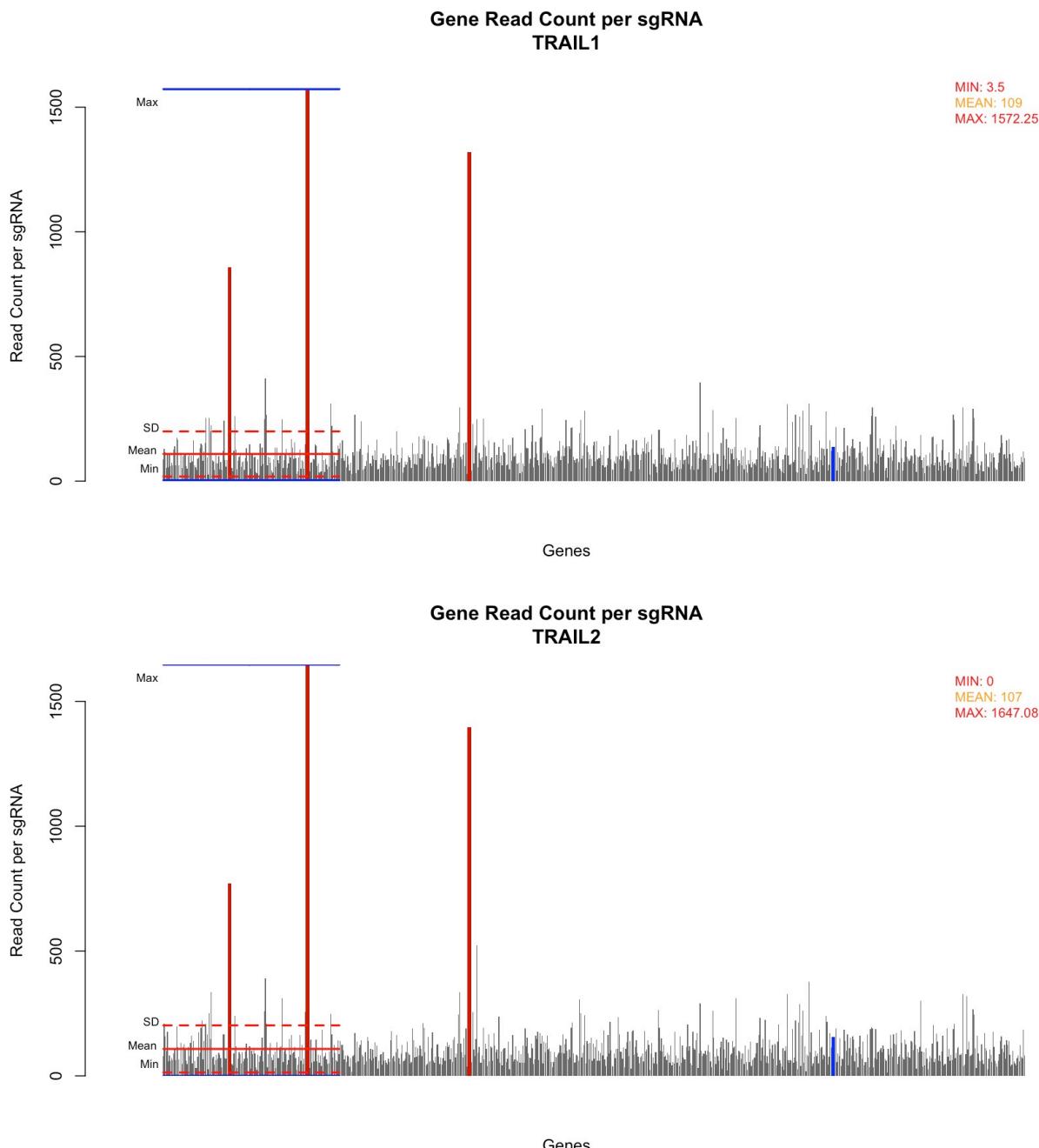


Read Depth

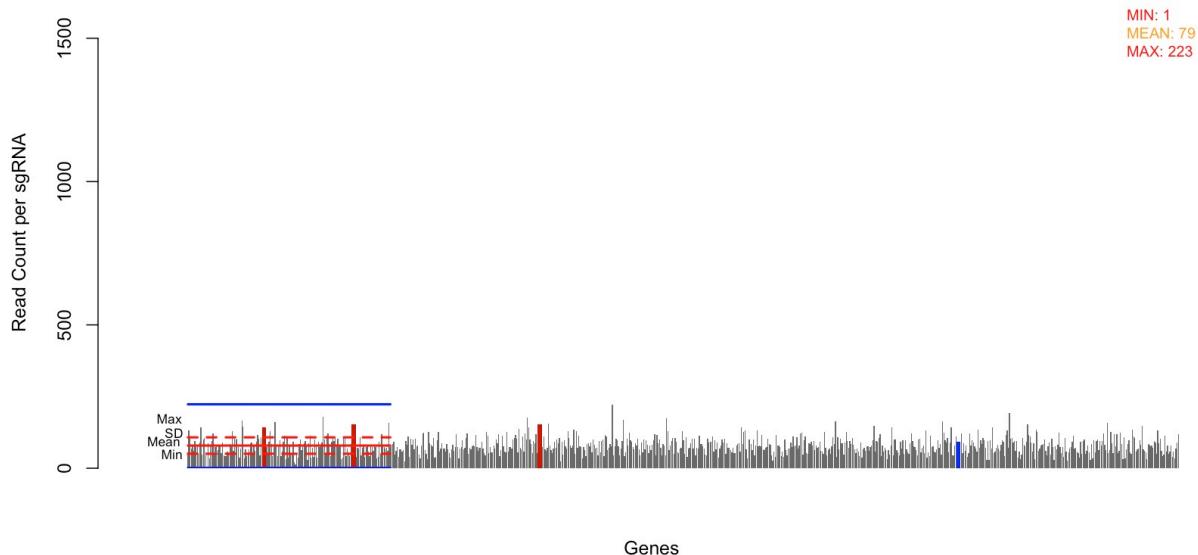
The following plot shows the read count for each gene normalized to the number of sgRNAs. Spikes indicate a higher read count per sgRNA for this particular gene.

One would expect no outstanding spikes within the untreated data samples, however spikes within the treated datasets indicate a read count enrichment for this particular gene.

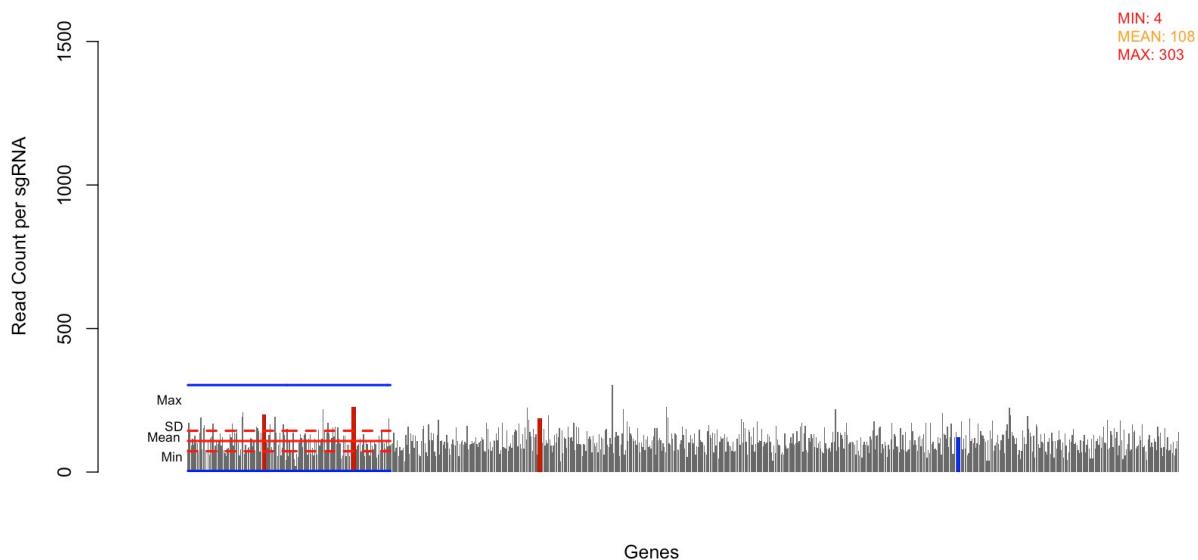
If a non-targeting control has been set in the MIACCS file, this control is highlighted in orange color.



Gene Read Count per sgRNA
DMSO1



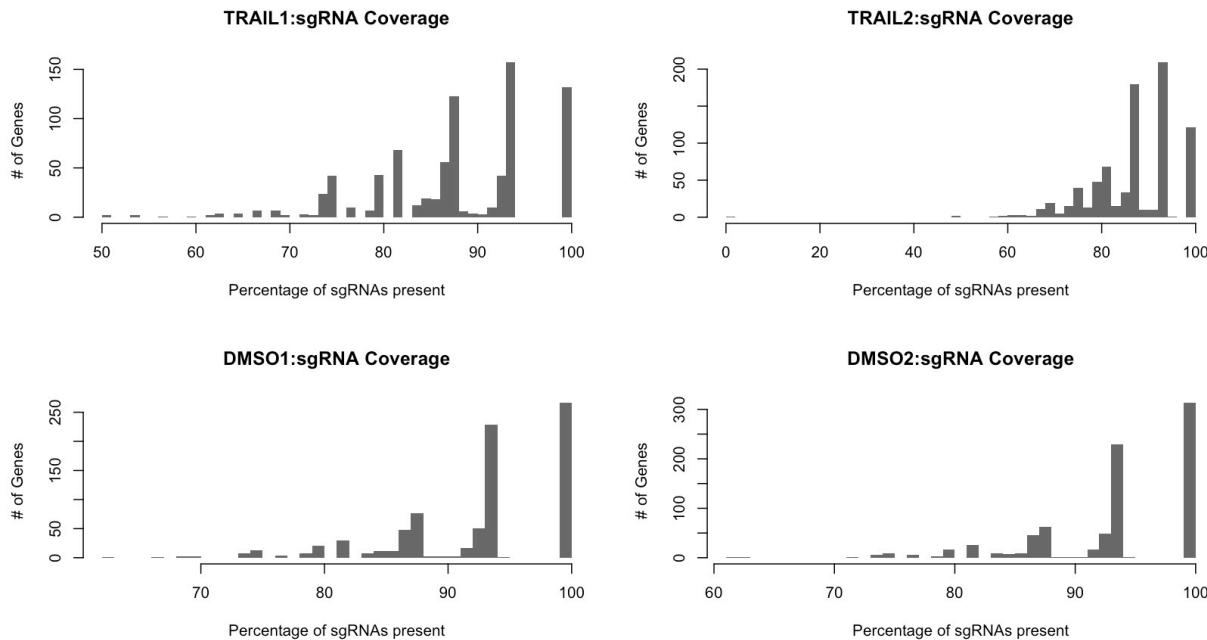
Gene Read Count per sgRNA
DMSO2



Designs per Gene

These plots provide an overview of the representation of sgRNAs per gene within your data.

Depending on the number of sgRNAs per gene in the library, one would expect a representation of more than 80 % of sgRNAs per gene in the untreated samples. Moreover, genes with a low percentage of present sgRNAs will also show a reduced readcount.



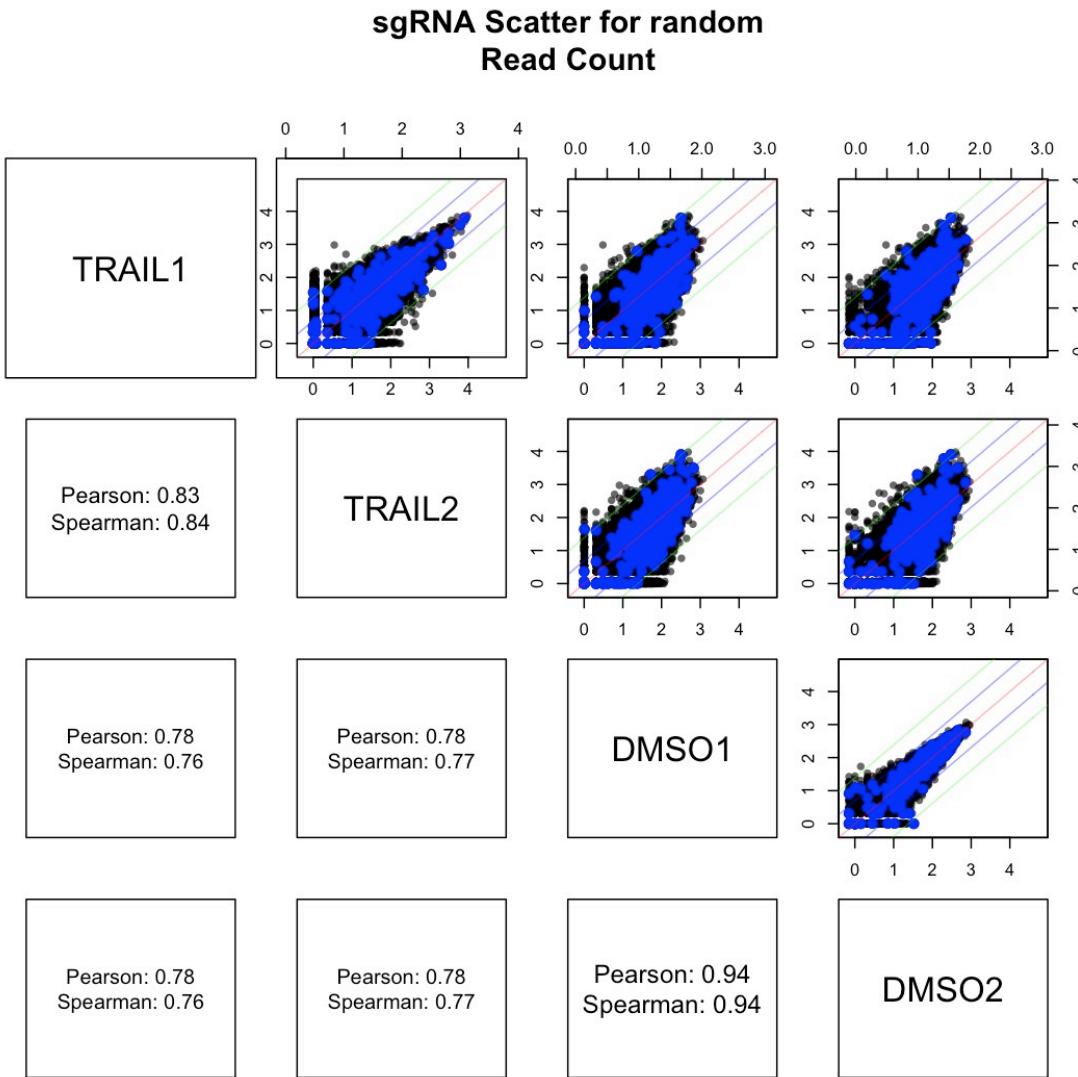
Controls

Non-Targeting

Non-targeting controls are sgRNAs that do either not target the genome at all (so called random or scramble sgRNAs) or target a gene that does not show a phenotype in the screen.

Therefore, the scatter for these, which are highlighted in **blue**, will be distributed within the main cloud of scatter points.

Non-targeting control: random

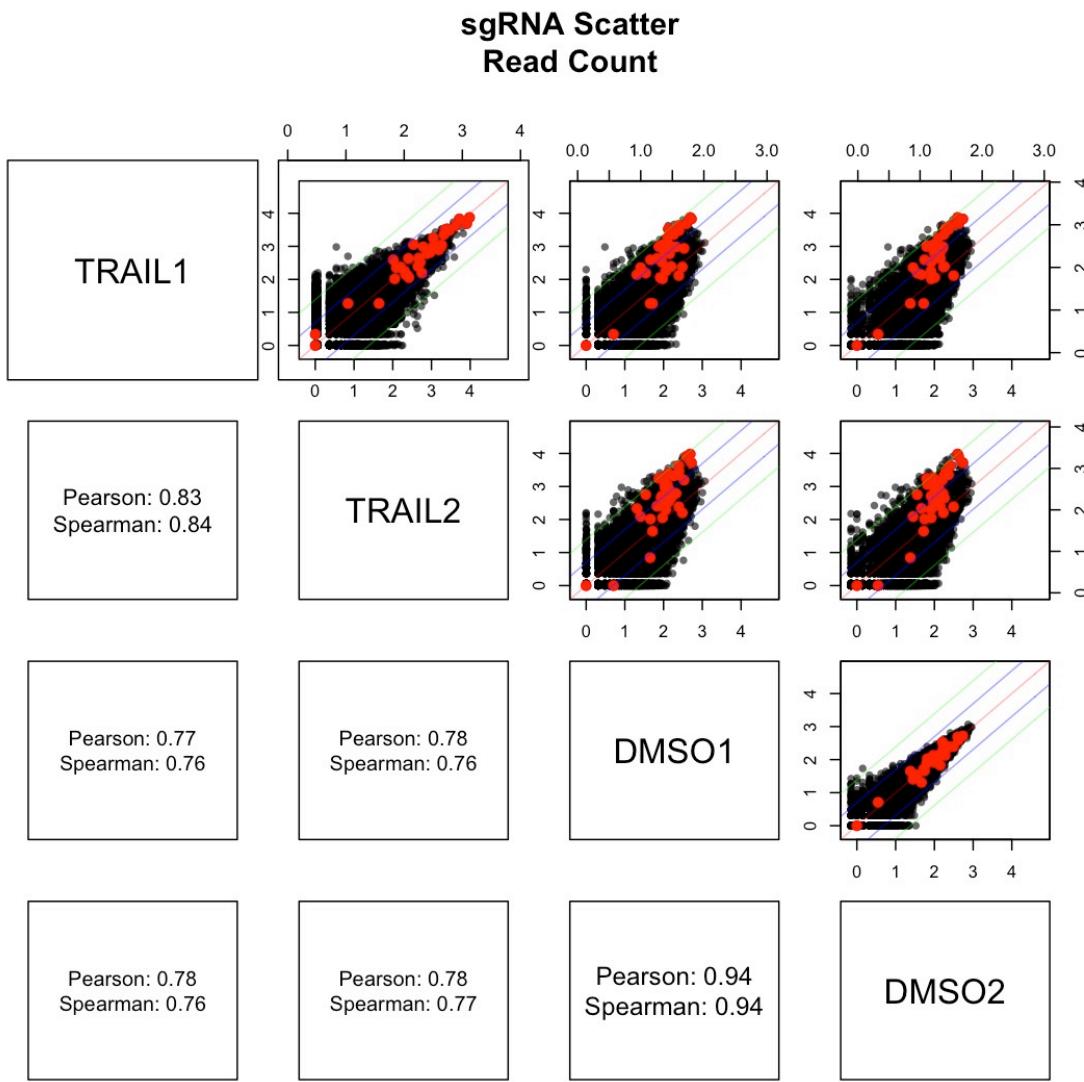


Positive Controls

SgRNAs targeting genes that will show a phenotype in the screening setup can be used as positive controls. These will show either an enrichment (in resistance screens) or a depletion (in dropout screens) in the treatment.

Within the scatter

Positive Control: CASP8 FADD BAX



Hit Analysis

Hit analysis is performed using three different methods:

- Wilcox
- DESeq2
- MAGeCK
- sgRSEA
- EdgeR
- BAGEL (for essential genes only)

For each analysis method, separate plots will be created and analysis files will be written to **TRAILscreen_HIT-CALLING.xlsx**. See below for further information.

The following adjusted p-values are used to determine significance levels:

Method	p-value
Wilcox	0.05
DESeq2	0.001
MAGeCK	0.05
sgRSEA	0.05
EdgeR	0.05

Wilcox

Within this approach, the read counts of all sgRNAs in one dataset are first normalized by the function set in the MIACCS file. By default, normalization is done by read count division with the dataset median. Then, the fold change of each population of sgRNAs for a gene is tested against the population of either the non-targeting controls or randomly picked sgRNAs, as defined by the random picks option within the MIACCS file, using a two-sided Mann-Whitney test with FDR correction.

DESeq2

For the DESeq2 analysis implementation, the read counts of all sgRNAs for a given gene are first summed up to increase the available read count.

Then, DESeq2 analysis is performed, which includes the estimation of size-factors, the variance stabilization using a parametric fit and a Wald-Test for difference in log2 fold changes between the untreated and treated data.

More information about this can be found in *Love et al.*

Moderated estimation of fold change and dispersion for RNA-seq data with DESeq2
Genome Biology 2014

MAGeCK

MAGeCK analysis uses a rank-based model to test for a change in abundance of sgRNAs after median normalization of the dataset.

Further information can be found at the MAGeCK Homepage.

sgRSEA

EdgeR

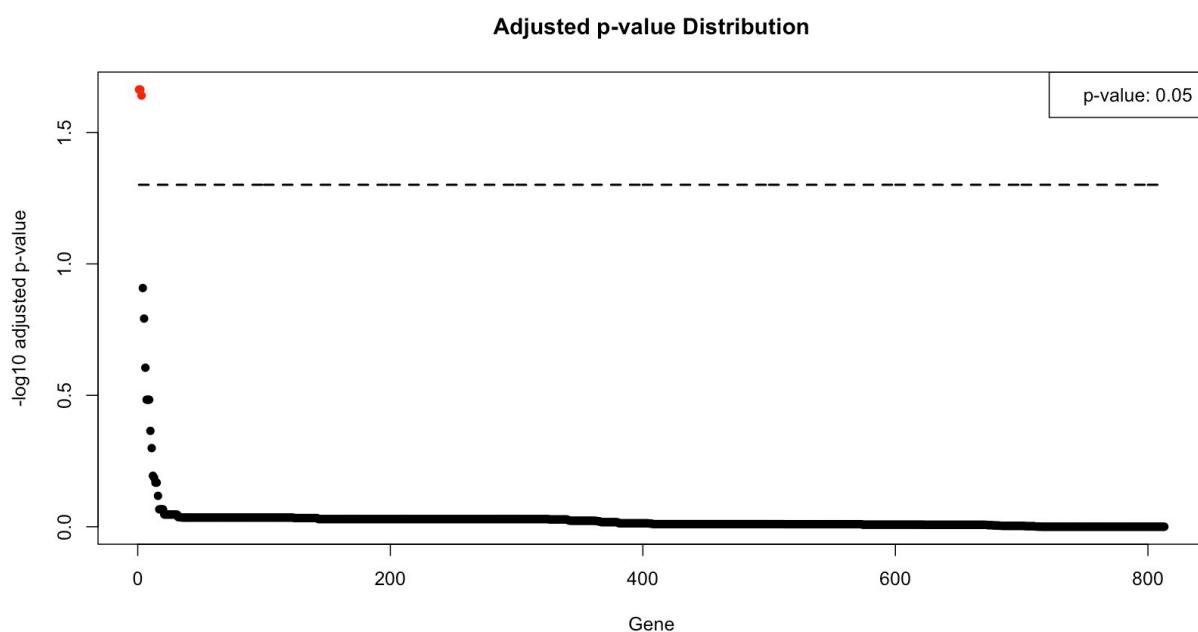
Wilcox

All analysis data can be found in the **TRAILscreen_HIT-CALLING.xlsx** file.

Since no non-targeting controls were set, 300 sgRNAs are picked from the dataset as reference population.

P-Value Distribution

For all genes present in the data, the -log10 corrected p-values are plotted to estimate how well the analysis method performed for this screen. A straight line of points with only small differences in the p-value indicates that the analysis method did not perform well. Genes that resulted in a p-value below the threshold set in the MIACCS file are highlighted in red color.



Enriched

The following genes showed enrichment in the treatment datasets with a **p-value smaller than 0.05**:

	untreated	treated	foldchange	p.value	p.value.unadjusted
BAX	143.12704	917.1813	6.798478	0.0217124	5.34e-05
CASP8	158.18219	1816.8700	8.167501	0.0217124	3.08e-05
PASK	85.00883	308.0369	3.437281	0.0228810	8.44e-05

According to the value set, the **top 5 % enriched genes** were:

	untreated	treated	foldchange	p.value	p.value.unadjusted
BAX	143.12704	917.18127	6.798478	0.0217124	0.0000534
CASP8	158.18219	1816.87003	8.167501	0.0217124	0.0000308
PASK	85.00883	308.03689	3.437281	0.0228810	0.0000844

	untreated	treated	foldchange	p.value	p.value.unadjusted
FADD	144.04003	1533.39464	7.987745	0.1235338	0.0006078
FN3K	72.55984	249.80955	4.056201	0.1614330	0.0009928
CDK5RAP3	73.60196	165.75113	2.467402	0.2482927	0.0018324
IP6K3	68.36468	193.54365	4.451214	0.3285571	0.0036372
TNFRSF11A	86.61134	254.38984	1.324014	0.3285571	0.0029655
SPA17	84.23373	186.44157	2.232137	0.6796230	0.0120621
DUSP10	54.88222	146.18710	2.305110	0.8585728	0.0205943
MAPK9	52.91706	113.16544	2.974498	0.8585728	0.0205676
BLK	73.60400	162.60685	1.944936	0.8987868	0.0342711
BMP2K	89.88385	286.98617	2.487181	0.8987868	0.0328072
EPHA7	62.74801	124.84162	1.593492	0.8987868	0.0318077
PDK3	65.06222	163.50521	2.791831	0.8987868	0.0271472
RPS6KA5	28.17447	179.71908	7.554352	0.8987868	0.0260204
STK32A	44.70298	90.94471	2.929534	0.8987868	0.0249928
GFRA2	129.16339	212.72348	1.034755	0.9189454	0.0378019
PIK3R1	36.91274	69.18599	1.956780	0.9189454	0.0381667
ADCK1	104.91736	210.49270	1.839442	0.9229450	0.1180712
ALPK2	74.05627	148.47060	2.275418	0.9229450	0.1134792
AMHR2	62.76665	283.33678	3.745034	0.9229450	0.0603062
BCL2L11	77.38375	84.52425	1.435660	0.9229450	0.1241911
BID	51.12874	112.05738	2.151734	0.9229450	0.0513902
BIRC3	13.71389	30.42060	4.863794	0.9229450	0.0693909
BMPR1B	82.04477	265.79562	2.181178	0.9229450	0.0612258
BNIP2	41.38942	117.54803	2.442863	0.9229450	0.1177739
CAMK4	110.30867	143.19683	2.329030	0.9229450	0.0865207
CARD14	78.40980	153.58036	2.531228	0.9229450	0.1055628
CDC42SE2	55.55011	67.59532	1.365523	0.9229450	0.1310015
CDK1	77.07135	170.98868	2.227912	0.9229450	0.1194826
CDK15	41.63251	61.60726	1.388267	0.9229450	0.0784766
CSNK1A1L	82.92674	81.98209	1.507643	0.9229450	0.0909549
CYCS	68.21345	74.70723	1.718748	0.9229450	0.1035559
DFFA	73.85877	65.97235	1.039886	0.9229450	0.1100632
DNAJC3	48.87403	105.96490	2.015995	0.9229450	0.0582681
EIF2AK4	65.46918	71.44697	1.014074	0.9229450	0.1116489
EPHA1	102.73369	174.58507	6.317790	0.9229450	0.0466029
EPHB4	90.75006	158.13947	1.819650	0.9229450	0.1318516
FASTK	74.45336	54.22382	1.069041	0.9229450	0.0967995
FER	109.13682	274.22055	2.186679	0.9229450	0.1239078

Depleted

The following genes showed depletion in the treatment datasets with a **p-value smaller than 0.05**:

No genes showed significant depletion with a p-value lower than 0.05

According to the value set, the **top 5 % depleted genes** were:

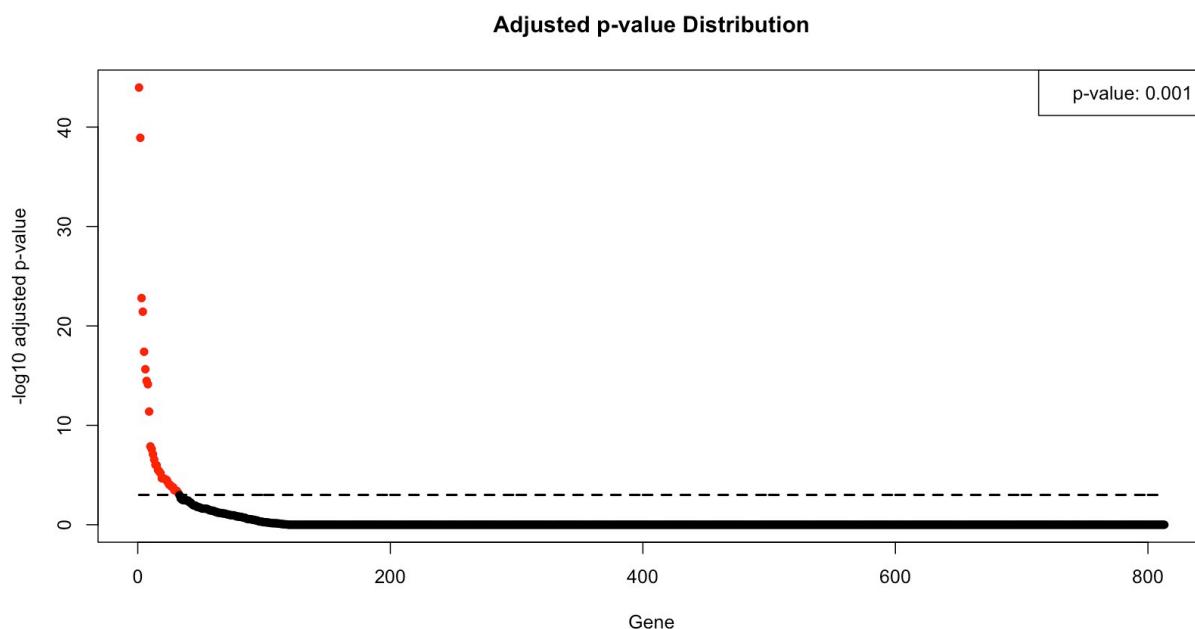
	untreated	treated	foldchange	p.value	p.value.unadjusted
MVD	74.79534	47.08786	0.6634916	0.3285571	0.0034906
SMG1	32.59640	15.16820	0.6035869	0.4317636	0.0053107
PIK3R4	64.43494	78.83071	0.8866423	0.5021597	0.0067943
ALPK3	39.56260	29.88064	0.6518333	0.6399275	0.0094454
CSF1R	128.47399	101.25142	0.6832260	0.6522926	0.0104303
CDC42BPG	75.88871	48.45397	0.6927946	0.6796230	0.0125392
SCYL3	57.95425	43.79768	0.9069555	0.7629067	0.0150142
AK1	70.51772	54.68879	0.7730872	0.8585728	0.0211211
AZU1	102.32073	88.33525	0.7833503	0.8585728	0.0206667
NTRK1	75.07423	57.41756	0.7985236	0.8987868	0.0302153
PRKCQ	48.15208	34.22132	0.7805941	0.8987868	0.0306018
PTK6	110.61103	110.01108	0.9166651	0.8987868	0.0320530
SGK2	110.84799	83.37928	0.8088680	0.8987868	0.0292684
TNFRSF4	114.91959	83.11471	0.7391965	0.8987868	0.0331705
BBC3	74.45029	56.03438	0.8144643	0.9189454	0.0384307
ADCK4	55.71186	73.28788	0.9475689	0.9229450	0.1068396
BCL2L12	149.62493	108.29531	0.8239904	0.9229450	0.1003483
BCL9	30.78449	16.06030	0.6583715	0.9229450	0.1022951
BNIP3	66.62248	67.08062	0.8763279	0.9229450	0.1083729
CAMK1G	106.10447	102.85697	0.9879692	0.9229450	0.0771641
CDK8	96.19131	160.42148	0.8852124	0.9229450	0.1357902
CHEK1	80.87149	58.47032	0.8231062	0.9229450	0.1223803
CLK3	123.35127	118.47213	0.9506903	0.9229450	0.0411393
DGCR14	119.06001	91.38009	0.7552230	0.9229450	0.0607536
DUSP2	74.13692	52.31603	0.8925823	0.9229450	0.0787340
DUSP6	72.61257	66.41636	0.8842135	0.9229450	0.0913225
DYRK2	118.61848	149.87232	0.9578722	0.9229450	0.0520156
GSK3A	46.87958	42.28743	0.8432772	0.9229450	0.0933327
ITPKC	106.29827	108.21253	0.9693716	0.9229450	0.1391177
MAP3K2	76.31134	68.95524	0.8757742	0.9229450	0.0654494
MAPK7	102.15593	80.37621	0.8944193	0.9229450	0.0777833
NRG3	72.15022	55.12130	0.7753980	0.9229450	0.0612036
PAPSS2	72.97250	53.82532	0.8700593	0.9229450	0.0725492
PFKFB2	45.40636	37.89168	0.8078912	0.9229450	0.0700413
PKMYT1	108.09106	91.94138	0.8040836	0.9229450	0.0397433
PRKCB	83.18413	74.45701	0.8926414	0.9229450	0.0919524
PRKCE	97.78193	72.94044	0.7825798	0.9229450	0.1165048
PRKG2	37.14424	26.69023	0.8880330	0.9229450	0.1243783
SHC1	176.63776	127.05193	0.8283902	0.9229450	0.1251804
STK16	65.94138	66.49753	0.8510213	0.9229450	0.1221482
TNFRSF18	117.56440	120.21361	0.8639204	0.9229450	0.1166461

DESeq2

All analysis data can be found in the **TRAILscreen_HIT-CALLING.xlsx** file.

P-Value Distribution

For all genes present in the data, the -log₁₀ corrected p-values are plotted to estimate how well the analysis method performed for this screen. A straight line of points with only small differences in the p-value indicates that the analysis method did not perform well. Genes that resulted in a p-value below the threshold set in the MIACCS file are highlighted in red color.



Enriched

The following genes showed enrichment in the treatment datasets with a **p-value smaller than 0.001**:

	log2FoldChange	lfcSE	padj	genes
CASP8	2.8539899	0.1968984	0.0000000	CASP8
FADD	2.7466780	0.2008926	0.0000000	FADD
BAX	2.0761255	0.1951457	0.0000000	BAX
RPS6KA5	2.0613922	0.1993450	0.0000000	RPS6KA5
CDK17	1.9749507	0.2098786	0.0000000	CDK17
HRK	1.7832227	0.1986851	0.0000000	HRK
TP53	1.7263896	0.1990543	0.0000000	TP53
BMPR1A	1.6606699	0.1934715	0.0000000	BMPR1A
AMHR2	1.5964273	0.2040561	0.0000000	AMHR2
PRKAR1A	1.3066797	0.1966018	0.0000000	PRKAR1A
PASK	1.3056495	0.2018553	0.0000001	PASK
PRKCH	1.2768183	0.2034549	0.0000003	PRKCH
PRKD3	1.2469315	0.2049320	0.0000009	PRKD3
PTPRR	1.1714789	0.1988912	0.0000031	PTPRR

	log2FoldChange	lfcSE	padj	genes
FN3K	1.2257973	0.2101826	0.0000044	FN3K
BMP2K	1.1356520	0.1969679	0.0000065	BMP2K
MDM2	1.1155550	0.2005697	0.0000212	MDM2
PRKCZ	1.1267946	0.2027299	0.0000217	PRKCZ
PAG1	1.2017977	0.2167288	0.0000233	PAG1
BMPR1B	1.1476671	0.2081757	0.0000279	BMPR1B
PRKY	1.1629272	0.2119197	0.0000322	PRKY
MYC	1.0493447	0.1952001	0.0000603	MYC
DUSP4	1.0685262	0.2020427	0.0000972	DUSP4
CSNK2A2	1.3577535	0.2578919	0.0001106	CSNK2A2
LMTK3	1.0154113	0.1953558	0.0001587	LMTK3
MAP2K7	1.1032489	0.2128120	0.0001706	MAP2K7
LATS1	1.2426869	0.2460336	0.0003452	LATS1
CALM3	1.0844637	0.2148274	0.0003499	CALM3
IP6K3	0.9775242	0.1947187	0.0004042	IP6K3
RIPK2	0.9771641	0.1981684	0.0006398	RIPK2

According to the value set, the **top 5 % enriched genes** were:

	log2FoldChange	lfcSE	padj	genes
CASP8	2.8539899	0.1968984	0.0000000	CASP8
FADD	2.7466780	0.2008926	0.0000000	FADD
BAX	2.0761255	0.1951457	0.0000000	BAX
RPS6KA5	2.0613922	0.1993450	0.0000000	RPS6KA5
CDK17	1.9749507	0.2098786	0.0000000	CDK17
HRK	1.7832227	0.1986851	0.0000000	HRK
TP53	1.7263896	0.1990543	0.0000000	TP53
BMPR1A	1.6606699	0.1934715	0.0000000	BMPR1A
AMHR2	1.5964273	0.2040561	0.0000000	AMHR2
PRKAR1A	1.3066797	0.1966018	0.0000000	PRKAR1A
PASK	1.3056495	0.2018553	0.0000001	PASK
PRKCH	1.2768183	0.2034549	0.0000003	PRKCH
PRKD3	1.2469315	0.2049320	0.0000009	PRKD3
PTPRR	1.1714789	0.1988912	0.0000031	PTPRR
FN3K	1.2257973	0.2101826	0.0000044	FN3K
BMP2K	1.1356520	0.1969679	0.0000065	BMP2K
MDM2	1.1155550	0.2005697	0.0000212	MDM2
PRKCZ	1.1267946	0.2027299	0.0000217	PRKCZ
PAG1	1.2017977	0.2167288	0.0000233	PAG1
BMPR1B	1.1476671	0.2081757	0.0000279	BMPR1B
PRKY	1.1629272	0.2119197	0.0000322	PRKY
MYC	1.0493447	0.1952001	0.0000603	MYC
DUSP4	1.0685262	0.2020427	0.0000972	DUSP4
CSNK2A2	1.3577535	0.2578919	0.0001106	CSNK2A2
LMTK3	1.0154113	0.1953558	0.0001587	LMTK3
MAP2K7	1.1032489	0.2128120	0.0001706	MAP2K7
LATS1	1.2426869	0.2460336	0.0003452	LATS1
CALM3	1.0844637	0.2148274	0.0003499	CALM3
IP6K3	0.9775242	0.1947187	0.0004042	IP6K3
RIPK2	0.9771641	0.1981684	0.0006398	RIPK2
PRPS1	1.0154924	0.2099970	0.0010360	PRPS1

	log2FoldChange	lfcSE	padj	genes
MAPK8IP2	0.9554903	0.2044514	0.0023104	MAPK8IP2
CSNK2A1	0.9415114	0.2038047	0.0029940	CSNK2A1
PRKAG3	0.9230088	0.2009259	0.0033866	PRKAG3
NEK11	0.9335366	0.2033509	0.0034314	NEK11
TGFBR1	0.9607698	0.2096900	0.0035763	TGFBR1
TNFRSF11B	0.9509991	0.2077597	0.0036486	TNFRSF11B
MAPK13	0.9602742	0.2100303	0.0037378	MAPK13
MBIP	0.9025821	0.2012146	0.0056186	MBIP
SEPHS1	0.8714230	0.1947709	0.0059241	SEPHS1
TNFRSF11A	1.0021224	0.2284252	0.0088570	TNFRSF11A

Depleted

The following genes showed depletion in the treatment datasets with a **p-value smaller than 0.001**:

	log2FoldChange	lfcSE	padj	genes
SMG1	-1.429982	0.2123290	0.0e+00	SMG1
PRKACB	-1.326844	0.2187738	1.1e-06	PRKACB

According to the value set, the **top 5 % depleted genes** were:

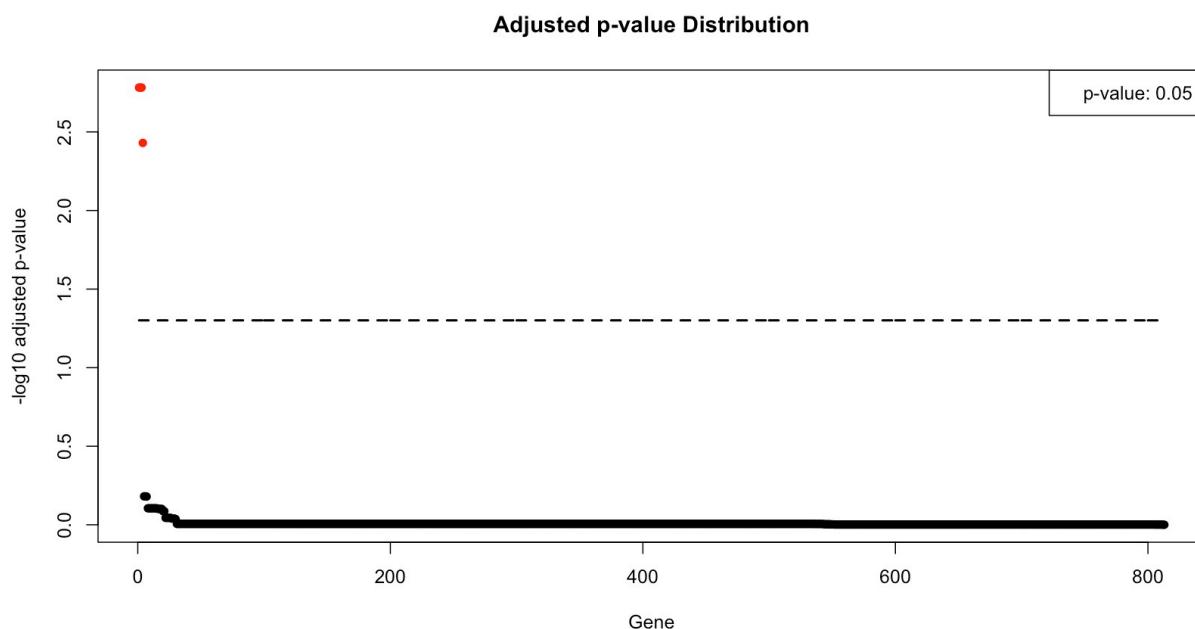
	log2FoldChange	lfcSE	padj	genes
SMG1	-1.4299818	0.2123290	0.0000000	SMG1
PRKACB	-1.3268439	0.2187738	0.0000011	PRKACB
DUSP2	-0.8839585	0.2036127	0.0109028	DUSP2
MAPK3	-0.8874385	0.2055074	0.0120925	MAPK3
MVD	-1.0079883	0.2337749	0.0124369	MVD
HK3	-0.8896877	0.2091965	0.0161867	HK3
BCL2L12	-0.8493349	0.2009970	0.0182295	BCL2L12
ROCK1	-0.8921263	0.2144381	0.0241872	ROCK1
WIF1	-0.8396864	0.2018872	0.0242731	WIF1
BBC3	-0.7995261	0.2002468	0.0491891	BBC3
SGK2	-0.7987094	0.2001047	0.0493829	SGK2
PRKCQ	-0.8650269	0.2190015	0.0587241	PRKCQ
CDC42BPG	-0.9735155	0.2476437	0.0633304	CDC42BPG
NRG3	-0.7790845	0.1998423	0.0723033	NRG3
MPP3	-0.8573709	0.2218129	0.0825529	MPP3
CDKN1B	-0.7810259	0.2039736	0.0954487	CDKN1B
MAPK7	-0.7443061	0.1956164	0.1051081	MAPK7
AK1	-0.7584758	0.1999155	0.1097052	AK1
CSF1R	-0.7419327	0.1957882	0.1115685	CSF1R
ITPKA	-0.9804692	0.2588762	0.1123445	ITPKA
CHEK1	-0.8384986	0.2227553	0.1231337	CHEK1
FASTK	-0.8297426	0.2226460	0.1427661	FASTK
SHC1	-0.8360697	0.2249526	0.1483839	SHC1
ALPK3	-0.7916102	0.2130996	0.1493037	ALPK3
SCYL3	-0.7831114	0.2119499	0.1613076	SCYL3
C9orf96	-0.7498465	0.2060267	0.1990927	C9orf96
PIK3R3	-0.8057038	0.2266208	0.2741052	PIK3R3
DGKG	-0.7204221	0.2027228	0.2753605	DGKG
PRKCE	-0.7937112	0.2241867	0.2892502	PRKCE
PRKG2	-0.8289301	0.2356366	0.3145684	PRKG2
MASTL	-0.7723763	0.2220390	0.3629620	MASTL
BCL3	-0.7351915	0.2172953	0.5119468	BCL3
LCK	-0.6660242	0.1988919	0.5781374	LCK
NTRK1	-0.7545015	0.2277952	0.6563060	NTRK1
NEK8	-0.6734080	0.2042739	0.6928860	NEK8
TLR1	-0.7084222	0.2149545	0.6941480	TLR1
PDK4	-0.7204333	0.2189604	0.7067081	PDK4
TNFRSF4	-0.8135550	0.2473382	0.7082275	TNFRSF4
PIK3CB	-0.7376748	0.2258552	0.7653496	PIK3CB
DGCR14	-0.7534509	0.2320389	0.8173098	DGCR14
PKMYT1	-0.6395897	0.1974689	0.8398298	PKMYT1

MAGeCK

All analysis data for MAGeCK can be found in the **TRAILscreen_HIT-CALLING.xlsx** file.

P-Value Distribution

For all genes present in the data, the -log₁₀ corrected p-values are plotted to estimate how well the analysis method performed for this screen. A straight line of points with only small differences in the p-value indicates that the analysis method did not perform well. Genes that resulted in a p-value below the threshold set in the MIACCS file are highlighted in red color.



Enriched

The following genes showed enrichment in the treatment datasets with a p-value smaller than 0.05:

	pos	rank.pos	neg	rank.neg	sgrna.neg.good	sgrna.pos.good
CASP8	0.001650	1	0.994410	804	0	10
BAX	0.001650	2	0.994232	775	1	9
FADD	0.001650	3	0.994410	792	1	9
PASK	0.003713	4	0.994410	800	1	11

According to the value set, the **top 5 % enriched genes** were:

	pos	rank.pos	neg	rank.neg	sgrna.neg.good	sgrna.pos.good
CASP8	0.001650	1	0.994410	804	0	10
BAX	0.001650	2	0.994232	775	1	9
FADD	0.001650	3	0.994410	792	1	9
PASK	0.003713	4	0.994410	800	1	11
TYRO3	0.659241	5	0.981079	109	4	9

	pos	rank.pos	neg	rank.neg	sgrna.neg.good	sgrna.pos.good
AMHR2	0.659241	6	0.994410	796	1	5
FN3K	0.661245	7	0.994232	730	2	11
PRKY	0.785149	8	0.994232	479	4	8
CDK5RAP3	0.785149	9	0.994450	807	1	9
ROR2	0.785149	10	0.994232	734	3	7
BMPR1A	0.785149	11	0.994232	637	3	6
DGKI	0.785149	12	0.994232	609	4	5
IP6K3	0.785149	13	0.994232	678	2	10
SGK1	0.785149	14	0.994232	562	2	6
CSNK1A1	0.785149	15	0.993066	290	6	2
RPS6KA5	0.792340	16	0.994410	802	1	5
FGFR2	0.792340	17	0.994232	435	4	6
FER	0.792340	18	0.994232	707	2	8
GAK	0.792340	19	0.994232	527	2	7
MYC	0.819189	20	0.994232	740	2	8
NME7	0.819189	21	0.994232	359	3	9
MAP3K13	0.903465	22	0.993066	214	6	8
CDK17	0.903465	23	0.994232	533	1	6
UCK1	0.903465	24	0.994410	790	2	8
SPA17	0.903465	25	0.994232	781	2	9
STK32A	0.903465	26	0.994232	596	1	8
MVK	0.912769	27	0.994232	695	2	6
BIRC5	0.912769	28	0.993066	177	5	4
MAP2K7	0.912769	29	0.950888	62	7	7
TNFRSF8	0.919967	30	0.993066	225	4	6
RIPK2	0.987129	31	0.994232	524	3	7
MAP2K3	0.987129	32	0.993066	137	5	7
CDK9	0.987129	33	0.994232	493	3	5
DUSP10	0.987129	34	0.994232	633	1	8
LMTK3	0.987129	35	0.994232	673	2	4
TK2	0.987129	36	0.994232	602	3	9
NLK	0.987129	37	0.994232	663	2	8
PRKD2	0.987129	38	0.994232	444	5	7
PRPS1	0.987129	39	0.993066	247	4	6
SGK223	0.987129	40	0.993066	289	6	5
SRPK2	0.987129	41	0.994232	658	2	5

Depleted

The following genes showed depletion in the treatment datasets with a **p-value smaller than 0.05**:

No genes showed significant depletion with a p-value lower than 0.05

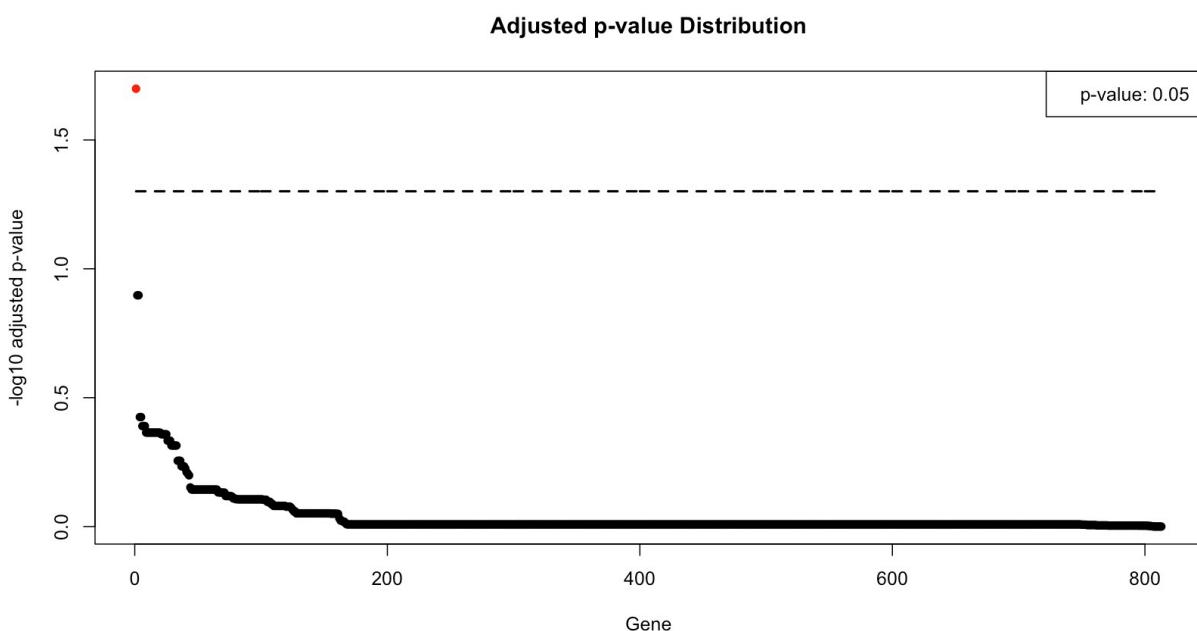
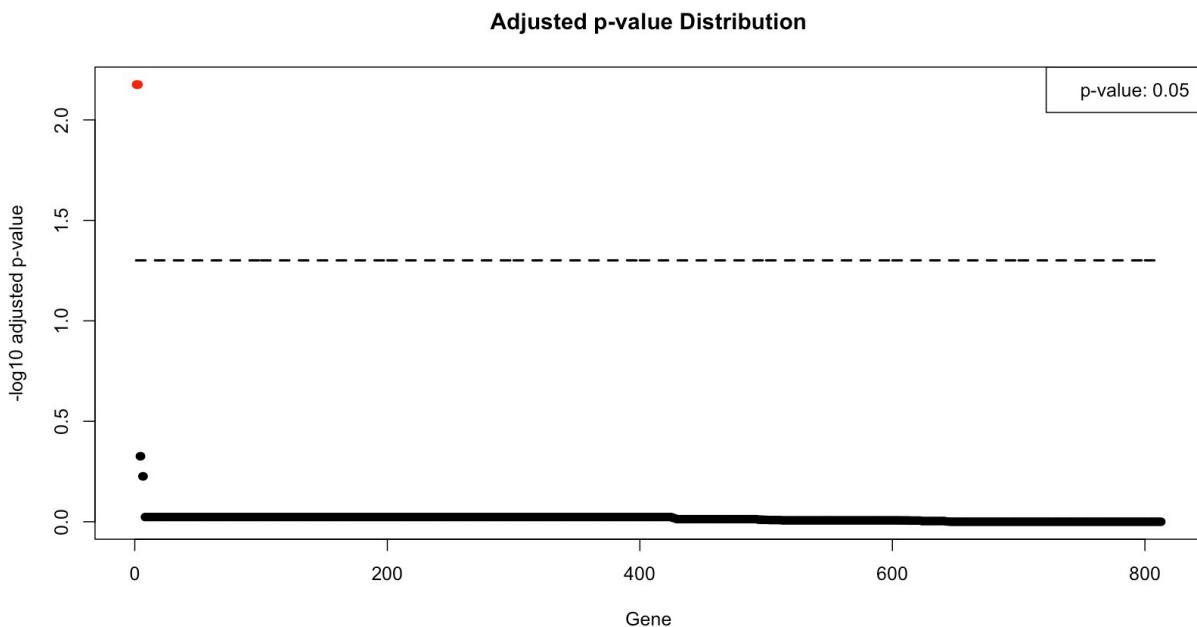
According to the value set, the **top 5 % depleted genes** were:

	pos	rank.pos	neg	rank.neg	sgrna.neg.good	sgrna.pos.good
TNFRSF13C	0.996031	555	0.701894	1	4	1
DYRK2	0.987129	373	0.701894	2	9	4
CDC42BPG	0.996304	803	0.701894	3	9	2
CHEK1	0.996304	777	0.701894	4	6	2
RAPGEF3	0.987129	78	0.701894	5	5	6
TNFRSF11A	0.987129	96	0.701894	6	9	1
CSF1R	0.996304	784	0.701894	7	8	1
PTK6	0.996304	743	0.701894	8	9	3
BMF	0.996304	585	0.701894	9	2	4
TESK2	0.987129	478	0.701894	10	6	4
NUAK2	0.987129	213	0.701894	11	3	5
AURKA	0.987129	219	0.701894	12	7	3
PRKACB	0.996304	769	0.701894	13	7	1
NRG3	0.996304	724	0.701894	14	8	3
TNFRSF13B	0.987129	344	0.701894	15	4	2
AZU1	0.996304	718	0.701894	16	6	3
WIF1	0.996304	799	0.701894	17	7	2
MAPK7	0.996304	678	0.701894	18	8	2
HK3	0.996304	650	0.701894	19	6	4
BCL2L12	0.996304	707	0.701894	20	6	2
TP53BP1	0.987129	395	0.701894	21	2	4
ITPKA	0.996304	795	0.701894	22	8	2
JAK3	0.987129	516	0.701894	23	8	3
CSNK1A1L	0.987129	451	0.736436	24	7	3
PAK7	0.987129	452	0.736436	25	7	5
MAP3K6	0.987129	350	0.790240	26	5	3
CAMK1G	0.996304	600	0.790240	27	6	3
PFKFB1	0.987129	340	0.790240	28	10	5
SGK2	0.996304	786	0.790240	29	6	1
PRKAA1	0.996304	697	0.790240	30	7	3
PKMYT1	0.996304	708	0.790240	31	9	3
TSSK3	0.996304	570	0.790240	32	6	3
NTRK3	0.987129	377	0.790240	33	7	3
FASTK	0.996304	703	0.790240	34	8	4
AK1	0.996304	757	0.790240	35	9	2
CLK3	0.996304	635	0.808760	36	9	3
MAPKAPK5	0.987129	514	0.808760	37	7	4
PTPRG	0.996304	624	0.808760	38	5	4
CDC42SE2	0.987129	517	0.808760	39	8	3
ACVRL1	0.996304	651	0.808760	40	6	4
PAPSS1	0.987129	527	0.808760	41	8	5

sgRSEA

P-Value Distribution

For all genes present in the data, the -log₁₀ corrected p-values are plotted to estimate how well the analysis method performed for this screen. A straight line of points with only small differences in the p-value indicates that the analysis method did not perform well. Genes that resulted in a p-value below the threshold set in the MIACCS file are highlighted in red color.



Enriched

The following genes showed enrichment in the treatment datasets with a **p-value smaller than 0.05**:

	m	NScore	p.value.pos	FDR.pos	rank.pos
CASP8	12	9.682579	2.46e-05	0.0066665	1
FADD	12	8.931627	2.46e-05	0.0066665	2
BAX	11	6.926343	2.46e-05	0.0066665	3

According to the value set, the **top 5 % enriched genes** were:

	m	NScore	p.value.pos	FDR.pos	rank.pos
CASP8	12	9.682579	0.0000246	0.0066665	1
FADD	12	8.931627	0.0000246	0.0066665	2
BAX	11	6.926343	0.0000246	0.0066665	3
PASK	15	3.445365	0.0029028	0.4719884	4
PRKY	16	3.439222	0.0029028	0.4719884	5
BMPR1A	15	3.285582	0.0050921	0.5942711	6
FN3K	16	3.283622	0.0051167	0.5942711	7
AMHR2	13	3.045998	0.0099137	0.9472708	8
PRKAR1A	15	2.925043	0.0141448	0.9472708	9
CALM3	16	2.862962	0.0165802	0.9472708	10
LMTK3	15	2.834060	0.0177609	0.9472708	11
BMPR1B	16	2.779514	0.0202209	0.9472708	12
PRKD3	16	2.737910	0.0221889	0.9472708	13
HRK	11	2.722066	0.0230745	0.9472708	14
MAP2K7	16	2.710748	0.0236403	0.9472708	15
BMP2K	16	2.698465	0.0241814	0.9472708	16
PAG1	16	2.647046	0.0273056	0.9472708	17
MAPK8IP2	16	2.644579	0.0274778	0.9472708	18
PRKCZ	16	2.609142	0.0297410	0.9472708	19
PTPRR	15	2.582810	0.0315859	0.9472708	20
SGK1	14	2.572202	0.0322009	0.9472708	21
CDK17	16	2.568932	0.0323239	0.9472708	22
TNFRSF8	15	2.565276	0.0327421	0.9472708	23
IP6K3	16	2.556433	0.0337753	0.9472708	24
DGKI	15	2.547181	0.0343411	0.9472708	25
RIPK2	13	2.533564	0.0352513	0.9472708	26
PRPS1	14	2.502705	0.0372931	0.9472708	27
TYRO3	16	2.486522	0.0384000	0.9472708	28
FER	16	2.453428	0.0411060	0.9472708	29
CASP7	11	2.449118	0.0416718	0.9472708	30
UCK1	16	2.443890	0.0422376	0.9472708	31
MAPK13	15	2.442287	0.0423606	0.9472708	32
PDK3	16	2.437216	0.0429018	0.9472708	33
TNFRSF1B	10	2.431507	0.0434922	0.9472708	34
TP53	10	2.430217	0.0436152	0.9472708	35
TGFBR1	16	2.425566	0.0438858	0.9472708	36
MYC	13	2.414676	0.0451403	0.9472708	37
ERBB2	16	2.407259	0.0458045	0.9472708	38
DUSP10	16	2.378936	0.0491501	0.9472708	39
DUSP4	16	2.362966	0.0512165	0.9472708	40

	m	NScore	p.value.pos	FDR.pos	rank.pos
PRKCH	15	2.362393	0.0513395	0.9472708	41

Depleted

The following genes showed depletion in the treatment datasets with a **p-value smaller than 0.05**:

	m	NScore	p.value.neg	FDR.neg	rank.neg
random	414	-2.801096	2.46e-05	0.0199995	1

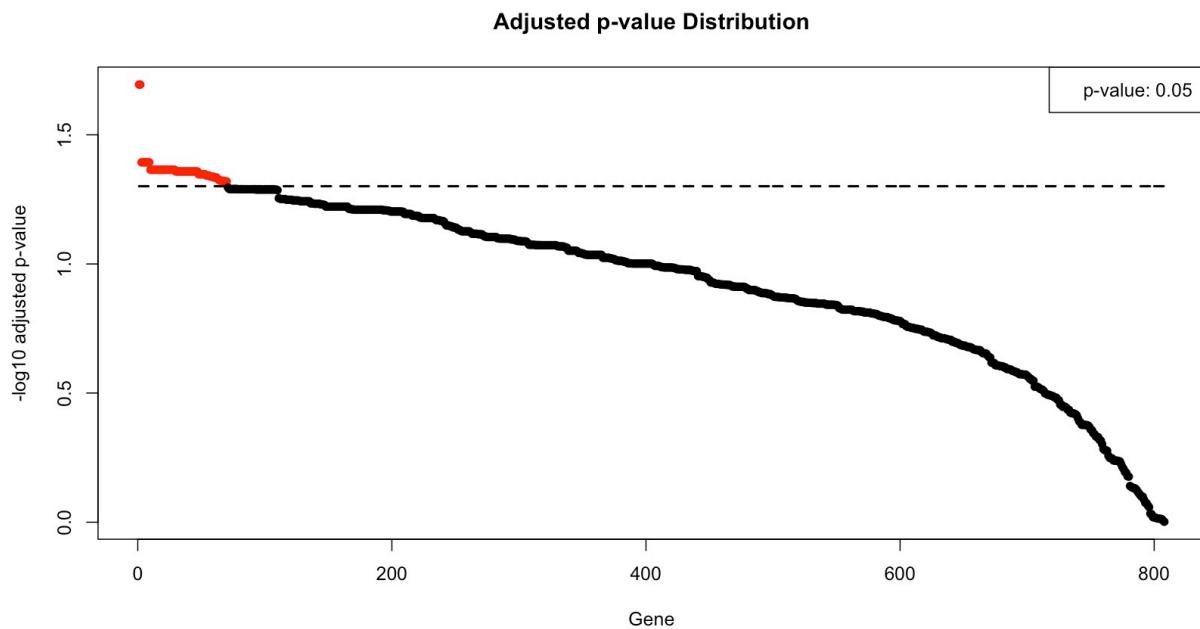
According to the value set, the **top 5 % depleted genes** were:

	m	NScore	p.value.neg	FDR.neg	rank.neg
random	414	-2.801096	0.0000246	0.0199995	1
BCL2L12	13	-1.887444	0.0003198	0.1266636	2
SHC1	16	-1.784004	0.0004674	0.1266636	3
TNFRSF4	12	-1.535367	0.0019188	0.3759908	4
CSF1R	15	-1.512875	0.0023124	0.3759908	5
MAPK7	15	-1.451736	0.0033702	0.4074900	6
SGK2	13	-1.438808	0.0035669	0.4074900	7
AZU1	16	-1.418133	0.0040097	0.4074900	8
PFKFB1	17	-1.365492	0.0055103	0.4319894	9
GFRA2	16	-1.334085	0.0066665	0.4319894	10
ACVRL1	16	-1.326585	0.0068879	0.4319894	11
DYRK2	15	-1.320904	0.0071093	0.4319894	12
EPHA5	15	-1.312450	0.0074537	0.4319894	13
AURKA	15	-1.286201	0.0086345	0.4319894	14
TNFRSF18	13	-1.261623	0.0100859	0.4319894	15
RIPK1	16	-1.253299	0.0104548	0.4319894	16
TNFRSF11A	13	-1.252824	0.0104548	0.4319894	17
CDC42BPG	16	-1.250730	0.0105532	0.4319894	18
C9orf96	4	-1.250275	0.0105778	0.4319894	19
CLK3	16	-1.249608	0.0106270	0.4319894	20
TRIB2	16	-1.231727	0.0116848	0.4383892	21
MVD	15	-1.217664	0.0130378	0.4383892	22
DVL2	13	-1.216879	0.0130624	0.4383892	23
CAMK1G	16	-1.211246	0.0134806	0.4383892	24
PTK6	16	-1.210582	0.0134806	0.4383892	25
MOK	16	-1.188620	0.0150550	0.4642743	26
BCL2A1	12	-1.179372	0.0157930	0.4642743	27
TSSK3	14	-1.176959	0.0159898	0.4642743	28
PKMYT1	15	-1.158012	0.0180561	0.4848366	29
ITPKA	16	-1.147605	0.0186957	0.4848366	30
TNFRSF13B	9	-1.147202	0.0187203	0.4848366	31
FASTK	16	-1.144290	0.0192123	0.4848366	32
ZAP70	16	-1.139813	0.0196797	0.4848366	33
PIK3R4	16	-1.105387	0.0238617	0.5555419	34
PRKCE	15	-1.103913	0.0241568	0.5555419	35
RAPGEF3	16	-1.100653	0.0245996	0.5555419	36
PAPSS2	15	-1.081131	0.0272318	0.5835754	37
PTPRG	14	-1.079358	0.0274286	0.5835754	38
PRKACB	15	-1.074967	0.0279944	0.5835754	39
DGCR14	15	-1.065953	0.0292736	0.5949854	40
NTRK3	15	-1.053533	0.0309955	0.6146190	41

EdgeR

P-Value Distribution

For all genes present in the data, the -log₁₀ corrected p-values are plotted to estimate how well the analysis method performed for this screen. A straight line of points with only small differences in the p-value indicates that the analysis method did not perform well. Genes that resulted in a p-value below the threshold set in the MIACCS file are highlighted in red color.



Enriched

The following genes showed enrichment in the treatment datasets with a **p-value smaller than 0.05**:

	NGenes	PropDown	PropUp	Direction	PValue	FDR	PValue.Mixed	FDR.Mixed
CASP8	12	0.0833333	0.6666667	Up	0.0002	0.0404000	0.0006	0.0181103
BAX	11	0.1818182	0.8181818	Up	0.0015	0.0431862	0.0019	0.0240058
FADD	12	0.1666667	0.6666667	Up	0.0018	0.0438383	0.0017	0.0233895

According to the value set, the **top 5 % enriched genes** were:

	NGenes	PropDown	PropUp	Direction	PValue	FDR	PValue.Mixed	FDR.Mixed
CASP8	12	0.0833333	0.6666667	Up	0.0002	0.0404000	0.0006	0.0181103
BAX	11	0.1818182	0.8181818	Up	0.0015	0.0431862	0.0019	0.0240058
FADD	12	0.1666667	0.6666667	Up	0.0018	0.0438383	0.0017	0.0233895
FN3K	16	0.1875000	0.3125000	Up	0.0056	0.0513783	0.0028	0.0261682
RPS6KA5	13	0.1538462	0.2307692	Up	0.0100	0.0582580	0.0057	0.0303000
PASK	15	0.0666667	0.4666667	Up	0.0151	0.0620429	0.0043	0.0270394
MYC	13	0.2307692	0.3846154	Up	0.0187	0.0664086	0.0377	0.0541302
CDK5RAP3	16	0.1250000	0.1875000	Up	0.0343	0.0846067	0.0250	0.0423521

	NGenes	PropDown	PropUp	Direction	PValue	FDR	PValue.Mixed	FDR.Mixed
MAPK9	13	0.0769231	0.2307692	Up	0.0434	0.0946296	0.2126	0.2162977
PRKY	16	0.3750000	0.3750000	Up	0.0501	0.0998528	0.0289	0.0466216
GRK7	16	0.1875000	0.1875000	Up	0.0514	0.1016931	0.0124	0.0346486
STK32A	13	0.2307692	0.3846154	Up	0.1100	0.1542354	0.0207	0.0400125
IP6K3	16	0.1875000	0.3750000	Up	0.1226	0.1655860	0.0035	0.0270394
AMHR2	13	0.3076923	0.3846154	Up	0.1465	0.1890281	0.0111	0.0337423
HRK	11	0.3636364	0.2727273	Up	0.2215	0.2596975	0.0237	0.0423364
FER	16	0.1875000	0.2500000	Up	0.2473	0.2833730	0.0315	0.0480371
SPA17	15	0.1333333	0.2666667	Up	0.2616	0.2989143	0.0040	0.0270394
RIPK2	13	0.3076923	0.2307692	Up	0.2848	0.3208898	0.0191	0.0388697
BMPR1A	15	0.3333333	0.2666667	Up	0.3441	0.3782210	0.0562	0.0714476
DUSP4	16	0.2500000	0.2500000	Up	0.4092	0.4402040	0.0153	0.0363481
SRPK2	15	0.1333333	0.2666667	Up	0.4963	0.5262073	0.0177	0.0374310
NEK11	16	0.2500000	0.1875000	Up	0.5369	0.5662856	0.0134	0.0354317
DUSP10	16	0.2500000	0.1875000	Up	0.5514	0.5778091	0.0815	0.0930857
MDM2	13	0.1538462	0.0769231	Up	0.5569	0.5820631	0.0607	0.0752768
BIRC3	12	0.2500000	0.2500000	Up	0.5711	0.5961349	0.0898	0.1014238
BMP2K	16	0.1875000	0.2500000	Up	0.5981	0.6227119	0.0139	0.0358120
PDK3	16	0.1875000	0.1875000	Up	0.6400	0.6637736	0.0241	0.0423364
PMVK	15	0.2000000	0.2666667	Up	0.7001	0.7242515	0.0205	0.0400125
IRAK1BP1	11	0.3636364	0.1818182	Up	0.7188	0.7398089	0.0198	0.0395000
CDK17	16	0.1250000	0.1250000	Up	0.8264	0.8419808	0.0096	0.0335304
DGKI	15	0.3333333	0.2666667	Up	0.8619	0.8748427	0.0006	0.0181103
LAMTOR3	15	0.2000000	0.0666667	Up	0.9202	0.9316807	0.1550	0.1621756
TP53	10	0.4000000	0.2000000	Up	0.9525	0.9607735	0.0250	0.0423521
BID	12	0.1666667	0.2500000	Up	0.9622	0.9681410	0.0256	0.0430092
BLK	14	0.1428571	0.1428571	Up	0.9637	0.9684443	0.0962	0.1068627
CDK1	15	0.2666667	0.2000000	Up	0.9712	0.9735598	0.0515	0.0669430
PLK4	15	0.1333333	0.1333333	Up	0.9960	0.9960000	0.2217	0.2252745
NA	NA	NA	NA	NA	NA	NA	NA	NA
NA.1	NA	NA	NA	NA	NA	NA	NA	NA
NA.2	NA	NA	NA	NA	NA	NA	NA	NA
NA.3	NA	NA	NA	NA	NA	NA	NA	NA

Depleted

The following genes showed depletion in the treatment datasets with a **p-value smaller than 0.05**:

	NGenes	PropDown	PropUp	Direction	PValue	FDR	PValue.Mixed	FDR.Mixed
SIK1	16	0.5000000	0.0625000	Down	0.0001	0.0202000	0.0295	0.0468830
PIM1	16	0.3750000	0.0000000	Down	0.0001	0.0202000	0.0322	0.0487377
FASTK	16	0.6250000	0.0000000	Down	0.0003	0.0404000	0.0024	0.0251268
BIK	10	0.5000000	0.0000000	Down	0.0003	0.0404000	0.0044	0.0272465
SMG1	14	0.5000000	0.0000000	Down	0.0004	0.0404000	0.0004	0.0181103
CDC7	16	0.3750000	0.0000000	Down	0.0004	0.0404000	0.0163	0.0364371
AURKC	15	0.5333333	0.0666667	Down	0.0005	0.0404000	0.0223	0.0414240
DUSP8	16	0.5000000	0.2500000	Down	0.0005	0.0404000	0.0014	0.0218160
PRKACG	16	0.5000000	0.1250000	Down	0.0007	0.0431862	0.0087	0.0335304
PACSIN1	15	0.3333333	0.0000000	Down	0.0008	0.0431862	0.0513	0.0668982
CLK3	16	0.5625000	0.0625000	Down	0.0009	0.0431862	0.0170	0.0368353
FLT4	16	0.3750000	0.0000000	Down	0.0010	0.0431862	0.0410	0.0575437
ACVR2A	16	0.3125000	0.1250000	Down	0.0010	0.0431862	0.0087	0.0335304
CSF1R	15	0.7333333	0.0000000	Down	0.0011	0.0431862	0.0035	0.0270394
PLK1	14	0.5000000	0.0714286	Down	0.0011	0.0431862	0.0107	0.0336667
random	414	0.4202899	0.1062802	Down	0.0011	0.0431862	0.0014	0.0218160
BMF	13	0.3076923	0.0769231	Down	0.0012	0.0431862	0.0233	0.0421996
AURKA	15	0.6000000	0.0666667	Down	0.0013	0.0431862	0.0005	0.0181103
ACVRL1	16	0.5000000	0.0625000	Down	0.0014	0.0431862	0.0218	0.0408698
DGKG	16	0.3750000	0.0625000	Down	0.0014	0.0431862	0.0161	0.0364281
HUNK	16	0.5000000	0.1250000	Down	0.0015	0.0431862	0.0078	0.0335304
PIP4K2A	13	0.4615385	0.0769231	Down	0.0015	0.0431862	0.0139	0.0358120
CHEK1	16	0.4375000	0.0000000	Down	0.0015	0.0431862	0.0002	0.0181103
AZU1	16	0.6875000	0.0000000	Down	0.0016	0.0431862	0.0029	0.0261682
DTYMK	15	0.6000000	0.1333333	Down	0.0016	0.0431862	0.0009	0.0202000
CAMK1D	15	0.3333333	0.0666667	Down	0.0016	0.0431862	0.0238	0.0423364
GRK4	16	0.1875000	0.1250000	Down	0.0016	0.0431862	0.0410	0.0575437
GTF2H1	16	0.3750000	0.0000000	Down	0.0018	0.0438383	0.2025	0.2068010
PHKG2	16	0.3750000	0.0000000	Down	0.0019	0.0438383	0.0315	0.0480371
PTK2	16	0.3750000	0.0000000	Down	0.0019	0.0438383	0.0626	0.0761151
PIK3CB	15	0.2666667	0.0000000	Down	0.0019	0.0438383	0.0027	0.0257976
TTN	16	0.4375000	0.0000000	Down	0.0020	0.0438383	0.0050	0.0295681
TRIO	16	0.2500000	0.0625000	Down	0.0021	0.0438383	0.0781	0.0898353
CAMK1G	16	0.5625000	0.0625000	Down	0.0022	0.0438383	0.0003	0.0181103
CRKL	13	0.5384615	0.0000000	Down	0.0022	0.0438383	0.0017	0.0233895
ATR	16	0.3125000	0.0625000	Down	0.0022	0.0438383	0.0013	0.0218160
YWHAH	16	0.6250000	0.0625000	Down	0.0023	0.0438383	0.0089	0.0335304
ENDOG	13	0.5384615	0.1538462	Down	0.0024	0.0438383	0.0016	0.0231926
HK3	15	0.4000000	0.0666667	Down	0.0024	0.0438383	0.0094	0.0335304
RPS6KB2	15	0.3333333	0.0000000	Down	0.0024	0.0438383	0.0004	0.0181103
DYRK1B	16	0.5000000	0.0000000	Down	0.0025	0.0438383	0.0108	0.0336667
TP53BP1	9	0.2222222	0.1111111	Down	0.0025	0.0438383	0.1053	0.1155462
AK1	16	0.6875000	0.0000000	Down	0.0026	0.0438383	0.0070	0.0326488
PCK1	15	0.3333333	0.2000000	Down	0.0026	0.0438383	0.0393	0.0555412
MAPK3	15	0.6000000	0.0000000	Down	0.0028	0.0449736	0.0543	0.0693576
CARD10	16	0.5000000	0.0000000	Down	0.0028	0.0449736	0.0135	0.0354317
PIK3C2B	16	0.4375000	0.0625000	Down	0.0029	0.0449736	0.0425	0.0580365
CDK10	16	0.5625000	0.0625000	Down	0.0030	0.0449736	0.0005	0.0181103
PRKACB	15	0.5333333	0.0666667	Down	0.0030	0.0449736	0.0045	0.0276585

	NGenes	PropDown	PropUp	Direction	PValue	FDR	PValue.Mixed	FDR.Mixed
BUB1B	16	0.5000000	0.1250000	Down	0.0030	0.0449736	0.0083	0.0335304
BBC3	13	0.6153846	0.0000000	Down	0.0031	0.0454500	0.0042	0.0270394
CDKN1B	12	0.5000000	0.0000000	Down	0.0032	0.0454500	0.0099	0.0335304
DAPK2	16	0.3125000	0.1250000	Down	0.0032	0.0454500	0.0034	0.0270394
BCL6	13	0.4615385	0.0769231	Down	0.0033	0.0458780	0.0411	0.0575840
EPHA5	15	0.6666667	0.0000000	Down	0.0034	0.0458780	0.0254	0.0429409
BCL7C	13	0.6153846	0.0000000	Down	0.0034	0.0458780	0.0227	0.0416884
CASP4	13	0.3076923	0.0769231	Down	0.0035	0.0462645	0.1643	0.1714651
TRIB2	16	0.6250000	0.1250000	Down	0.0036	0.0462645	0.0031	0.0267870
NME4	16	0.4375000	0.0625000	Down	0.0036	0.0462645	0.0343	0.0510590
RET	16	0.2500000	0.1250000	Down	0.0037	0.0468127	0.0382	0.0545579
DFFA	10	0.6000000	0.0000000	Down	0.0038	0.0473437	0.0183	0.0381034
NADK	16	0.5000000	0.1250000	Down	0.0039	0.0476358	0.0453	0.0605331
PFKFB1	17	0.6470588	0.0588235	Down	0.0040	0.0476358	0.0060	0.0306217
MOK	16	0.5000000	0.0625000	Down	0.0040	0.0476358	0.0125	0.0348083
PIK3R4	16	0.6250000	0.0625000	Down	0.0041	0.0479029	0.0006	0.0181103
BCL2L12	13	0.6153846	0.0000000	Down	0.0042	0.0479029	0.0004	0.0181103
CAMK2G	16	0.4375000	0.0000000	Down	0.0042	0.0479029	0.0106	0.0336667

According to the value set, the **top 5 % depleted genes** were:

	NGenes	PropDown	PropUp	Direction	PValue	FDR	PValue.Mixed	FDR.Mixed
SIK1	16	0.5000000	0.0625000	Down	0.0001	0.0202000	0.0295	0.0468830
PIM1	16	0.3750000	0.0000000	Down	0.0001	0.0202000	0.0322	0.0487377
FASTK	16	0.6250000	0.0000000	Down	0.0003	0.0404000	0.0024	0.0251268
BIK	10	0.5000000	0.0000000	Down	0.0003	0.0404000	0.0044	0.0272465
SMG1	14	0.5000000	0.0000000	Down	0.0004	0.0404000	0.0004	0.0181103
CDC7	16	0.3750000	0.0000000	Down	0.0004	0.0404000	0.0163	0.0364371
AURKC	15	0.5333333	0.0666667	Down	0.0005	0.0404000	0.0223	0.0414240
DUSP8	16	0.5000000	0.2500000	Down	0.0005	0.0404000	0.0014	0.0218160
PRKACG	16	0.5000000	0.1250000	Down	0.0007	0.0431862	0.0087	0.0335304
PACSIN1	15	0.3333333	0.0000000	Down	0.0008	0.0431862	0.0513	0.0668982
CLK3	16	0.5625000	0.0625000	Down	0.0009	0.0431862	0.0170	0.0368353
FLT4	16	0.3750000	0.0000000	Down	0.0010	0.0431862	0.0410	0.0575437
ACVR2A	16	0.3125000	0.1250000	Down	0.0010	0.0431862	0.0087	0.0335304
CSF1R	15	0.7333333	0.0000000	Down	0.0011	0.0431862	0.0035	0.0270394
PLK1	14	0.5000000	0.0714286	Down	0.0011	0.0431862	0.0107	0.0336667
random	414	0.4202899	0.1062802	Down	0.0011	0.0431862	0.0014	0.0218160
BMF	13	0.3076923	0.0769231	Down	0.0012	0.0431862	0.0233	0.0421996
AURKA	15	0.6000000	0.0666667	Down	0.0013	0.0431862	0.0005	0.0181103
ACVRL1	16	0.5000000	0.0625000	Down	0.0014	0.0431862	0.0218	0.0408698
DGKG	16	0.3750000	0.0625000	Down	0.0014	0.0431862	0.0161	0.0364281
HUNK	16	0.5000000	0.1250000	Down	0.0015	0.0431862	0.0078	0.0335304
PIP4K2A	13	0.4615385	0.0769231	Down	0.0015	0.0431862	0.0139	0.0358120
CHEK1	16	0.4375000	0.0000000	Down	0.0015	0.0431862	0.0002	0.0181103
AZU1	16	0.6875000	0.0000000	Down	0.0016	0.0431862	0.0029	0.0261682
DTYMK	15	0.6000000	0.1333333	Down	0.0016	0.0431862	0.0009	0.0202000
CAMK1D	15	0.3333333	0.0666667	Down	0.0016	0.0431862	0.0238	0.0423364
GRK4	16	0.1875000	0.1250000	Down	0.0016	0.0431862	0.0410	0.0575437
GTF2H1	16	0.3750000	0.0000000	Down	0.0018	0.0438383	0.2025	0.2068010
PHKG2	16	0.3750000	0.0000000	Down	0.0019	0.0438383	0.0315	0.0480371

	NGenes	PropDown	PropUp	Direction	PValue	FDR	PValue.Mixed	FDR.Mixed
PTK2	16	0.3750000	0.0000000	Down	0.0019	0.0438383	0.0626	0.0761151
PIK3CB	15	0.2666667	0.0000000	Down	0.0019	0.0438383	0.0027	0.0257976
TTN	16	0.4375000	0.0000000	Down	0.0020	0.0438383	0.0050	0.0295681
TRIO	16	0.2500000	0.0625000	Down	0.0021	0.0438383	0.0781	0.0898353
CAMK1G	16	0.5625000	0.0625000	Down	0.0022	0.0438383	0.0003	0.0181103
CRKL	13	0.5384615	0.0000000	Down	0.0022	0.0438383	0.0017	0.0233895
ATR	16	0.3125000	0.0625000	Down	0.0022	0.0438383	0.0013	0.0218160
YWHAH	16	0.6250000	0.0625000	Down	0.0023	0.0438383	0.0089	0.0335304
ENDOG	13	0.5384615	0.1538462	Down	0.0024	0.0438383	0.0016	0.0231926
HK3	15	0.4000000	0.0666667	Down	0.0024	0.0438383	0.0094	0.0335304
RPS6KB2	15	0.3333333	0.0000000	Down	0.0024	0.0438383	0.0004	0.0181103
DYRK1B	16	0.5000000	0.0000000	Down	0.0025	0.0438383	0.0108	0.0336667

Hit Candidate Overview

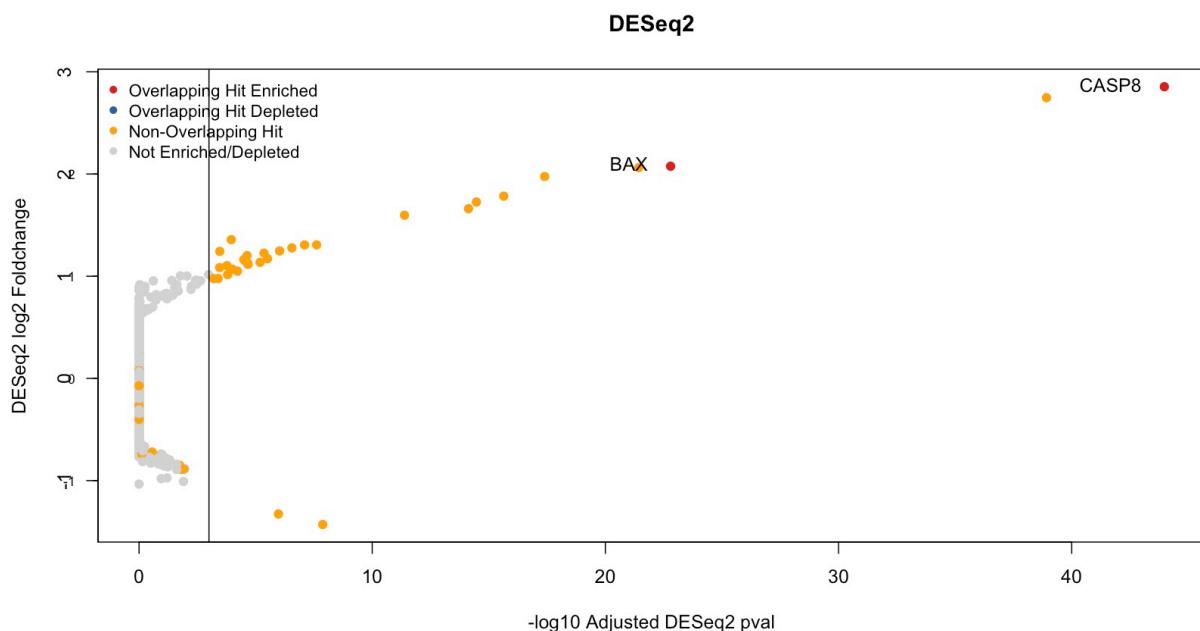
Overview

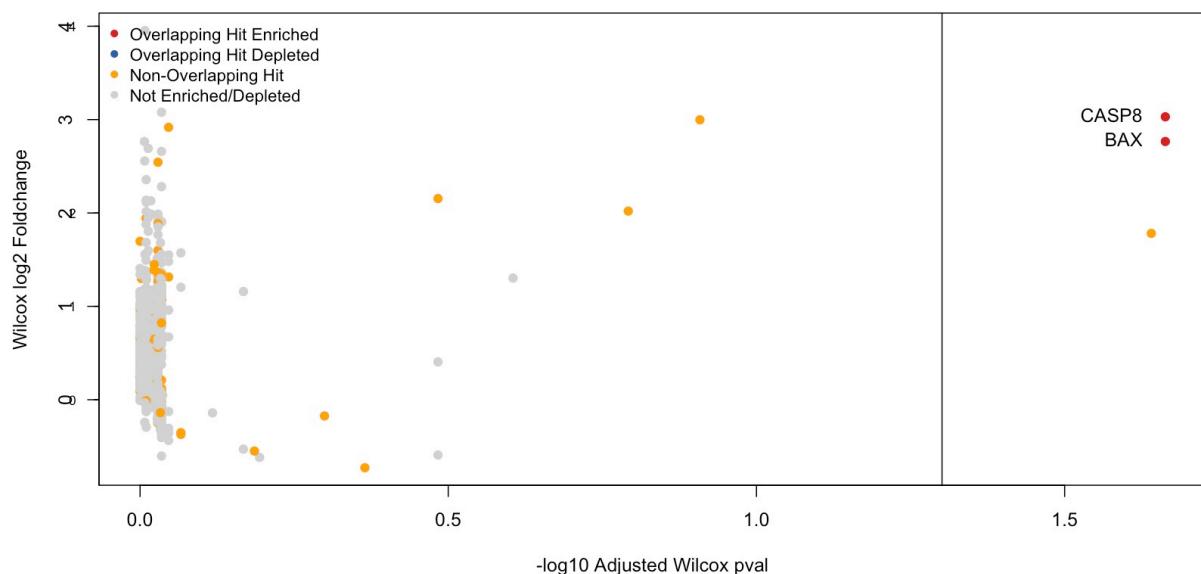
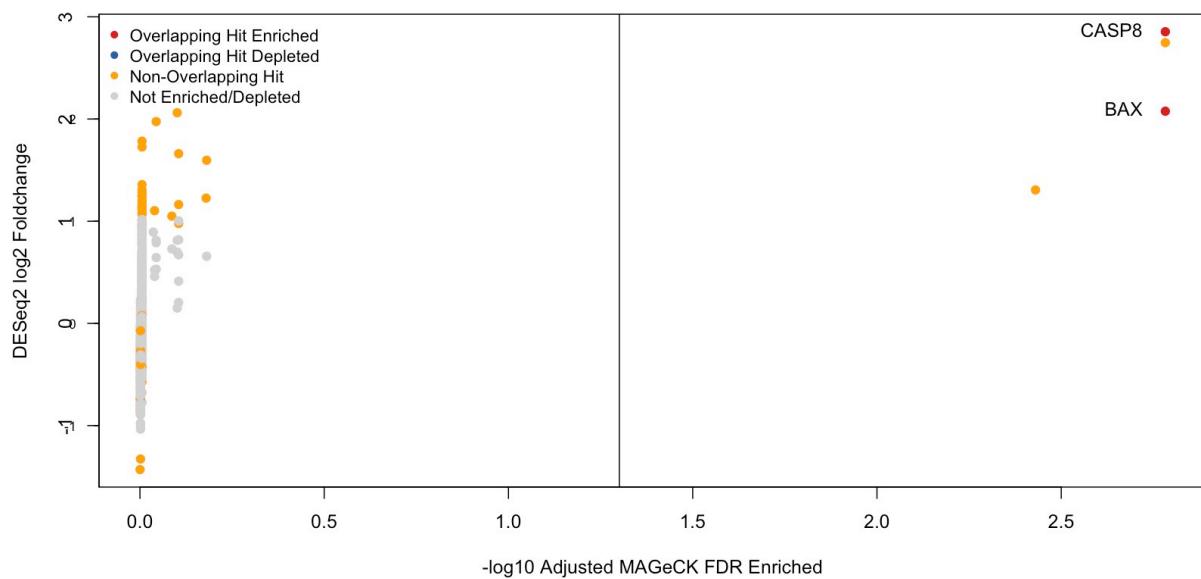
Genes which showed enrichment or depletion within the individual analysis methods are presented in the following section.

All genes that showed **significant enrichment** within Wilcox, DESeq2 and MAGeCK with the given p-value cutoffs are highlighted in **red** color.

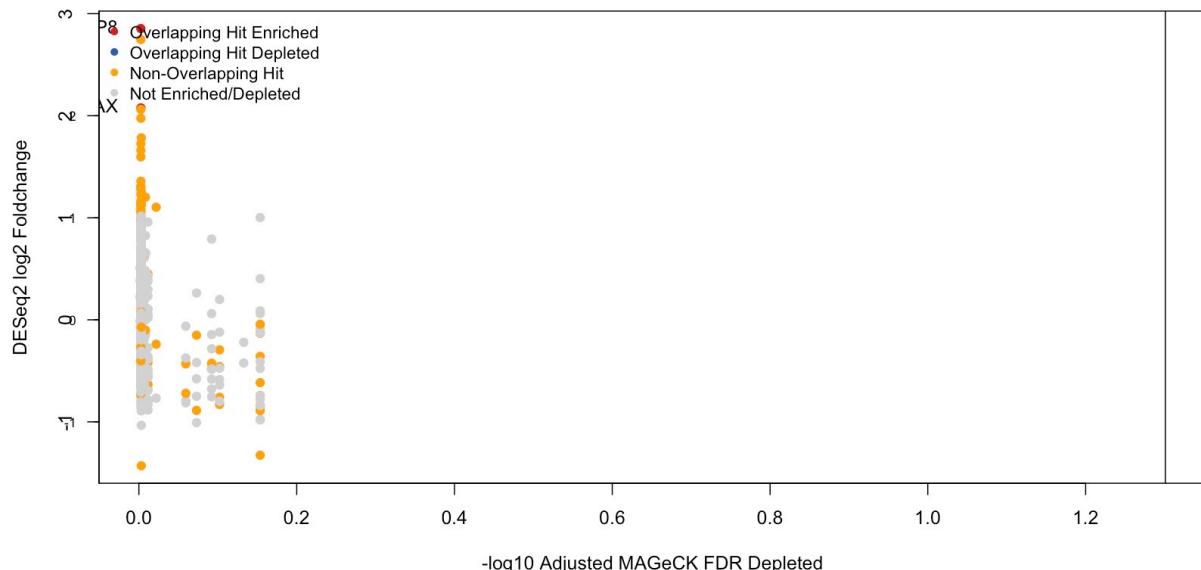
All genes that showed **significant depletion** within Wilcox, DESeq2 and MAGeCK with the given p-value cutoffs are highlighted in **blue** color.

Moreover, all genes that showed up as *significantly* enriched or depleted in any of the analysis methods are highlighted in **orange** color. Genes that showed no significant effect are presented in grey or black color.

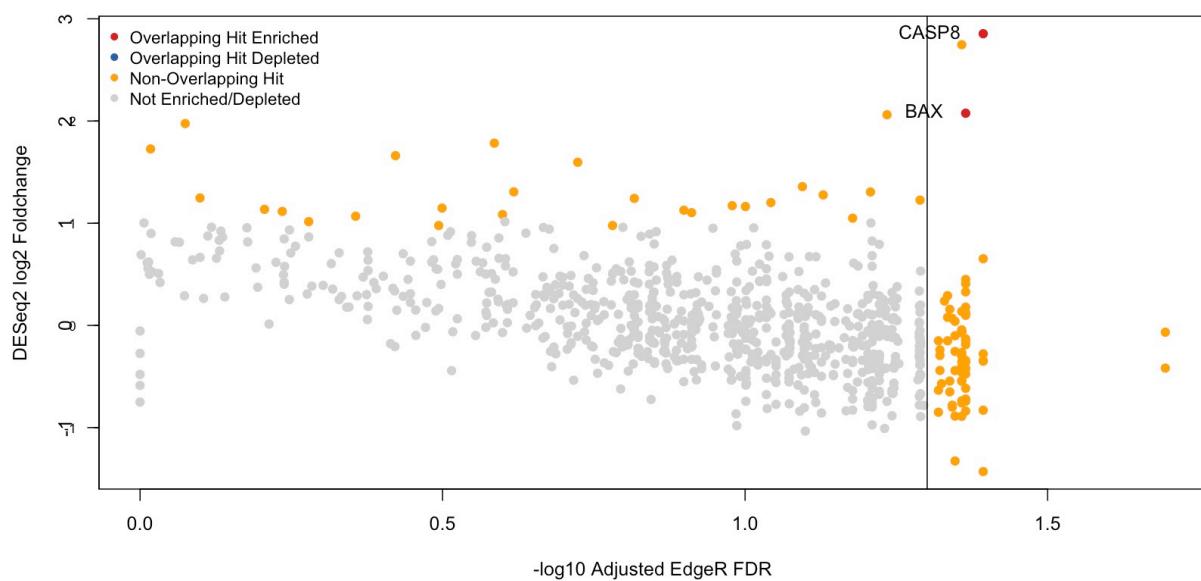


Wilcox**MAGeCK enriched**

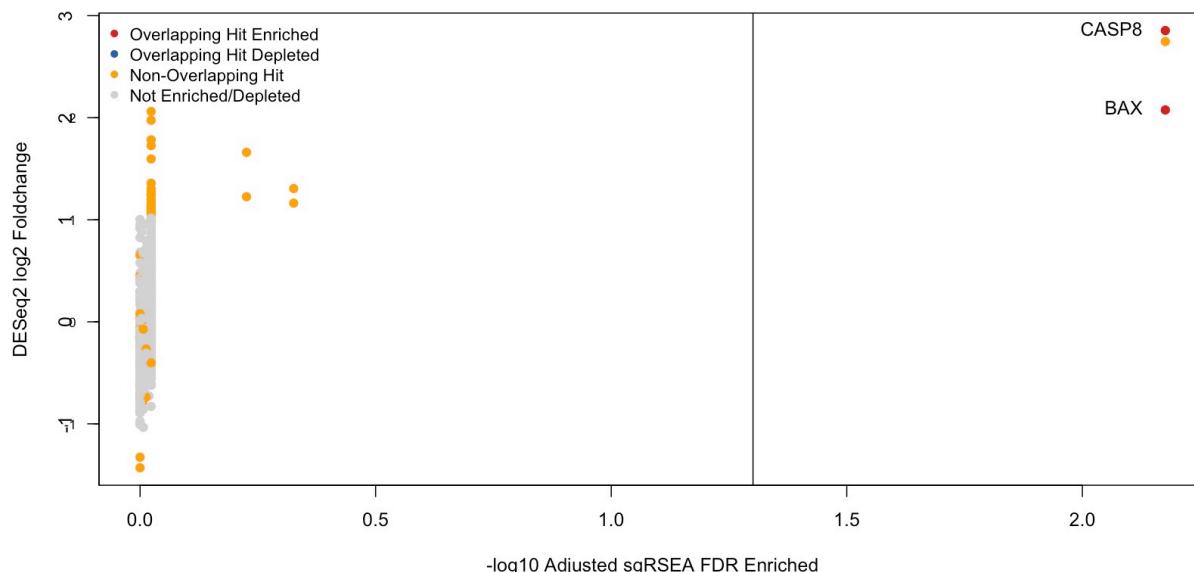
MAGeCK depleted



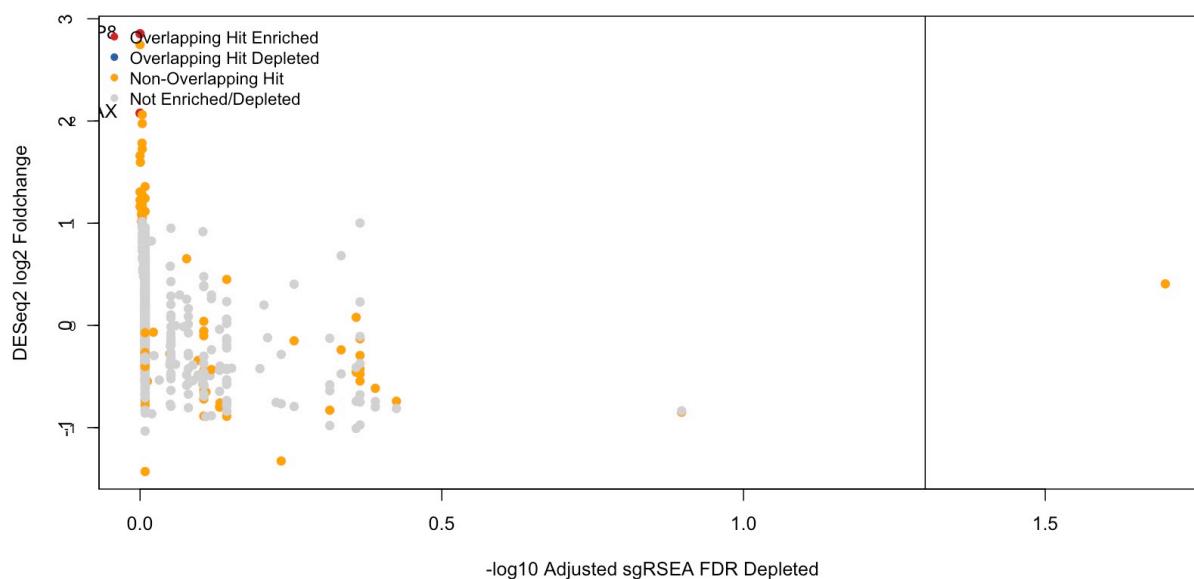
edgeR



sgRSEA enriched



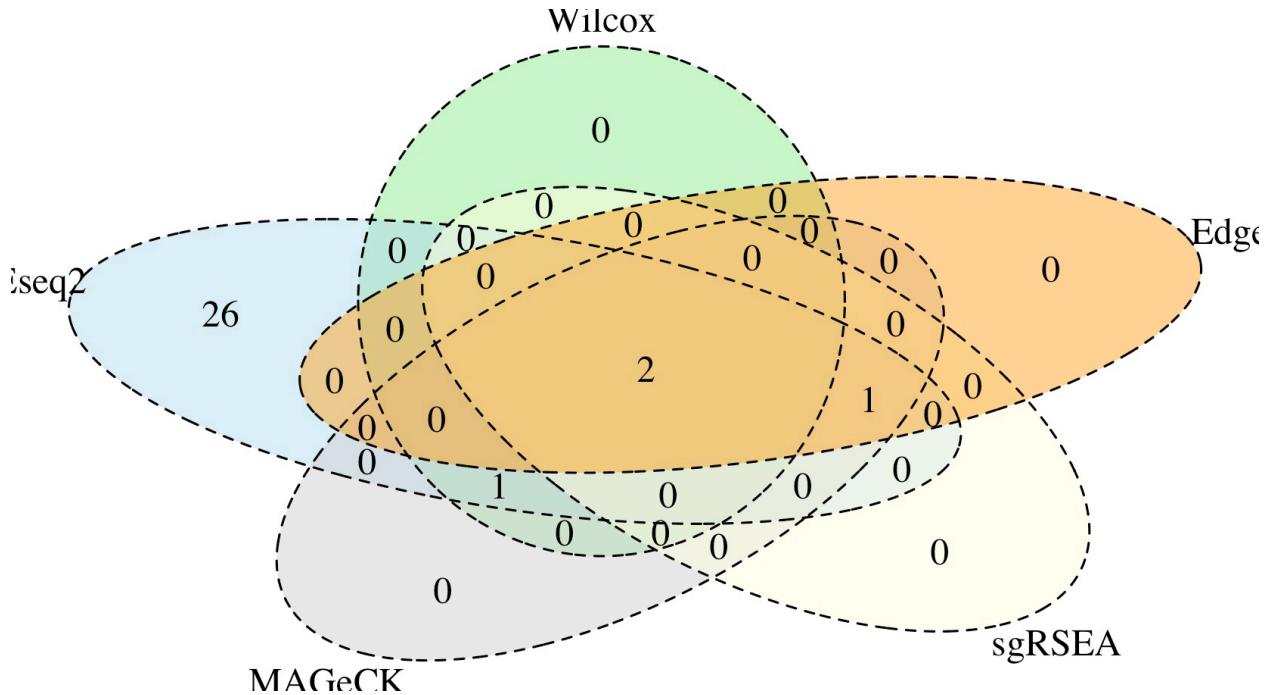
sgRSEA depleted



Overlaps in Enrichment Analysis

The following genes showed enrichment in all analysis methods.

Within the **top enriched hits**, the overlap of enriched hits per analysis method is displayed as follows:



Overlaps in Depletion Analysis

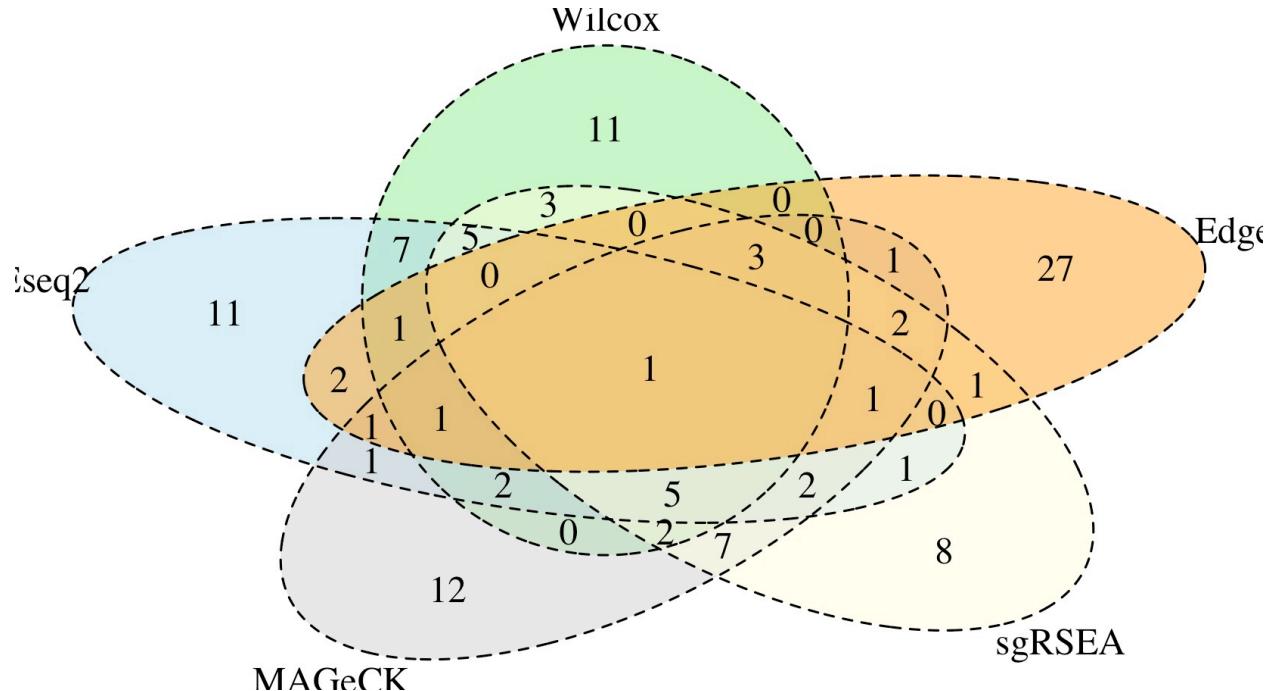
ATTENTION

No overlapping depleted genes were found between all three methods.

Therefore, the overlap from the 5 % of genes within all methods is used for plotting possible hit candidates.

We strongly advise you to have a closer look at the individual outputs of the analysis methods and to carefully look at the following candidate genes.

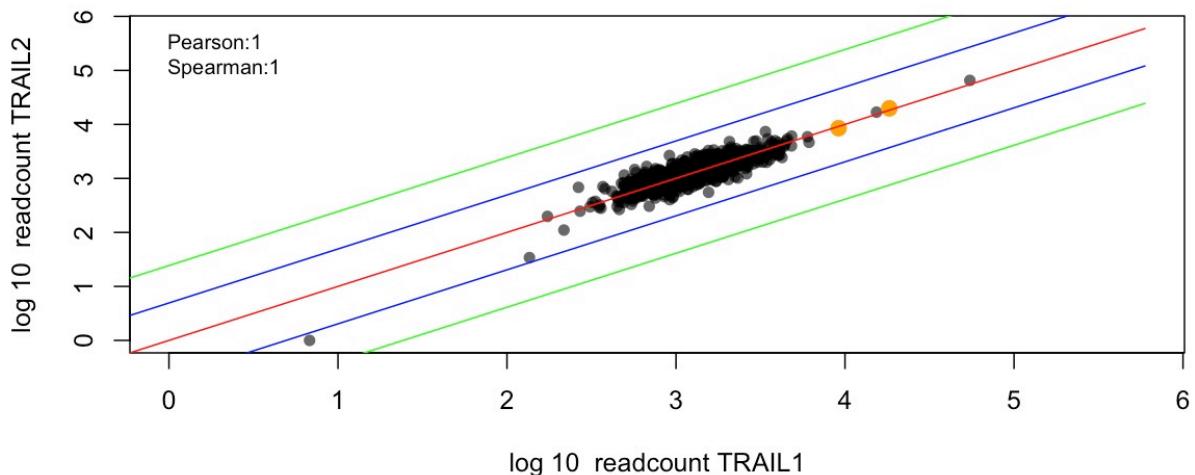
Within the **top depleted hits**, the overlap of depleted hits per analysis method is displayed as follows:



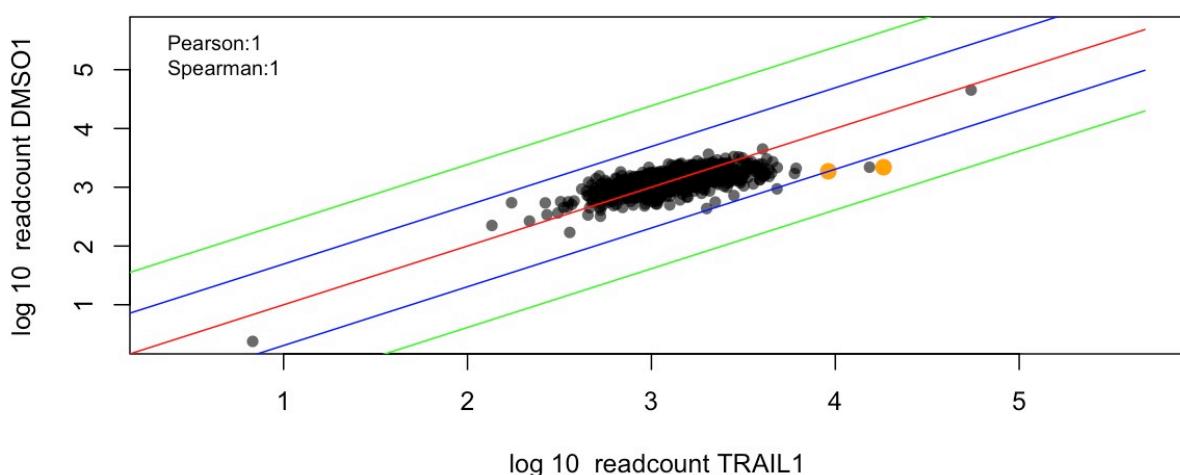
Enriched Overlapping Hit Candidates

All overlapping genes which showed enrichment are highlighted in **orange** color in the following plots.

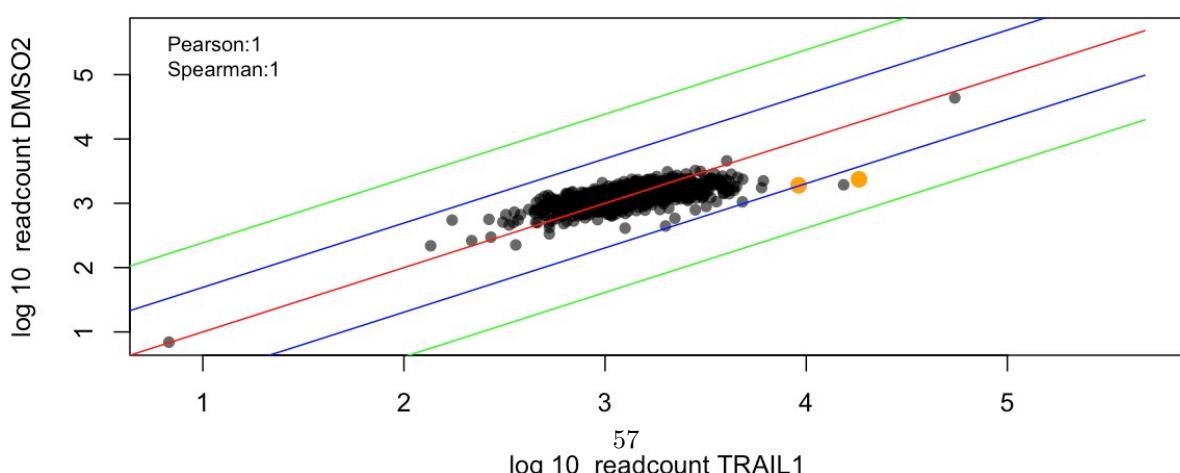
Gene Scatter Scatter for BAX CASP8 TRAILscreen



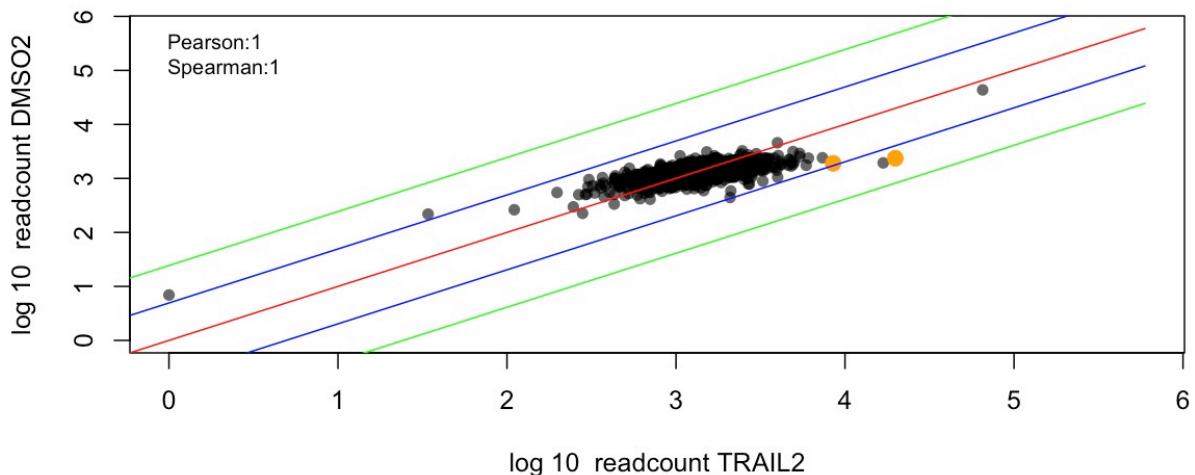
Gene Scatter Scatter for BAX CASP8 TRAILscreen



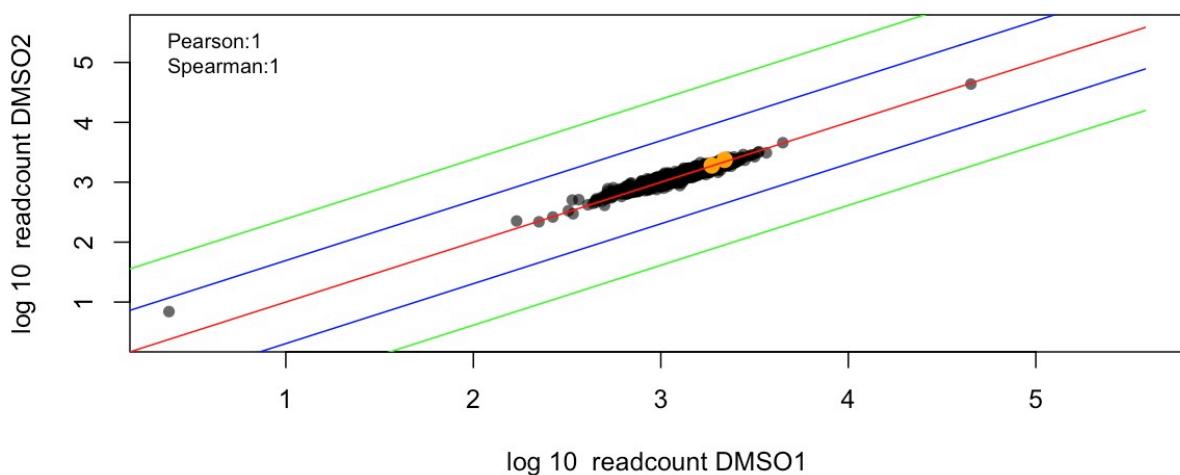
Gene Scatter Scatter for BAX CASP8 TRAILscreen



Gene Scatter Scatter for BAX CASP8 TRAILscreen



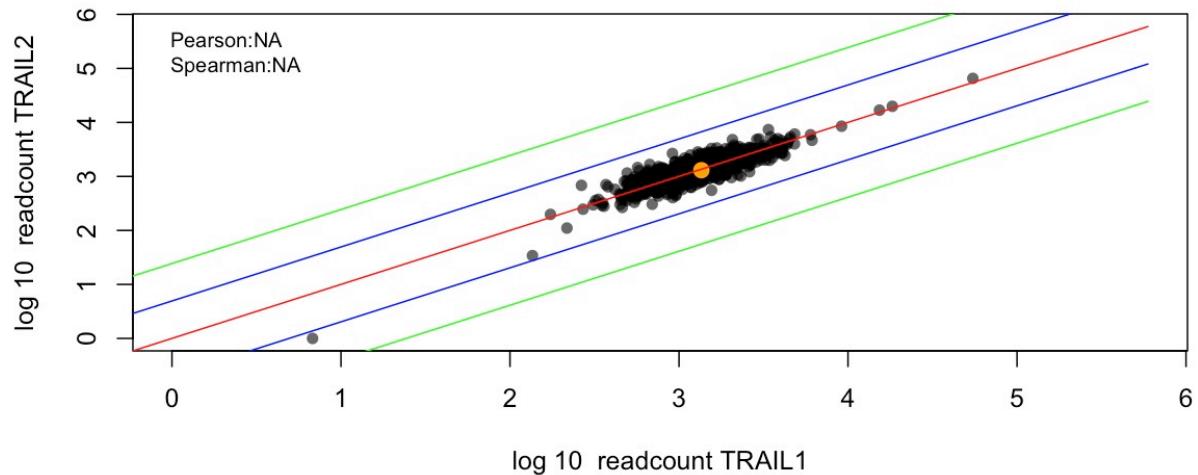
Gene Scatter Scatter for BAX CASP8 TRAILscreen



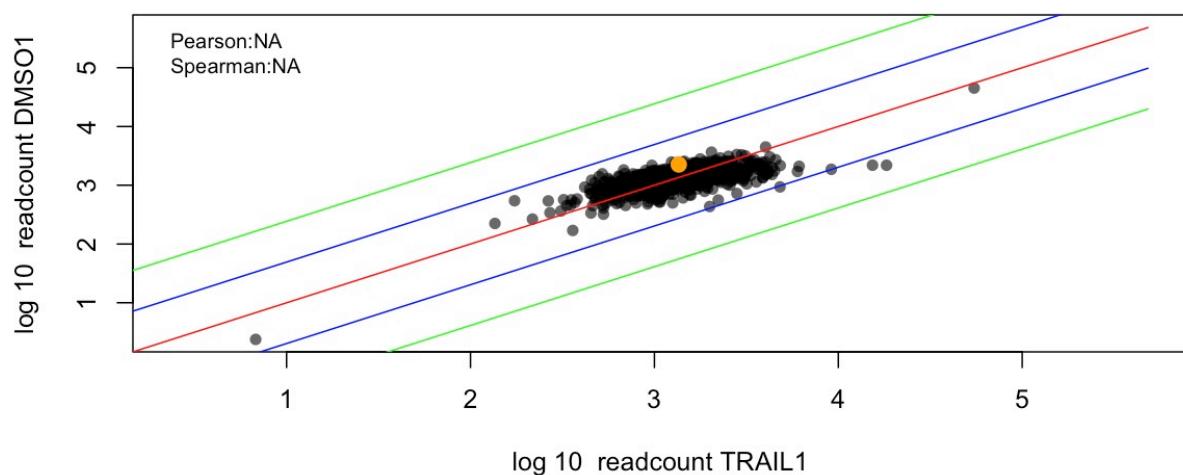
Depleted Overlapping Hit Candidates

All overlapping genes which showed depletion are highlighted in orange color in the following plots.

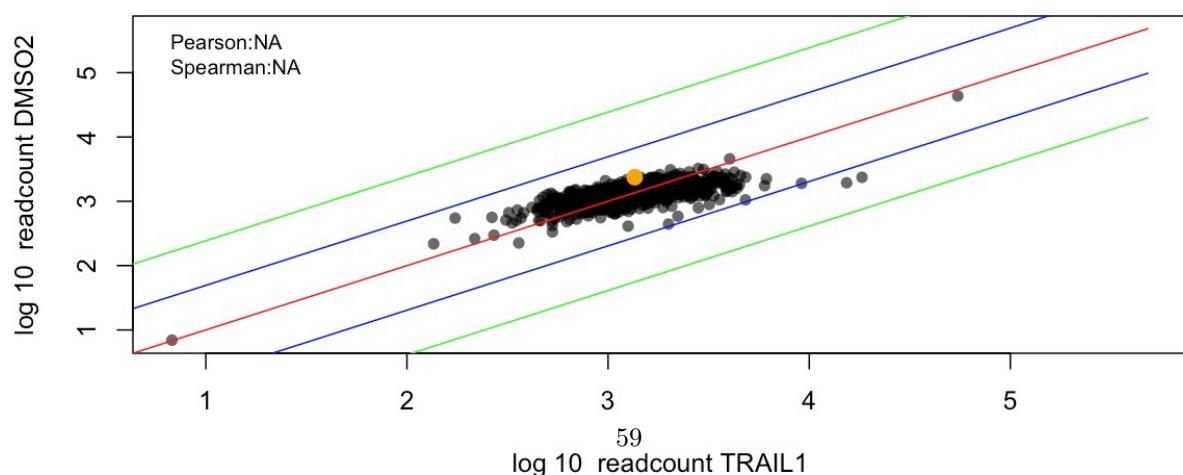
Gene Scatter Scatter for CSF1R TRAILscreen



Gene Scatter Scatter for CSF1R TRAILscreen

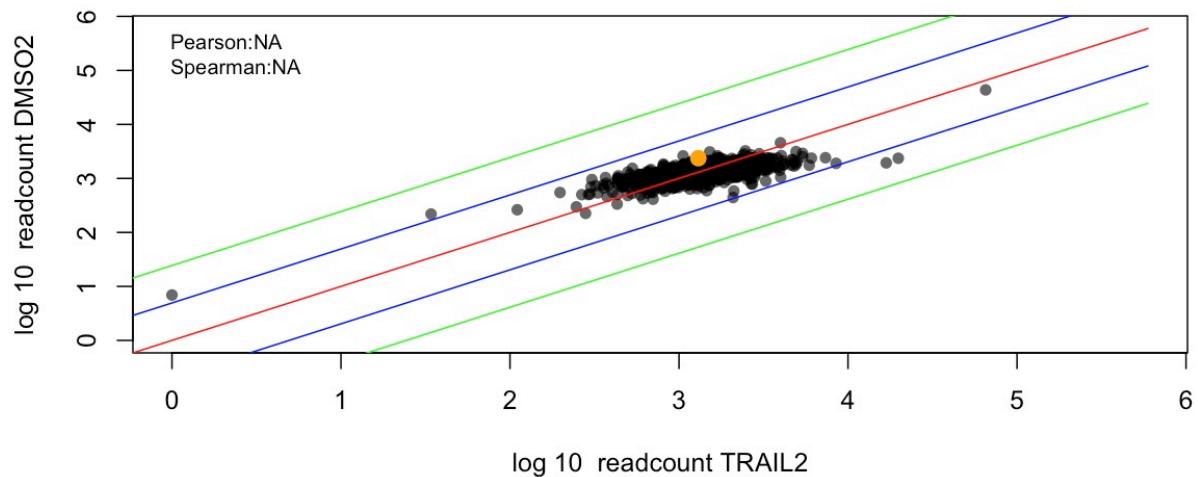


Gene Scatter Scatter for CSF1R TRAILscreen

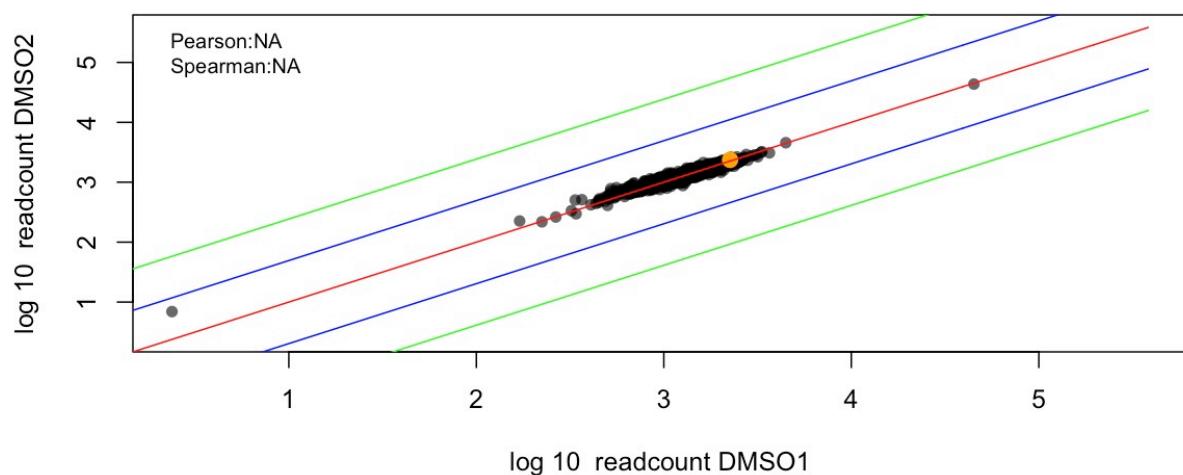


Gene Scatter Scatter for CSF1R

**Gene Scatter Scatter for CSF1R
TRAILscreen**



**Gene Scatter Scatter for CSF1R
TRAILscreen**



Hit Candidates

Scatterplots representing the gene read count as well as sgRNA read count for all overlapping hits are plotted in this section.

If there were *significantly* enriched or depleted genes that overlapped in all analysis methods, they will be presented here.

Therefore, the top overlapping hits of each Hit Analysis with a p-value below the thresholds for each analysis method are highlighted in the scatter plots.

In the case that no *significantly* enriched or depleted genes did overlap in all methods, those that overlapped within the 5 % of top enriched and the top 5 % depleted genes are used.

Therefore, the top overlapping hits of each Hit Analysis are highlighted in the scatter plots as well in this case.

This allows a fast and easy view for single genes and its individual sgRNAs. Moreover, individual sgRNA effects are plotted as well as the corresponding target sequence.

In this section, the following plots are **generated for each hit candidate**:

- Scatterplot with gene read count within all datasets
- Scatterplot with sgRNA read count within all datasets
- sgRNA log₂ fold changes
- sgRNA log₂ fold change distribution in comparison to all sgRNAs or given controls
- sgRNA target sequence list

The scatter plots show the median normalized, log read count of each genes/sgRNA. Moreover, the **blue lines indicate a read count foldchange of 2**, the **green lines indicate a read count foldchange of 4**.

Enriched

BAX

In addition to the plots below, the following information has been retrieved via biomaRt:

ENSEMBL ID (links to Ensembl) ENSG00000087088

HGNC SYMBOL (links to GeneCards)

GENE DESCRIPTION

BCL2-associated X protein [Source:HGNC Symbol;Acc:HGNC:959]

GO TERM

B cell receptor apoptotic signaling pathway

MIM GENE DESCRIPTION

BCL2-ASSOCIATED X PROTEIN; BAX

ENSEMBL PROTEIN ID

ENSP00000263262

PROTEIN FAMILY DESCRIPTION

BCL 2

Wilcox p-value: 0.05

DESeq2 p-value: 0.001

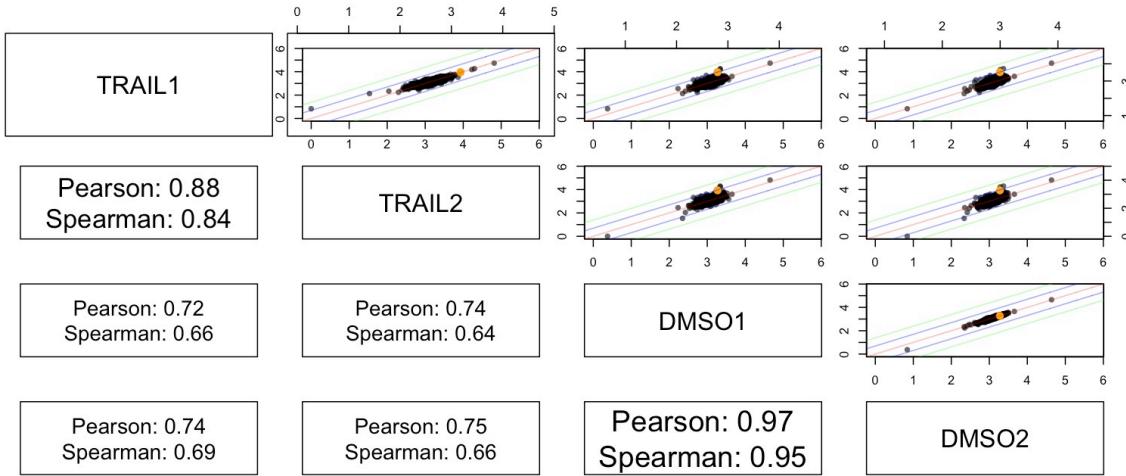
MAGECK p-value: 0.05

EdgeR p-value: 0.05

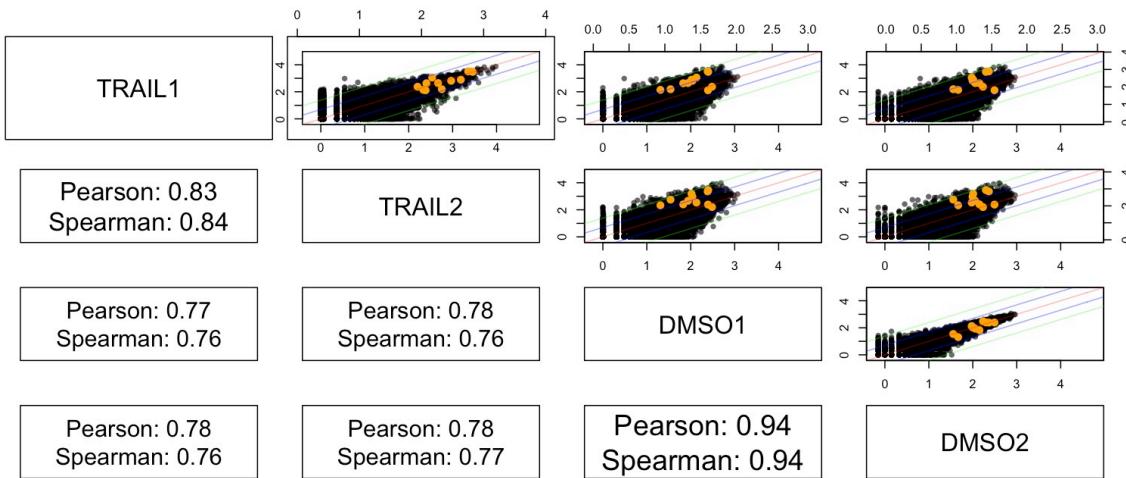
sgRSEA enriched p-value: 0.05

sgRSEA depleted p-value: 0.05

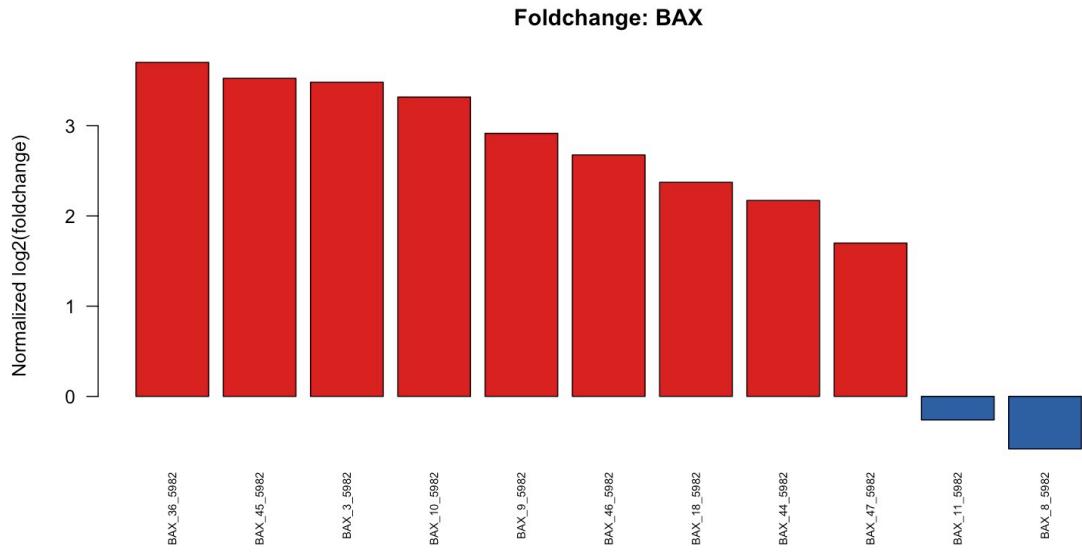
Gene Scatter for BAX
TRAILscreen



sgRNA Scatter for BAX
TRAILscreen

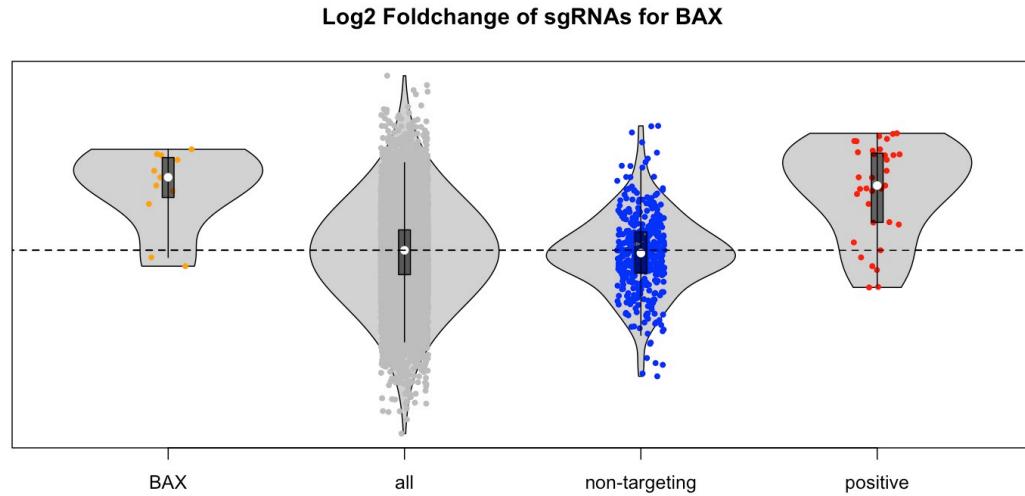


```
## Warning in if (!controls.target %in% cp$readcount$gene) {: Bedingung hat
## Länge > 1 und nur das erste Element wird benutzt
```



```
List of 4 $ gene : num [1:11] 3.318 -0.261 2.373 3.482 3.702 ... $ all : num [1:12478] 0 1.4223 0.0487 1.0106 0 ... $ nontarget: num [1:414] -2.0667 3.0342 1.8581 -0.0398 1.4653 ... $ target : num [1:35] 3.318 -0.261 2.373 3.482 3.702 ... NULL
```

```
## Warning in rm(dXML): Objekt 'dXML' nicht gefunden
```



```
designs genes sequence log2foldchange — _____ 5 BAX_36_5982
BAX gtccaatgtccagccatga 3.7077488 7 BAX_45_5982 BAX gcgtcccaaagttaggagg 3.5308003 4
BAX_3_5982 BAX gaaactgatcagaaccatcat 3.4944943 1 BAX_10_5982 BAX gaccgtgaccatttgtgg 3.3539223
11 BAX_9_5982 BAX gcagaccgtgaccatcttg 2.9275765 8 BAX_46_5982 BAX gatggtcacggctgccacg
2.6869293 3 BAX_18_5982 BAX ggggtaataaacctcctc 2.4074533 6 BAX_44_5982 BAX gaggaggc-
cgccctggagac 2.1829201 9 BAX_47_5982 BAX gagcactccgcacaaaga 1.7091792 2 BAX_11_5982 BAX
gctgaggccccagctgct -0.2620781 10 BAX_8_5982 BAX gacggctctctctactt -0.5840614
```

CASP8

In addition to the plots below, the following information has been retrieved via biomaRt:

ENSEMBL ID (links to Ensembl) ENSG00000064012

HGNC SYMBOL (links to GeneCards)

GENE DESCRIPTION

caspase 8 [Source:HGNC Symbol;Acc:HGNC:1509]

GO TERM

cysteine-type endopeptidase activity involved in apoptotic signaling pathway

MIM GENE DESCRIPTION

CASPASE 8, APOPTOSIS-RELATED CYSTEINE PROTEASE; CASP8;;MORT1-ASSOCIATED CED3 HOMOLOG; MACH;;FADD-HOMOLOGOUS ICE/CED3-LIKE PROTEASE;;FADD-LIKE ICE; FLICE;;MCH5

ENSEMBL PROTEIN ID

ENSP00000376091

PROTEIN FAMILY DESCRIPTION

CASPASE 8 PRECURSOR CASP 8 EC_3.4.22.61 [CONTAINS CASPASE 8 SUBUNIT P18; CASPASE 8 SUBUNIT P10]

Wilcox p-value: 0.05

DESeq2 p-value: 0.001

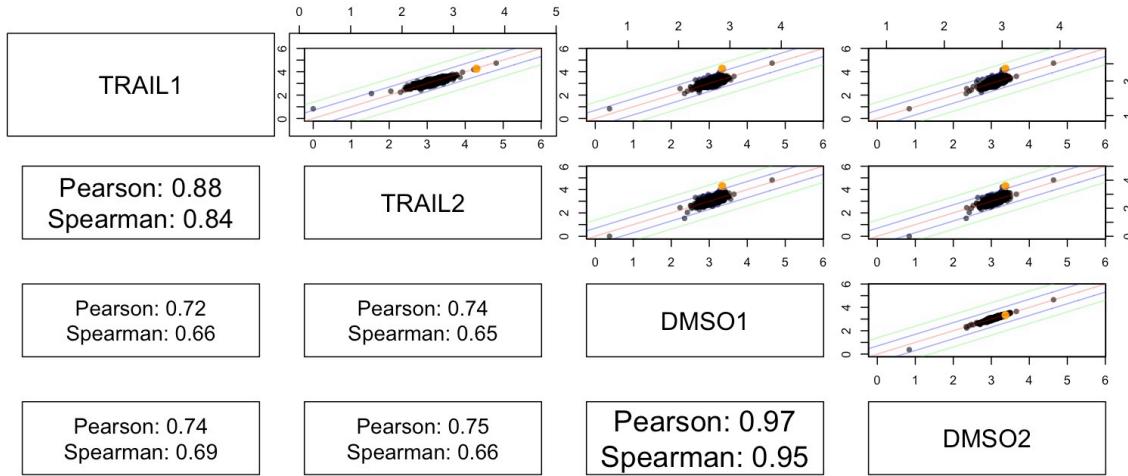
MAGECK p-value: 0.05

EdgeR p-value: 0.05

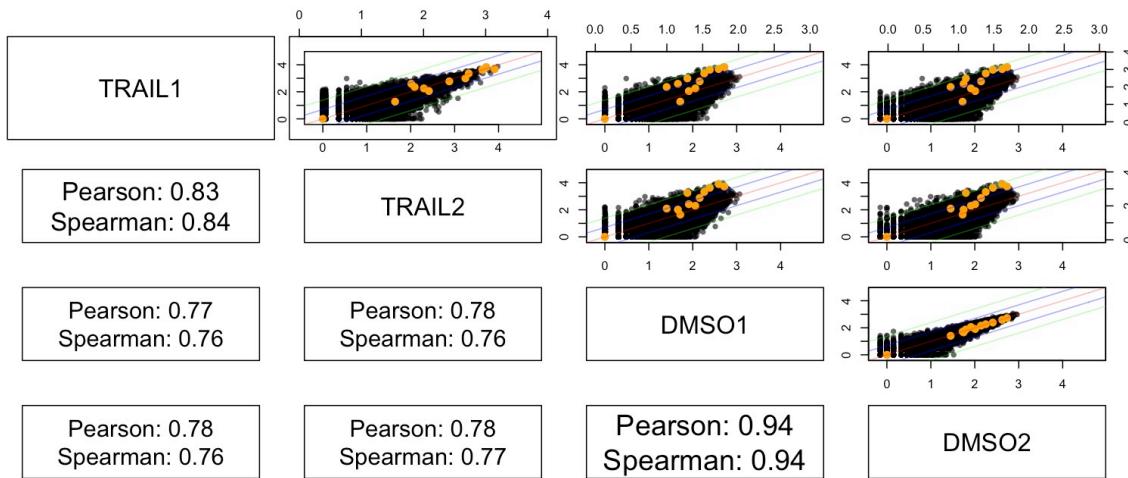
sgRSEA enriched p-value: 0.05

sgRSEA depleted p-value: 0.05

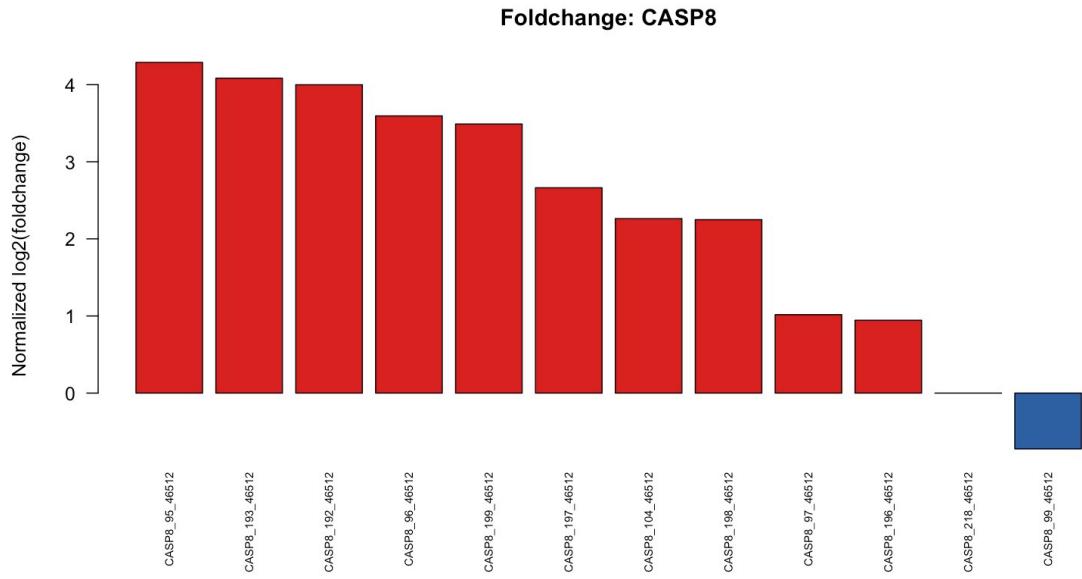
**Gene Scatter for CASP8
TRAILscreen**



**sgRNA Scatter for CASP8
TRAILscreen**

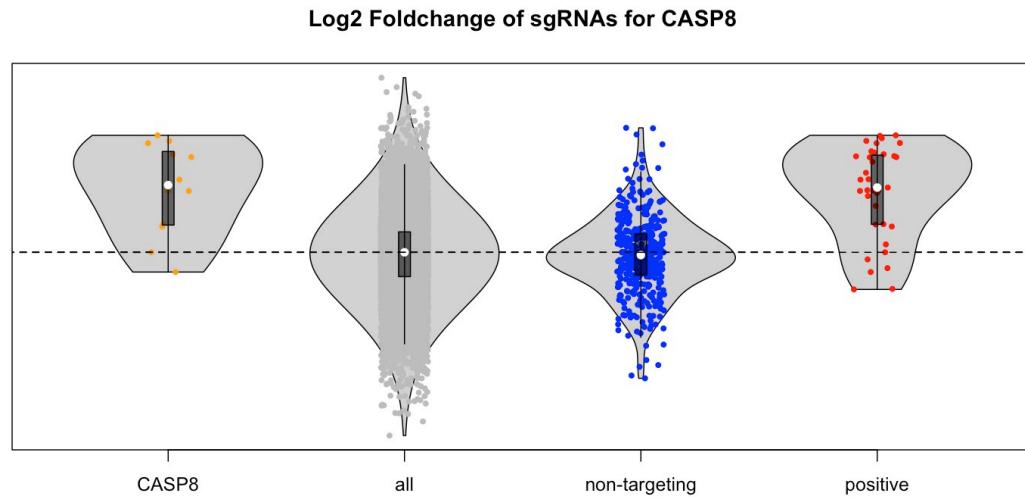


```
## Warning in if (!controls.target %in% cp$readcount$gene) {: Bedingung hat
## Länge > 1 und nur das erste Element wird benutzt
```



```
List of 4 $ gene : num [1:12] 2.263 3.999 4.083 0.945 2.663 ...
... $ all : num [1:12478] 0 1.4223 0.0487 1.0106 0
... $ nontarget: num [1:414] -2.0667 3.0342 1.8581 -0.0398 1.4653 ...
... $ target : num [1:35] 3.318 -0.261 2.373
3.482 3.702 ... NULL
```

```
## Warning in rm(dXML): Objekt 'dXML' nicht gefunden
```



```
designs genes sequence log2foldchange --- 9 CASP8_95_46512
CASP8 ggagacaaggcatcatcta 4.3085091 3 CASP8_193_46512 CASP8 gagatgtcagctatagatg 4.0887650 2
CASP8_192_46512 CASP8 gatgatgcccttgtccat 4.0023587 10 CASP8_96_46512 CASP8 ggcatacatctatg-
gcactga 3.6022538 7 CASP8_199_46512 CASP8 gacatcgctctcaggctc 3.4923121 5 CASP8_197_46512
CASP8 ggaaacacagtttacag 2.7076093 1 CASP8_104_46512 CASP8 gcctgagagagcgatgtcct 2.2853202
6 CASP8_198_46512 CASP8 gcaaagtgaactggatgtacc 2.2572689 11 CASP8_97_46512 CASP8 gagctga-
catctcaggtaac 1.0247204 4 CASP8_196_46512 CASP8 gcagaaagtcaagcctatcc 0.9521233 12 CASP8_99_46512
CASP8 ggagcaaccatttagaaa -0.7414744 8 CASP8_218_46512 CASP8 gaaggcataaagcaagttg NaN
```

Depleted

CSF1R

In addition to the plots below, the following information has been retrieved via biomaRt:

ENSEMBL ID (links to Ensembl) ENSG00000182578

HGNC SYMBOL (links to GeneCards)

GENE DESCRIPTION

colony stimulating factor 1 receptor [Source:HGNC Symbol;Acc:HGNC:2433]

GO TERM

cytokine binding

MIM GENE DESCRIPTION

COLONY-STIMULATING FACTOR 1 RECEPTOR; CSF1R;;MCSFR;;ONCOGENE FMS; FMS;;c-FMS;;CD115 ANTIGEN; CD115;;V-FMS MCDONOUGH FELINE SARCOMA VIRAL ONCOGENE HOMOLOG, FORMERLY

ENSEMBL PROTEIN ID

ENSP00000422212

PROTEIN FAMILY DESCRIPTION

MACROPHAGE COLONY STIMULATING FACTOR 1 RECEPTOR PRECURSOR CSF 1 RECEPTOR CSF 1 R CSF 1R M CSF R EC_2.7.10.1 PROTO ONCOGENE C FMS CD115 ANTIGEN

Wilcox p-value: 0.05

DESeq2 p-value: 0.001

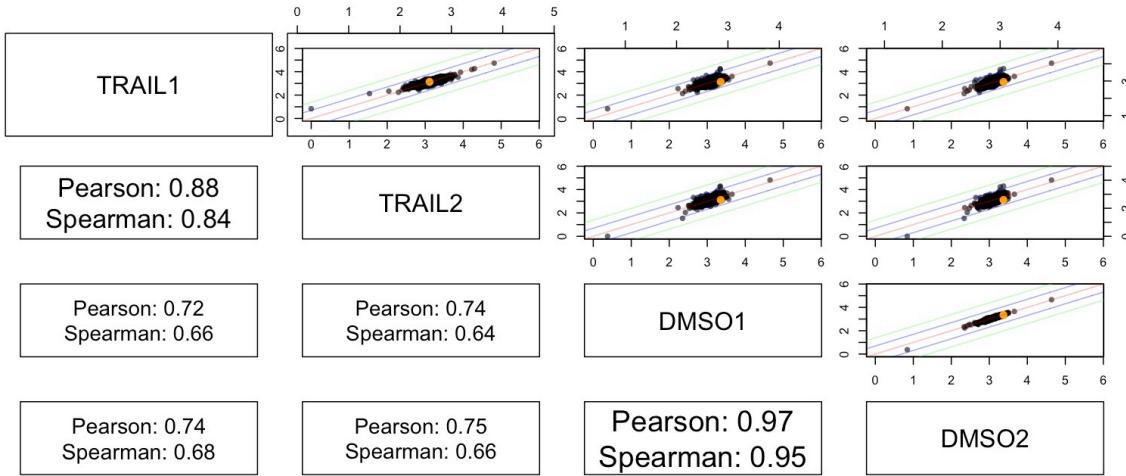
MAGeCK p-value: 0.05

EdgeR p-value: 0.05

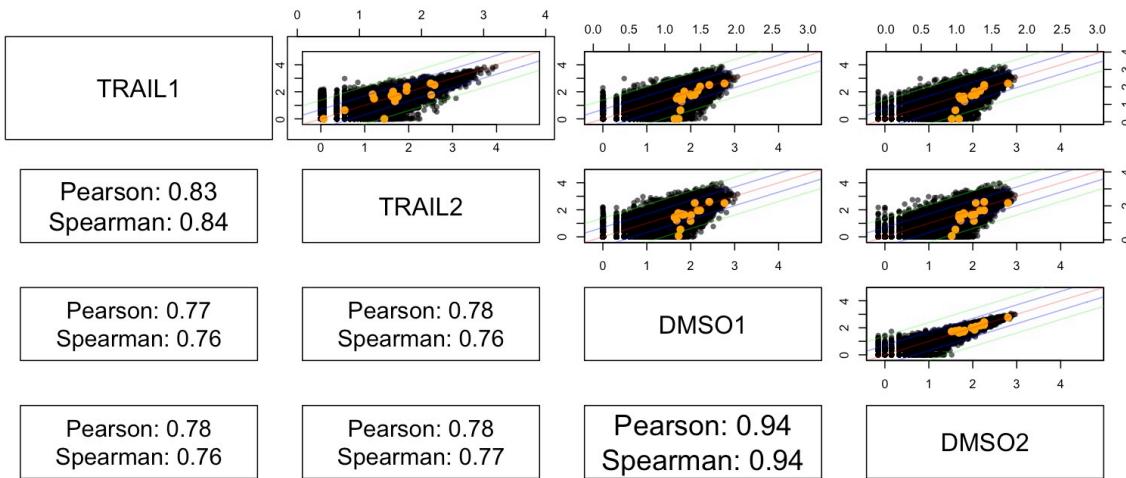
sgRSEA enriched p-value: 0.05

sgRSEA depleted p-value: 0.05

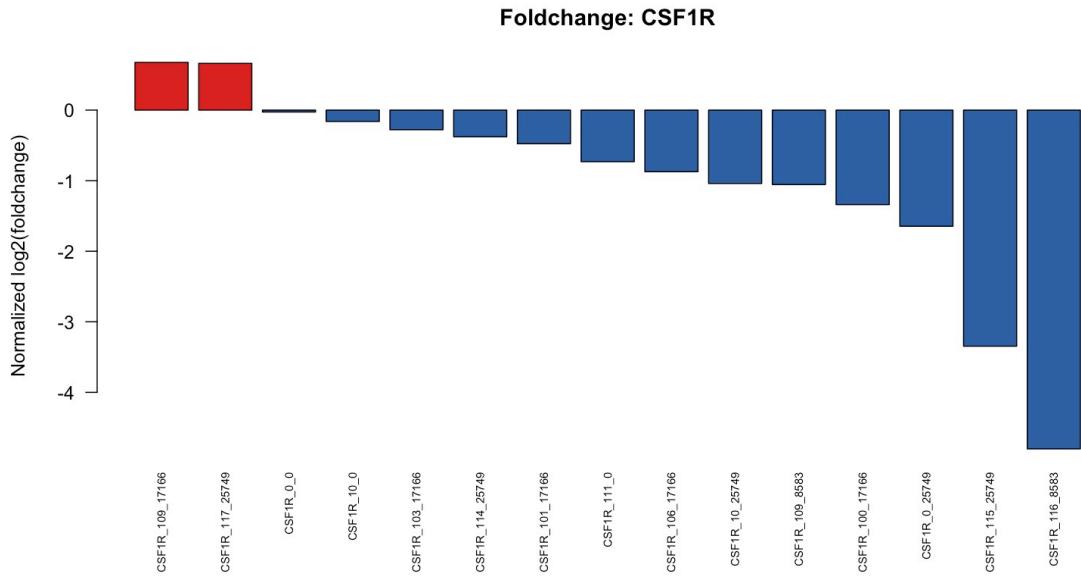
**Gene Scatter for CSF1R
TRAILscreen**



**sgRNA Scatter for CSF1R
TRAILscreen**

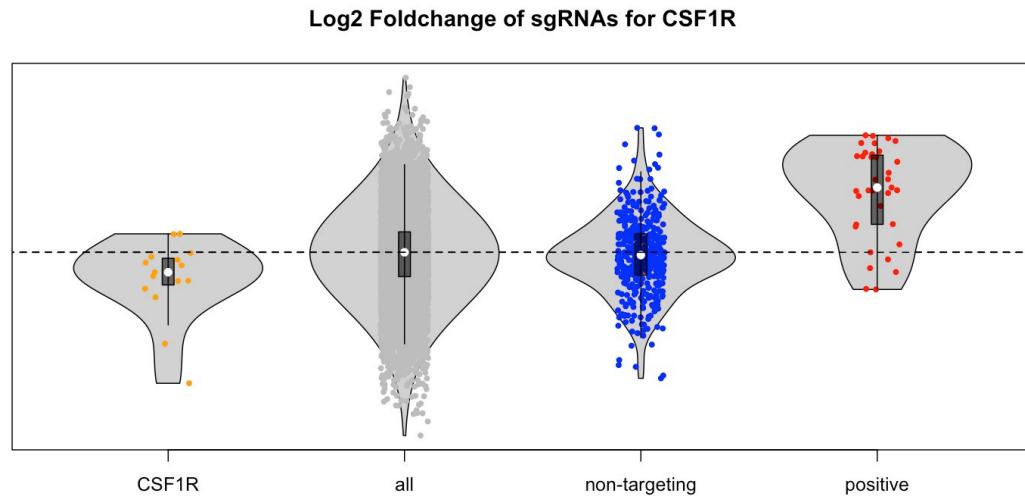


```
## Warning in if (!controls.target %in% cp$readcount$gene) {: Bedingung hat
## Länge > 1 und nur das erste Element wird benutzt
```



List of 4 \$ gene : num [1:15] -0.027 -1.646 -0.161 -1.04 -1.339 ... \$ all : num [1:12478] 0 1.4223 0.0487 1.0106 0 ... \$ nontarget: num [1:414] -2.0667 3.0342 1.8581 -0.0398 1.4653 ... \$ target : num [1:35] 3.318 -0.261 2.373 3.482 3.702 ... NULL

```
## Warning in rm(dXML): Objekt 'dXML' nicht gefunden
```



```
designs genes sequence log2foldchange --- 9 CSF1R_109_17166
CSF1R gtctggccattcagcaca 0.6808084 15 CSF1R_117_25749 CSF1R ggcctcggtgggaagtggc 0.6652537
1 CSF1R_0_0 CSF1R gtgtggccagccacatgcca -0.0271138 3 CSF1R_10_0 CSF1R gataggacagaggatgcc
-0.1642028 7 CSF1R_103_17166 CSF1R ggcctgtctaaagagacct -0.2815084 12 CSF1R_114_25749
CSF1R gctcttaccatgcaagctg -0.3850648 6 CSF1R_101_17166 CSF1R gcttcaggcggggcagagag -0.4801451
11 CSF1R_111_0 CSF1R gtgcagctcctgactattcc -0.7324426 8 CSF1R_106_17166 CSF1R gagggtaaggt
gtgectgc -0.8919592 4 CSF1R_10_25749 CSF1R ggcagggtctagacttagagg -1.0704989 10 CSF1R_109_8583
CSF1R gactcatgttggcatacagt -1.0709220 5 CSF1R_100_17166 CSF1R gccctggatgactgagacc -1.3611498 2
CSF1R_0_25749 CSF1R gggcactgcattgatagtcc -1.7146265 13 CSF1R_115_25749 CSF1R gccaagctgtggc
caccaggc -3.6446094 14 CSF1R_116_8583 CSF1R gacatgcaggcgaccaccac -6.2135039
```

Compare Analysis

On the following pages, a comparison between the hit analysis methods is generated.

Enriched

List

Moreover, the **5 % top enriched hits** sorted according to **MAGECK** are stored in **TRAILSscreen-COMPARE-HITS.xls** and are listed below:

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
AAK1	AAK1	0.8490879	0.9266668	0.2518099	1.0000000	0.987129	354	0.947
AATK	AATK	0.3652049	0.9779888	0.1067198	1.0000000	0.987129	426	0.976
ABI1	ABI1	0.6614735	0.9352306	0.1162178	1.0000000	0.987129	356	0.947
ABL1	ABL1	0.2336004	0.9352306	NA	NA	0.996304	679	0.991
ABL2	ABL2	1.3379411	0.9771922	0.5016700	1.0000000	0.987129	100	0.970
ACAD10	ACAD10	0.3150538	0.9606573	NA	NA	0.996304	641	0.947
ACVR1	ACVR1	0.3126358	0.9827536	NA	NA	0.987129	293	0.984
ACVR1B	ACVR1B	NA	NA	NA	NA	0.996304	805	0.984
ACVR1C	ACVR1C	0.3216195	1.0000000	NA	NA	0.996304	580	0.947
ACVR2A	ACVR2A	0.6652447	0.9771922	0.1224029	1.0000000	0.987129	314	0.947
ACVR2B	ACVR2B	0.5893975	0.9352306	NA	NA	0.996304	618	0.947
ACVRL1	ACVRL1	0.1547038	0.9352306	NA	NA	0.996304	651	1.000
ADAM9	ADAM9	0.2316545	0.9771922	0.0175680	1.0000000	0.987129	481	0.947
ADCK1	ADCK1	0.8792684	0.9229450	0.5071946	1.0000000	0.987129	105	0.947
ADCK2	ADCK2	0.3872307	0.9352306	0.0546219	1.0000000	0.987129	509	1.000
ADCK4	ADCK4	NA	NA	NA	NA	0.996304	593	0.970
ADCK5	ADCK5	NA	NA	NA	NA	0.996304	748	0.947
ADK	ADK	0.3366018	0.9698250	0.2571406	1.0000000	0.987129	317	0.984
ADRA1A	ADRA1A	0.6224620	1.0000000	0.0605394	1.0000000	0.987129	413	0.947
ADRA1B	ADRA1B	0.4133678	0.9926949	0.0884423	1.0000000	0.987129	470	0.947
ADRB2	ADRB2	0.2897587	0.9887617	0.0472115	1.0000000	0.987129	366	0.947
ADRBK1	ADRBK1	0.2779031	1.0000000	NA	NA	0.996304	615	1.000
ADRBK2	ADRBK2	0.1119104	0.9819710	NA	NA	0.996304	589	0.947
AK1	AK1	NA	NA	NA	NA	0.996304	757	1.000
AK2	AK2	0.6182661	0.9606573	0.1696018	1.0000000	0.987129	296	0.947
AK3	AK3	0.3829512	1.0000000	0.1801904	1.0000000	0.987129	504	0.947
AK4	AK4	0.9031620	0.9771922	0.1334896	1.0000000	0.987129	429	0.947
AK5	AK5	1.0934510	1.0000000	0.2975198	1.0000000	0.987129	183	1.000
AK7	AK7	0.2460428	0.9779888	NA	NA	0.987129	422	0.947
AK8	AK8	0.5845752	0.9771922	0.4519921	1.0000000	0.987129	162	0.947
AKAP1	AKAP1	1.0065961	0.9827536	0.0396423	1.0000000	0.987129	309	0.947
AKAP11	AKAP11	0.2849709	0.9487700	NA	NA	0.996304	573	0.947
AKAP13	AKAP13	0.1704186	0.9779888	NA	NA	0.996304	694	0.947
AKAP6	AKAP6	0.9169562	0.9819710	0.2006890	1.0000000	0.987129	486	0.947
AKAP7	AKAP7	1.9619324	0.9352306	0.8631775	1.0000000	0.987129	94	0.947
AKAP8	AKAP8	0.3727569	0.9487700	0.0177373	1.0000000	0.987129	167	0.947
AKT1	AKT1	0.6055139	1.0000000	0.6713801	1.0000000	0.987129	270	0.970
AKT2	AKT2	0.6638235	1.0000000	0.2558955	1.0000000	0.987129	229	1.000
AKT3	AKT3	0.4264502	0.9779888	NA	NA	0.996304	711	0.947
ALDH18A1	ALDH18A1	0.3903918	1.0000000	0.0758586	1.0000000	0.987129	349	0.947
ALK	ALK	0.3878483	1.0000000	0.5311555	1.0000000	0.987129	419	0.947
ALPK1	ALPK1	0.5414683	1.0000000	0.7933572	0.0730360	0.987129	286	0.970

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
ALPK2	ALPK2	1.1861315	0.9229450	0.4752721	1.0000000	0.987129	248	0.947
ALPK3	ALPK3	NA	NA	NA	NA	0.996304	776	1.000
AMHR2	AMHR2	1.9049790	0.9229450	1.5964273	0.0000000	0.659241	6	0.947
ANGPT4	ANGPT4	0.1407379	0.9771922	NA	NA	0.996304	601	1.000
ANKK1	ANKK1	0.9678571	0.9352306	0.5810874	1.0000000	0.987129	178	0.991
APAF1	APAF1	0.6581306	0.9779888	0.6268081	1.0000000	0.987129	146	0.947
APPL1	APPL1	0.1421216	0.9698250	NA	NA	0.996031	554	0.947
ARAF	ARAF	0.0793280	0.9352306	NA	NA	0.996304	696	0.962
ASB14	ASB14	0.7000271	0.9352306	0.2528492	1.0000000	0.987129	535	0.947
ATM	ATM	0.8598655	1.0000000	NA	NA	0.987129	323	0.970
ATR	ATR	0.5064041	1.0000000	NA	NA	0.996304	654	0.991
AURKA	AURKA	0.5966894	0.9352306	NA	NA	0.987129	219	1.000
AURKB	AURKB	0.6001437	1.0000000	NA	NA	0.996304	562	0.947
AURKC	AURKC	0.1785723	0.9352306	NA	NA	0.987129	490	1.000
AVPR1A	AVPR1A	2.6916402	0.9698250	NA	NA	0.987129	114	0.984
AVPR1B	AVPR1B	0.6204075	0.9352306	0.1775714	1.0000000	0.987129	55	0.947
AXL	AXL	1.0230421	0.9352306	0.5119962	1.0000000	0.987129	44	0.947
AZU1	AZU1	NA	NA	NA	NA	0.996304	718	1.000
BAD	BAD	0.6490158	0.9352306	0.1128426	1.0000000	0.987129	431	0.970
BAK1	BAK1	0.1528272	1.0000000	NA	NA	0.996304	626	0.991
BAX	BAX	2.7652118	0.0217124	2.0761255	0.0000000	0.001650	2	0.000
BBC3	BBC3	NA	NA	NA	NA	0.996304	790	1.000
BCKDK	BCKDK	0.6007982	0.9819710	NA	NA	0.996304	674	0.978
BCL2	BCL2	0.4817923	0.9352306	NA	NA	0.987129	500	0.947
BCL2A1	BCL2A1	1.0979959	0.9771922	0.6822578	0.3586741	0.987129	80	1.000
BCL2L1	BCL2L1	0.9720055	0.9487700	0.4339202	1.0000000	0.987129	274	0.947
BCL2L10	BCL2L10	0.2377835	0.9864715	NA	NA	0.996304	569	0.947
BCL2L11	BCL2L11	0.5217141	0.9229450	NA	NA	0.987129	374	1.000
BCL2L12	BCL2L12	NA	NA	NA	NA	0.996304	707	1.000
BCL2L13	BCL2L13	0.1810211	0.9819710	NA	NA	0.987129	513	0.947
BCL2L14	BCL2L14	0.8981997	0.9352306	0.0962272	1.0000000	0.987129	435	0.947
BCL2L2	BCL2L2	0.4017994	1.0000000	NA	NA	0.996304	572	0.947
BCL3	BCL3	NA	NA	NA	NA	0.996304	793	1.000
BCL6	BCL6	0.3910792	0.9779888	0.1574662	1.0000000	0.987129	515	0.947
BCL6B	BCL6B	1.0888513	0.9352306	0.3637162	1.0000000	0.987129	232	0.947
BCL7A	BCL7A	0.7840958	0.9352306	0.0251795	1.0000000	0.987129	208	0.991
BCL7C	BCL7C	NA	NA	NA	NA	0.996304	759	1.000
BCL9	BCL9	1.0017657	0.9352306	0.0382068	1.0000000	0.996304	801	0.984
BCL9L	BCL9L	1.0017657	0.9352306	0.0382068	1.0000000	0.987129	97	0.984
BCLAF1	BCLAF1	0.2376465	0.9771922	NA	NA	0.996304	630	0.947
BCR	BCR	0.7922757	1.0000000	0.1041858	1.0000000	0.987129	461	0.970
BDKRB2	BDKRB2	0.6305869	1.0000000	0.5015864	1.0000000	0.987129	368	0.947
BID	BID	1.1054997	0.9229450	0.6200439	1.0000000	0.987129	276	0.947
BIK	BIK	0.4574442	0.9771922	NA	NA	0.987129	482	1.000
BIRC2	BIRC2	0.2949161	0.9827536	0.0605163	1.0000000	0.996304	677	0.947
BIRC3	BIRC3	2.2820821	0.9229450	0.6171374	1.0000000	0.987129	161	0.947
BIRC5	BIRC5	2.7648443	0.9837614	0.4600186	1.0000000	0.912769	28	0.984
BIRC6	BIRC6	0.5031186	0.9779888	NA	NA	0.987129	503	0.947
BIRC7	BIRC7	0.8484004	0.9352306	0.2328013	1.0000000	0.987129	221	1.000
BIRC8	BIRC8	0.2739741	0.9771922	NA	NA	0.996304	616	1.000
BLK	BLK	0.9597226	0.8987868	0.6178920	1.0000000	0.987129	85	0.947
BMF	BMF	0.2946646	1.0000000	NA	NA	0.996304	585	0.980

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
BMP2K	BMP2K	1.3145116	0.8987868	1.1356520	0.0000065	0.987129	60	0.947
BMPR1A	BMPR1A	2.5431466	0.9352306	1.6606699	0.0000000	0.785149	11	0.594
BMPR1B	BMPR1B	1.1251076	0.9229450	1.1476671	0.0000279	0.987129	50	0.947
BMPR2	BMPR2	0.4431816	0.9378502	0.1415590	1.0000000	0.996304	575	0.947
BMX	BMX	0.2145662	0.9819710	NA	NA	0.987129	466	0.984
BNIP1	BNIP1	NA	NA	NA	NA	0.996304	766	0.984
BNIP2	BNIP2	1.2885731	0.9229450	0.8995957	0.5528187	0.987129	126	0.947
BNIP3	BNIP3	2.1366771	0.9773178	0.0158775	1.0000000	0.996304	715	1.000
BNIP3L	BNIP3L	2.1366771	0.9773178	0.0158775	1.0000000	0.987129	141	0.947
BNIPL	BNIPL	0.5447136	1.0000000	NA	NA	0.996304	713	0.970
BRAF	BRAF	1.2906334	0.9771922	0.2781647	1.0000000	0.987129	69	0.980
BRDT	BRDT	0.2595800	0.9864715	NA	NA	0.996304	595	0.947
BRSK1	BRSK1	1.1531367	1.0000000	0.1338796	1.0000000	0.987129	163	0.970
BRSK2	BRSK2	0.4913395	0.9352306	NA	NA	0.996304	656	0.947
BUB1	BUB1	0.2480291	0.9487700	0.0400312	1.0000000	0.996304	623	1.000
BUB1B	BUB1B	0.3582333	0.9352306	0.0400312	1.0000000	0.987129	332	1.000
C9orf96	C9orf96	0.1699802	1.0000000	NA	NA	0.996304	607	1.000
CALM3	CALM3	1.1575331	0.9352306	1.0844637	0.0003499	0.987129	87	0.947
CAMK1D	CAMK1D	0.3476371	1.0000000	NA	NA	0.996304	692	0.947
CAMK1G	CAMK1G	NA	NA	NA	NA	0.996304	600	1.000
CAMK2A	CAMK2A	0.6072899	0.9819710	NA	NA	0.987129	310	1.000
CAMK2B	CAMK2B	0.6782782	0.9352306	NA	NA	0.987129	430	0.970
CAMK2D	CAMK2D	0.7351997	0.9771922	NA	NA	0.996304	577	0.947
CAMK2G	CAMK2G	NA	NA	NA	NA	0.996304	758	1.000
CAMK4	CAMK4	1.2197290	0.9229450	NA	NA	0.987129	259	0.947
CAMKK1	CAMKK1	0.8647683	0.9352306	NA	NA	0.987129	351	0.947
CAMKK2	CAMKK2	0.7064955	0.9266668	0.3091615	1.0000000	0.987129	83	0.947
CAMKV	CAMKV	0.8317257	0.9487700	0.2966085	1.0000000	0.987129	226	0.947
CARD10	CARD10	0.1792013	0.9606573	NA	NA	0.996304	721	1.000
CARD14	CARD14	1.3398373	0.9229450	0.4727671	1.0000000	0.987129	164	0.947
CASK	CASK	0.5568249	0.9352306	NA	NA	0.987129	389	1.000
CASP1	CASP1	0.0299268	0.9771922	NA	NA	0.996304	676	0.947
CASP10	CASP10	0.0642150	0.9352306	NA	NA	0.987129	485	0.970
CASP14	CASP14	0.7949243	0.9887617	NA	NA	0.987129	376	1.000
CASP2	CASP2	0.5285449	0.9779888	0.2371773	1.0000000	0.987129	247	0.984
CASP3	CASP3	0.6728596	0.9352306	0.1088891	1.0000000	0.987129	443	0.947
CASP4	CASP4	0.8122720	0.9771922	0.2911088	1.0000000	0.987129	464	0.947
CASP5	CASP5	0.4818931	1.0000000	NA	NA	0.996304	627	0.947
CASP6	CASP6	0.7891917	0.9378502	0.2071519	1.0000000	0.987129	396	0.947
CASP7	CASP7	1.5963005	0.9698250	0.8742705	0.5708383	0.987129	49	0.947
CASP8	CASP8	3.0298947	0.0217124	2.8539899	0.0000000	0.001650	1	0.006
CASP8AP2	CASP8AP2	0.5113819	0.9827536	NA	NA	0.996304	754	0.947
CASP9	CASP9	0.6754727	0.9492743	0.3310930	1.0000000	0.987129	159	0.947
CCL2	CCL2	0.7710394	0.9771922	NA	NA	0.996304	578	0.970
CCL4	CCL4	1.3756793	0.9926949	NA	NA	0.996304	560	0.984
CD3E	CD3E	0.8461799	0.9779888	0.3012161	1.0000000	0.987129	137	0.947
CD7	CD7	0.7130263	0.9352306	0.5271125	1.0000000	0.987129	101	0.947
CDADC1	CDADC1	1.7678111	0.9352306	0.3918391	1.0000000	0.987129	43	0.947
CDC42BPA	CDC42BPA	1.1834975	0.9352306	0.2834888	1.0000000	0.987129	228	0.947
CDC42BPB	CDC42BPB	1.0977392	0.9779888	NA	NA	0.987129	128	0.984
CDC42BPG	CDC42BPG	NA	NA	NA	NA	0.996304	803	1.000
CDC42SE2	CDC42SE2	0.4494539	0.9229450	NA	NA	0.987129	517	0.986

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
CDC7	CDC7	0.0060741	0.9698250	NA	NA	0.996304	751	0.947
CDK1	CDK1	1.1556923	0.9229450	0.6140451	1.0000000	0.987129	152	0.947
CDK10	CDK10	0.2673360	0.9352306	NA	NA	0.987129	524	1.000
CDK11B	CDK11B	0.0896996	1.0000000	NA	NA	0.996304	737	0.947
CDK12	CDK12	0.3322233	0.9779888	NA	NA	0.991716	545	0.947
CDK13	CDK13	0.2129967	0.9945080	NA	NA	0.996304	664	0.970
CDK14	CDK14	0.6990722	0.9864715	0.1727391	1.0000000	0.987129	252	0.947
CDK15	CDK15	0.4732855	0.9229450	0.1040112	1.0000000	0.987129	324	0.947
CDK16	CDK16	0.0643085	0.9771922	NA	NA	0.996304	660	0.980
CDK17	CDK17	1.5989542	0.9352306	1.9749507	0.0000000	0.903465	23	0.947
CDK18	CDK18	0.9657632	1.0000000	0.4776672	1.0000000	0.987129	107	1.000
CDK19	CDK19	0.4945861	0.9926949	0.0633021	1.0000000	0.987129	398	0.947
CDK20	CDK20	0.7175418	1.0000000	0.3200857	1.0000000	0.987129	283	0.947
CDK4	CDK4	0.3312383	0.9698250	0.1198308	1.0000000	0.987129	401	0.947
CDK5	CDK5	0.8240295	0.9779888	NA	NA	0.996304	644	1.000
CDK5R1	CDK5R1	0.1712568	1.0000000	NA	NA	0.987129	411	0.947
CDK5R2	CDK5R2	NA	NA	NA	NA	0.996304	558	1.000
CDK5RAP1	CDK5RAP1	0.4985872	0.9779888	0.2997079	1.0000000	0.987129	473	0.984
CDK5RAP3	CDK5RAP3	1.3029931	0.2482927	0.6707720	0.4964897	0.785149	9	0.947
CDK6	CDK6	0.3301377	0.9779888	0.1850170	1.0000000	0.987129	454	0.978
CDK8	CDK8	NA	NA	0.2622786	1.0000000	0.987129	533	1.000
CDK9	CDK9	2.5566733	0.9827536	0.6566444	1.0000000	0.987129	33	0.947
CDKL1	CDKL1	0.4241545	0.9926949	NA	NA	0.996304	591	0.984
CDKL2	CDKL2	0.9408717	1.0000000	0.0248414	1.0000000	0.987129	236	0.970
CDKL3	CDKL3	0.3136498	0.9948812	0.1586791	1.0000000	0.996304	568	0.947
CDKL5	CDKL5	0.8667182	0.9378502	0.2035985	1.0000000	0.987129	275	0.947
CDKN1A	CDKN1A	0.0807526	0.9771922	NA	NA	0.996304	640	0.947
CDKN1B	CDKN1B	NA	NA	NA	NA	0.996304	753	0.986
CDKN1C	CDKN1C	0.3911030	0.9926949	NA	NA	0.987129	400	0.947
CDKN2C	CDKN2C	0.0677839	0.9698250	NA	NA	0.996304	802	0.947
CDKN2D	CDKN2D	0.0039816	0.9771922	NA	NA	0.993913	549	0.984
CDKN3	CDKN3	0.4553831	0.9887617	0.0341383	1.0000000	0.987129	459	0.947
CERK	CERK	0.4986536	1.0000000	0.6090677	1.0000000	0.987129	300	0.984
CFLAR	CFLAR	0.1493484	0.9864715	NA	NA	0.996304	581	0.947
CGREF1	CGREF1	0.4922119	0.9819710	0.0669532	1.0000000	0.987129	445	0.984
CHEK1	CHEK1	NA	NA	NA	NA	0.996304	777	1.000
CHEK2	CHEK2	0.7874497	1.0000000	NA	NA	0.987129	318	0.991
CHKA	CHKA	0.7338485	0.9989689	0.6773307	0.3863041	0.987129	193	0.947
CHKB	CHKB	0.7498821	0.9698250	0.6014773	1.0000000	0.987129	132	0.947
CHRM1	CHRM1	0.4614514	1.0000000	0.0189734	1.0000000	0.987129	381	0.947
CHUK	CHUK	0.1820807	0.9779888	NA	NA	0.996304	736	1.000
CIAPIN1	CIAPIN1	NA	NA	NA	NA	0.996304	617	0.947
CINP	CINP	1.3219023	0.9352306	0.7087550	1.0000000	0.987129	239	0.947
CIT	CIT	0.4943923	1.0000000	NA	NA	0.987129	450	0.984
CKB	CKB	1.1405447	0.9819710	NA	NA	0.987129	225	1.000
CKM	CKM	0.5914545	0.9819710	NA	NA	0.987129	326	0.947
CKMT1B	CKMT1B	0.3765893	0.9771922	NA	NA	0.996304	689	0.947
CKS2	CKS2	0.4302807	1.0000000	0.5272082	1.0000000	0.987129	474	0.947
CLK1	CLK1	0.4591103	0.9819710	0.4423802	1.0000000	0.987129	336	0.947
CLK3	CLK3	NA	NA	NA	NA	0.996304	635	1.000
CLK4	CLK4	0.4182401	1.0000000	NA	NA	0.990527	543	0.984
CMPK1	CMPK1	1.0182413	1.0000000	0.2219268	1.0000000	0.987129	191	0.947

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
CNKS1	CNKS1	0.3308219	0.9819710	NA	NA	0.987129	369	0.980
COASY	COASY	0.2034530	0.9827536	0.1899146	1.0000000	0.987129	316	0.970
COL4A3BP	COL4A3BP	0.7266131	0.9827536	NA	NA	0.987129	522	0.947
COPB2	COPB2	0.9704806	0.9352306	0.1726865	1.0000000	0.987129	394	0.947
CRKL	CRKL	NA	NA	NA	NA	0.996304	782	1.000
CSF1R	CSF1R	NA	NA	NA	NA	0.996304	784	1.000
CSK	CSK	0.6385729	0.9352306	NA	NA	0.987129	330	0.984
CSNK1A1	CSNK1A1	1.9897143	0.9606573	0.2043810	1.0000000	0.785149	15	0.991
CSNK1A1L	CSNK1A1L	0.5922948	0.9229450	NA	NA	0.987129	451	1.000
CSNK1D	CSNK1D	0.9370669	0.9926949	0.0067087	1.0000000	0.987129	198	0.973
CSNK1E	CSNK1E	0.2600198	1.0000000	NA	NA	0.996304	768	0.947
CSNK1G1	CSNK1G1	0.4850075	0.9771922	NA	NA	0.996304	683	0.947
CSNK1G2	CSNK1G2	0.0088025	0.9352306	NA	NA	0.987129	457	1.000
CSNK1G3	CSNK1G3	NA	NA	NA	NA	0.996304	756	0.986
CSNK2A1	CSNK2A1	0.9501715	0.9827536	0.9415114	0.0029940	0.987129	201	0.947
CSNK2A2	CSNK2A2	0.9740946	0.9994817	1.3577535	0.0001106	0.987129	111	0.947
CYCS	CYCS	0.7813584	0.9229450	NA	NA	0.987129	328	1.000
DAK	DAK	0.7943606	0.9352306	NA	NA	0.987129	446	0.947
DAPK1	DAPK1	0.6515759	0.9698250	NA	NA	0.996304	716	0.984
DAPK2	DAPK2	1.3516898	0.9352306	0.0680619	1.0000000	0.987129	160	0.947
DAPK3	DAPK3	0.8675944	0.9487700	0.3525906	1.0000000	0.987129	68	0.984
DBF4	DBF4	0.4474898	0.9771922	0.1867628	1.0000000	0.987129	186	0.947
DCK	DCK	1.0928526	0.9352306	0.6421748	1.0000000	0.987129	224	0.947
DCLK1	DCLK1	0.3787345	1.0000000	NA	NA	0.996304	733	0.976
DCLK2	DCLK2	0.3331730	0.9352306	NA	NA	0.987129	421	0.947
DCLK3	DCLK3	0.8873556	0.9352306	0.2415460	1.0000000	0.987129	121	0.947
DDR2	DDR2	NA	NA	NA	NA	0.997369	810	0.984
DFFA	DFFA	0.0564257	0.9229450	NA	NA	0.987605	539	1.000
DFFB	DFFB	NA	NA	NA	NA	0.996304	653	0.991
DGCR14	DGCR14	NA	NA	NA	NA	0.996304	796	1.000
DGKA	DGKA	0.6377161	1.0000000	0.6380826	1.0000000	0.987129	148	0.947
DGKB	DGKB	0.4676881	0.9984707	0.2043910	1.0000000	0.996304	567	0.947
DGKD	DGKD	0.5167425	0.9352306	0.0918170	1.0000000	0.996304	588	0.947
DGKE	DGKE	0.7915332	1.0000000	NA	NA	0.996304	684	0.984
DGKG	DGKG	0.2538426	0.9698250	NA	NA	0.996304	695	1.000
DGKI	DGKI	1.3207805	0.9771922	0.8176321	0.0921921	0.785149	12	0.947
DGKQ	DGKQ	0.3678490	0.9352306	0.0195405	1.0000000	0.987129	403	1.000
DGKZ	DGKZ	0.4150202	0.9926949	NA	NA	0.996304	637	0.984
DGUOK	DGUOK	0.5595465	0.9352306	0.5498107	1.0000000	0.987129	265	0.947
DLG1	DLG1	0.3518074	0.9827536	NA	NA	0.996304	668	0.970
DLG2	DLG2	0.8140560	0.9352306	0.2424578	1.0000000	0.987129	234	0.947
DLG3	DLG3	0.3414023	1.0000000	0.2025251	1.0000000	0.987605	537	0.947
DLG4	DLG4	0.4716592	1.0000000	0.2081794	1.0000000	0.987129	250	0.970
DMPK	DMPK	1.2629304	0.9352306	0.5624410	1.0000000	0.987129	165	0.947
DNAJC3	DNAJC3	1.0114922	0.9229450	0.6046011	1.0000000	0.987129	397	0.947
DOK1	DOK1	0.4190093	0.9352306	0.2970529	1.0000000	0.987129	171	1.000
DTYMK	DTYMK	0.6645978	0.9352306	0.4497592	1.0000000	0.987129	210	1.000
DUSP10	DUSP10	1.2048354	0.8585728	0.8461876	0.6000355	0.987129	34	0.947
DUSP2	DUSP2	0.9931999	0.9352306	NA	NA	0.996304	730	1.000
DUSP22	DUSP22	0.9931999	0.9352306	NA	NA	0.987129	414	0.947
DUSP4	DUSP4	1.3113083	0.9352306	1.0685262	0.0000972	0.987129	88	0.947
DUSP5	DUSP5	0.0219508	0.9352306	NA	NA	0.996304	658	1.000

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
DUSP6	DUSP6	NA	NA	NA	NA	0.996304	731	1.000
DUSP7	DUSP7	0.3954938	1.0000000	NA	NA	0.987129	197	1.000
DUSP8	DUSP8	0.9452810	0.9487700	0.6522982	1.0000000	0.987129	56	1.000
DVL2	DVL2	0.1272480	0.9352306	NA	NA	0.996304	636	1.000
DYRK1A	DYRK1A	0.6041260	0.9771922	NA	NA	0.987129	512	0.947
DYRK1B	DYRK1B	0.1272847	0.9352306	NA	NA	0.996031	553	0.970
DYRK2	DYRK2	NA	NA	NA	NA	0.987129	373	1.000
DYRK4	DYRK4	0.7596034	0.9352306	0.1920439	1.0000000	0.987129	406	0.947
EDN2	EDN2	NA	NA	NA	NA	0.996304	611	0.947
EEF2K	EEF2K	0.7898820	0.9819710	NA	NA	0.994367	551	0.970
EGFR	EGFR	NA	NA	NA	NA	0.996304	597	1.000
EIF2AK1	EIF2AK1	0.9644395	0.9606573	NA	NA	0.987129	307	0.947
EIF2AK2	EIF2AK2	0.3951569	0.9779888	0.0935621	1.0000000	0.987129	402	0.947
EIF2AK3	EIF2AK3	0.5133710	0.9352306	0.3383180	1.0000000	0.987129	519	0.947
EIF2AK4	EIF2AK4	0.0201623	0.9229450	NA	NA	0.996304	639	0.991
ENDOG	ENDOG	0.5335832	0.9352306	NA	NA	0.987129	417	1.000
EPHA1	EPHA1	2.6594200	0.9229450	0.2900311	1.0000000	0.987129	108	0.947
EPHA2	EPHA2	0.2715076	1.0000000	0.0472961	1.0000000	0.987129	345	0.984
EPHA3	EPHA3	0.7595923	0.9352306	0.1324196	1.0000000	0.987129	215	0.947
EPHA4	EPHA4	0.2466863	0.9819710	0.0979450	1.0000000	0.987129	468	0.947
EPHA5	EPHA5	NA	NA	NA	NA	0.996304	638	1.000
EPHA6	EPHA6	NA	NA	NA	NA	0.996304	762	0.991
EPHA7	EPHA7	0.6721918	0.8987868	0.4552777	1.0000000	0.987129	258	0.947
EPHA8	EPHA8	1.1113576	0.9352306	0.0572473	1.0000000	0.987129	173	0.980
EPHB1	EPHB1	0.6755185	0.9827536	0.2115824	1.0000000	0.987605	538	0.947
EPHB2	EPHB2	0.4955283	0.9721909	NA	NA	0.996304	587	1.000
EPHB4	EPHB4	0.8636606	0.9229450	0.3259425	1.0000000	0.987129	483	0.947
EPHB6	EPHB6	0.5172891	0.9771922	0.1039725	1.0000000	0.987129	288	0.991
ERBB2	ERBB2	0.6416822	0.9698250	0.8551889	0.0207807	0.987129	177	0.947
ERBB3	ERBB3	0.2506936	0.9779888	NA	NA	0.987129	303	0.947
ERBB4	ERBB4	0.5379258	0.9771922	NA	NA	0.987129	392	0.984
ERN1	ERN1	0.2360471	0.9352306	0.4297750	1.0000000	0.987129	280	0.947
ETNK1	ETNK1	1.1306210	0.9819710	0.2739880	1.0000000	0.987129	181	0.980
ETNK2	ETNK2	0.0423561	0.9378502	NA	NA	0.996304	712	1.000
EVI5L	EVI5L	0.7418737	0.9771922	0.3781197	1.0000000	0.987129	135	0.947
EXOSC10	EXOSC10	NA	NA	NA	NA	0.996304	779	0.957
FADD	FADD	2.9977883	0.1235338	2.7466780	0.0000000	0.001650	3	0.006
FASTK	FASTK	0.0963179	0.9229450	NA	NA	0.996304	703	1.000
FER	FER	1.1287416	0.9229450	0.8130390	0.0356230	0.792340	18	0.947
FES	FES	0.4611444	0.9352306	0.1308092	1.0000000	0.987129	408	0.947
FGFR1	FGFR1	0.5964834	0.9819710	0.2560162	1.0000000	0.987129	418	0.947
FGFR2	FGFR2	1.9214314	0.9352306	0.6981811	0.2598086	0.792340	17	0.947
FGFR3	FGFR3	1.1112466	1.0000000	0.9170620	0.9295999	0.987129	64	1.000
FGFR4	FGFR4	NA	NA	NA	NA	0.996304	646	0.991
FGR	FGR	1.9011334	0.9229450	0.4998164	1.0000000	0.987129	45	0.947
FLT1	FLT1	0.4081041	0.9771922	0.1658447	1.0000000	0.987129	510	0.947
FLT3	FLT3	0.2578944	0.9779888	NA	NA	0.996304	691	0.947
FLT4	FLT4	0.0930259	0.9819710	NA	NA	0.996304	565	0.984
FN3K	FN3K	2.0201293	0.1614330	1.2257973	0.0000044	0.661245	7	0.594
FN3KRP	FN3KRP	0.3948722	1.0000000	NA	NA	0.996304	680	1.000
FRK	FRK	0.3856751	0.9352306	0.3121334	1.0000000	0.987129	518	0.947
FUK	FUK	0.0348757	0.9378502	NA	NA	0.996304	620	1.000

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
FXN	FXN	0.9372110	0.9352306	0.4181693	1.0000000	0.987129	428	0.947
FYB	FYB	0.5139241	0.9771922	0.4347904	1.0000000	0.987129	166	0.947
FYN	FYN	0.4276836	0.9827536	NA	NA	0.987129	437	0.947
GADD45A	GADD45A	0.2121154	0.9771922	NA	NA	0.996304	576	0.980
GADD45B	GADD45B	0.5671594	0.9352306	0.0903561	1.0000000	0.987129	386	0.947
GADD45G	GADD45G	0.0692511	0.9378502	NA	NA	0.996304	609	1.000
GAK	GAK	1.0728750	0.9229450	0.1504273	1.0000000	0.792340	19	0.947
GALK1	GALK1	1.0073200	0.9352306	0.2240781	1.0000000	0.987129	149	0.947
GALK2	GALK2	1.1455236	0.9352306	NA	NA	0.987129	298	0.947
GAP43	GAP43	0.7464976	0.9771922	0.1094674	1.0000000	0.987129	220	0.970
GCK	GCK	0.1714343	0.9926949	NA	NA	0.996304	725	0.970
GFRA2	GFRA2	0.0492886	0.9189454	0.2292247	1.0000000	0.987129	334	1.000
GK	GK	1.1833971	0.9827536	0.0217644	1.0000000	0.987129	383	0.947
GK2	GK2	0.3158302	0.9995748	NA	NA	0.987129	289	1.000
GMFB	GMFB	NA	NA	NA	NA	0.996304	774	0.986
GMFG	GMFG	0.1654409	0.9864715	0.0060920	1.0000000	0.987129	347	0.970
GRK1	GRK1	0.3870944	0.9819710	0.3221080	1.0000000	0.987129	496	0.947
GRK4	GRK4	0.3664403	0.9771922	0.3282639	1.0000000	0.987129	341	0.947
GRK5	GRK5	2.1305308	0.9606573	0.3976867	1.0000000	0.987129	214	0.947
GRK6	GRK6	0.6868571	0.9827536	NA	NA	0.996304	557	0.984
GRK7	GRK7	1.0761258	0.9229450	0.7780284	0.0629914	0.987129	123	0.947
GSK3A	GSK3A	NA	NA	NA	NA	0.996304	775	0.984
GSK3B	GSK3B	0.5736942	0.9827536	NA	NA	0.987129	292	1.000
GTF2H1	GTF2H1	0.2378024	1.0000000	NA	NA	0.996304	699	0.984
GUCY2C	GUCY2C	0.6748501	1.0000000	0.6733792	0.6150173	0.987129	139	0.984
GUCY2D	GUCY2D	0.5357575	0.9771922	NA	NA	0.996304	726	0.970
GUCY2F	GUCY2F	1.1727577	0.9266668	0.3254783	1.0000000	0.987129	477	0.947
GUK1	GUK1	0.5080971	0.9352306	NA	NA	0.987129	205	0.947
HCK	HCK	0.0064593	0.9617135	NA	NA	0.996304	688	0.984
HIPK1	HIPK1	0.1865967	0.9827536	NA	NA	0.996304	608	0.970
HIPK2	HIPK2	0.3779807	0.9229450	NA	NA	0.987129	379	1.000
HIPK3	HIPK3	1.3844461	0.9827536	NA	NA	0.987129	432	0.947
HIPK4	HIPK4	0.2264915	0.9352306	NA	NA	0.996304	566	1.000
HK1	HK1	0.3284579	0.9819710	NA	NA	0.996304	747	0.970
HK2	HK2	0.1229796	0.9819710	NA	NA	0.987129	463	0.947
HK3	HK3	0.2879143	0.9779888	NA	NA	0.996304	650	1.000
HRK	HRK	1.8860725	0.9352306	1.7832227	0.0000000	0.987129	46	0.947
HSPB8	HSPB8	0.1477088	1.0000000	NA	NA	0.987129	338	0.970
HUNK	HUNK	0.3004522	0.9779888	0.0986521	1.0000000	0.987129	416	0.984
ICK	ICK	0.8070161	1.0000000	0.4460625	1.0000000	0.987129	319	0.947
IGF1R	IGF1R	0.0997776	1.0000000	NA	NA	0.996304	612	0.947
IKBKAP	IKBKAP	NA	NA	NA	NA	0.996304	781	0.947
IKBKB	IKBKB	1.3256621	0.9352306	0.6412730	1.0000000	0.987129	188	0.947
IKBKE	IKBKE	NA	NA	NA	NA	0.996304	673	1.000
IL2	IL2	0.2941995	1.0000000	NA	NA	0.996304	582	0.947
ILK	ILK	1.5617934	0.9771922	0.3427110	1.0000000	0.987129	257	0.970
ILKAP	ILKAP	0.5073778	0.9771922	0.3427110	1.0000000	0.987129	423	0.947
INSR	INSR	0.9671779	0.9352306	0.1654122	1.0000000	0.987129	129	0.947
IP6K1	IP6K1	1.0358713	1.0000000	0.3003799	1.0000000	0.987129	192	0.984
IP6K2	IP6K2	0.6787674	0.9779888	0.2934268	1.0000000	0.987129	484	0.947
IP6K3	IP6K3	2.1541987	0.3285571	0.9775242	0.0004042	0.785149	13	0.947
IPMK	IPMK	1.0358599	0.9487700	0.3504497	1.0000000	0.987129	84	0.947

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
IPPK	IPPK	0.4359185	1.0000000	0.1637995	1.0000000	0.987129	370	1.000
IQCH	IQCH	0.7304135	0.9487700	0.1747066	1.0000000	0.987129	424	0.947
IRAK1BP1	IRAK1BP1	1.1029057	0.9378502	0.8329178	0.0667500	0.987129	67	0.947
IRAK2	IRAK2	NA	NA	NA	NA	0.996304	794	1.000
IRAK3	IRAK3	0.6046816	0.9352306	0.3140614	1.0000000	0.987129	76	0.947
IRAK4	IRAK4	0.5722086	0.9352306	NA	NA	0.987129	440	0.947
IRS1	IRS1	0.4113347	0.9352306	NA	NA	0.987129	385	0.947
ITGB1BP1	ITGB1BP1	0.6097321	0.9827536	NA	NA	0.987129	387	0.984
ITK	ITK	0.6874024	0.9819710	0.0614818	1.0000000	0.987129	294	0.970
ITPK1	ITPK1	0.9015111	0.9352306	NA	NA	0.987129	378	1.000
ITPKA	ITPKA	NA	NA	NA	NA	0.996304	795	1.000
ITPKB	ITPKB	0.5643856	0.9378502	NA	NA	0.996304	657	1.000
ITPKC	ITPKC	NA	NA	NA	NA	0.996304	661	1.000
JAK1	JAK1	0.2760568	0.9779888	NA	NA	0.996304	629	0.947
JAK2	JAK2	0.7931736	0.9771922	0.5538103	1.0000000	0.987129	415	0.947
JAK3	JAK3	NA	NA	0.0615456	1.0000000	0.987129	516	1.000
KALRN	KALRN	0.8982621	0.9352306	0.5238860	1.0000000	0.987129	104	0.947
KDR	KDR	0.1928624	0.9773178	0.2522061	1.0000000	0.987129	342	0.947
KHK	KHK	0.3303576	1.0000000	0.4216749	1.0000000	0.987129	231	0.947
KIF13B	KIF13B	0.2795424	0.9819710	NA	NA	0.991716	547	0.947
KIT	KIT	0.7830503	0.9229450	0.5246567	1.0000000	0.987129	372	0.947
KSR2	KSR2	0.7677107	0.9352306	0.4008560	1.0000000	0.987129	357	0.947
LAMTOR3	LAMTOR3	0.8558083	0.9266668	0.5078978	1.0000000	0.987129	158	0.947
LATS1	LATS1	0.7533308	0.9819710	1.2426869	0.0003452	0.987129	144	0.947
LATS2	LATS2	0.6932787	0.9352306	0.2612398	1.0000000	0.987129	295	0.947
LCK	LCK	NA	NA	NA	NA	0.996304	727	1.000
LCP2	LCP2	0.3437949	0.9926949	NA	NA	0.996304	619	0.984
LIMK2	LIMK2	0.7231050	0.9995748	0.7912191	1.0000000	0.987129	273	0.947
LMTK2	LMTK2	0.4300985	0.9773178	0.5304925	1.0000000	0.987129	272	0.986
LMTK3	LMTK3	1.9431917	0.9779888	1.0154113	0.0001587	0.987129	35	0.947
LRRK1	LRRK1	0.1263765	0.9352306	NA	NA	0.987129	534	1.000
LTK	LTK	2.1156511	0.9771922	NA	NA	0.987129	235	0.947
LYN	LYN	0.6322382	0.9819710	0.1248995	1.0000000	0.987129	405	0.947
MAGI3	MAGI3	0.6160097	0.9819710	NA	NA	0.987129	320	0.970
MALT1	MALT1	0.3742165	0.9779888	NA	NA	0.987129	465	0.970
MAP2K1	MAP2K1	0.3651131	1.0000000	0.2425068	1.0000000	0.987129	480	0.947
MAP2K2	MAP2K2	0.6108592	1.0000000	0.2625788	1.0000000	0.987129	264	0.984
MAP2K3	MAP2K3	1.2597789	0.9352306	0.5789501	1.0000000	0.987129	32	1.000
MAP2K4	MAP2K4	0.5920671	0.9827536	NA	NA	0.987129	442	0.947
MAP2K5	MAP2K5	0.5332510	0.9771922	0.1079867	1.0000000	0.987129	352	0.957
MAP2K6	MAP2K6	1.0316118	0.9352306	0.2213907	1.0000000	0.987129	112	0.947
MAP2K7	MAP2K7	1.6965688	1.0000000	1.1032489	0.0001706	0.912769	29	0.947
MAP3K1	MAP3K1	0.2194834	0.9819710	NA	NA	0.996304	720	0.947
MAP3K10	MAP3K10	0.7102742	0.9352306	0.1875562	1.0000000	0.987129	130	0.984
MAP3K11	MAP3K11	1.1780454	0.9698250	0.1159087	1.0000000	0.987129	404	0.970
MAP3K12	MAP3K12	0.2995401	0.9827536	0.1292028	1.0000000	0.987129	268	0.947
MAP3K13	MAP3K13	1.0182412	0.9352306	0.7890949	0.1618026	0.903465	22	0.947
MAP3K14	MAP3K14	0.7399975	0.9819710	0.4605167	1.0000000	0.987129	174	0.947
MAP3K2	MAP3K2	NA	NA	NA	NA	0.996304	722	1.000
MAP3K3	MAP3K3	0.6480624	0.9352306	NA	NA	0.987129	361	0.970
MAP3K4	MAP3K4	0.4463569	0.9771922	NA	NA	0.987129	491	0.970
MAP3K5	MAP3K5	0.8004945	0.9771922	0.5124545	1.0000000	0.987129	133	0.947

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
MAP3K6	MAP3K6	0.3951576	0.9352306	0.1991338	1.0000000	0.987129	350	1.000
MAP3K7	MAP3K7	0.5874053	0.9779888	0.5640807	1.0000000	0.987129	355	0.947
MAP3K8	MAP3K8	0.6192415	0.9827536	0.1414424	1.0000000	0.987129	302	0.947
MAP3K9	MAP3K9	0.4414683	0.9771922	NA	NA	0.996304	667	0.970
MAP4K1	MAP4K1	0.2909970	0.9606573	NA	NA	0.996304	596	1.000
MAP4K2	MAP4K2	0.2015943	1.0000000	0.0769249	1.0000000	0.996304	682	0.970
MAP4K3	MAP4K3	0.7589799	0.9771922	NA	NA	0.987129	267	0.970
MAP4K4	MAP4K4	0.4741068	0.9698250	0.3836724	1.0000000	0.987129	262	0.947
MAP4K5	MAP4K5	1.3771763	0.9771922	0.1812439	1.0000000	0.987129	244	0.947
MAPK1	MAPK1	0.1345348	0.9762600	NA	NA	0.996304	687	1.000
MAPK10	MAPK10	0.5809323	0.9378502	NA	NA	0.987129	532	0.947
MAPK11	MAPK11	0.0706652	0.9827536	NA	NA	0.996304	734	0.970
MAPK12	MAPK12	0.5423328	0.9352306	0.2049093	1.0000000	0.987129	393	0.947
MAPK13	MAPK13	1.0818802	0.9827536	0.9602742	0.0037378	0.987129	58	0.947
MAPK14	MAPK14	0.6029024	0.9819710	0.0440406	1.0000000	0.987129	223	0.984
MAPK3	MAPK3	NA	NA	NA	NA	0.996304	787	1.000
MAPK4	MAPK4	0.2888695	0.9926949	NA	NA	0.996304	741	0.947
MAPK6	MAPK6	0.3704328	0.9487700	0.6294471	1.0000000	0.987129	362	0.947
MAPK7	MAPK7	NA	NA	NA	NA	0.996304	678	1.000
MAPK8	MAPK8	0.5759238	0.9606573	0.9554903	0.0023104	0.996304	702	0.947
MAPK8IP1	MAPK8IP1	0.5185405	0.9352306	NA	NA	0.987129	364	0.947
MAPK8IP2	MAPK8IP2	1.6805443	0.9266668	0.9554903	0.0023104	0.987129	47	0.947
MAPK8IP3	MAPK8IP3	0.4862367	0.9779888	NA	NA	0.987129	306	0.984
MAPK9	MAPK9	1.5726463	0.8585728	0.5997949	1.0000000	0.987129	154	0.947
MAPKAPK3	MAPKAPK3	0.3156536	0.9887617	NA	NA	0.996304	704	0.984
MAPKAPK5	MAPKAPK5	0.2706731	0.9771922	0.0602349	1.0000000	0.987129	514	0.996
MARK1	MARK1	0.4592459	0.9771922	NA	NA	0.987129	494	0.947
MARK2	MARK2	0.5270241	0.9819710	NA	NA	0.996031	552	0.947
MARK3	MARK3	0.9070370	0.9229450	0.4957894	1.0000000	0.987129	185	0.947
MARK4	MARK4	0.4363262	0.9771922	0.2990854	1.0000000	0.987129	441	0.947
MAST1	MAST1	0.3969498	0.9698250	0.2046545	1.0000000	0.987129	218	1.000
MAST2	MAST2	0.5315558	0.9948812	NA	NA	0.987129	488	1.000
MAST3	MAST3	0.6850745	0.9352306	0.0229754	1.0000000	0.987129	245	0.947
MASTL	MASTL	1.3458525	0.9229450	NA	NA	0.987129	290	1.000
MATK	MATK	1.1744549	0.9543714	0.4812604	1.0000000	0.987129	122	0.984
MBIP	MBIP	0.6893827	0.9229450	0.9025821	0.0056186	0.987129	297	0.947
MCL1	MCL1	0.5331213	0.9771922	0.1729979	1.0000000	0.987129	99	0.947
MDM1	MDM1	0.6533793	0.9352306	0.4885223	1.0000000	0.987129	458	0.947
MDM2	MDM2	0.8195314	0.9229450	1.1155550	0.0000212	0.987129	305	0.947
MDM4	MDM4	0.9092164	1.0000000	0.1928406	1.0000000	0.987129	321	0.984
MECOM	MECOM	1.0334410	0.9771922	0.4807266	1.0000000	0.987129	253	0.947
MELK	MELK	1.3664380	0.9266668	NA	NA	0.987129	207	1.000
MERTK	MERTK	0.0904356	0.9352306	NA	NA	0.996304	669	1.000
MET	MET	0.7008543	1.0000000	NA	NA	0.987129	382	0.984
MINK1	MINK1	0.2812650	0.9698250	NA	NA	0.987129	209	0.984
MKNK1	MKNK1	0.4992978	0.9352306	0.1796720	1.0000000	0.987129	109	0.947
MKNK2	MKNK2	0.7401384	0.9352306	0.0820211	1.0000000	0.987129	77	0.984
MLKL	MLKL	0.3443046	0.9779888	0.1029673	1.0000000	0.987129	282	0.947
MOK	MOK	0.2788543	0.9771922	NA	NA	0.987129	467	1.000
MOS	MOS	0.8542050	0.9698250	0.0266578	1.0000000	0.987129	266	0.984
MPP2	MPP2	0.8810937	0.9229450	0.4494138	1.0000000	0.987129	249	0.947
MPP3	MPP3	NA	NA	NA	NA	0.999373	812	0.984

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
MPZL1	MPZL1	1.5564806	0.9819710	NA	NA	0.987129	311	1.000
MRC2	MRC2	1.4689974	0.9229450	0.3586746	1.0000000	0.987129	199	0.947
MST1R	MST1R	0.1070315	0.9352306	NA	NA	0.996304	670	1.000
MST4	MST4	0.1768072	1.0000000	NA	NA	0.996304	710	0.984
MTOR	MTOR	0.2076935	1.0000000	NA	NA	0.996304	666	0.986
MUSK	MUSK	0.3964869	0.9771922	0.3428274	1.0000000	0.987129	456	0.947
MVD	MVD	NA	NA	NA	NA	0.996304	804	1.000
MVK	MVK	1.2210034	0.9352306	0.5232427	1.0000000	0.912769	27	0.947
MYC	MYC	1.0703745	0.9229450	1.0493447	0.0000603	0.819189	20	0.947
MYD88	MYD88	0.5112041	0.9779888	NA	NA	0.987129	521	0.978
MYLK	MYLK	1.1328158	0.9229450	0.5531443	1.0000000	0.987129	124	0.947
MYLK2	MYLK2	0.5365124	0.9827536	NA	NA	0.987129	506	1.000
MYLK3	MYLK3	1.3646725	0.9229450	0.6653034	0.4634541	0.987129	169	0.947
MYO3A	MYO3A	0.2875021	0.9352306	NA	NA	0.987129	390	0.984
MYO3B	MYO3B	0.3165419	0.9771922	0.0431093	1.0000000	0.996304	647	0.947
NADK	NADK	0.1379279	0.9352306	NA	NA	0.996304	633	0.986
NAGK	NAGK	NA	NA	NA	NA	0.996304	672	0.984
NBEA	NBEA	0.9817465	0.9819710	NA	NA	0.987129	528	0.984
NEK1	NEK1	0.1522166	1.0000000	0.9335366	0.0034314	0.996304	767	0.947
NEK11	NEK11	1.4784213	0.9352306	0.9335366	0.0034314	0.987129	70	0.947
NEK2	NEK2	0.9370639	0.9779888	0.2189573	1.0000000	0.996304	728	0.947
NEK3	NEK3	0.9905953	0.9352306	NA	NA	0.987129	180	0.947
NEK4	NEK4	0.1021662	0.9948812	NA	NA	0.996304	714	0.947
NEK6	NEK6	0.3737859	0.9827536	0.2776363	1.0000000	0.987129	200	0.947
NEK7	NEK7	1.0266071	0.9819710	NA	NA	0.996304	652	0.947
NEK8	NEK8	NA	NA	NA	NA	0.996304	746	1.000
NEK9	NEK9	0.0526153	0.9779888	NA	NA	0.996304	709	0.947
NIM1	NIM1	0.0794934	0.9819710	NA	NA	0.996304	648	0.947
NLK	NLK	1.3468388	0.9352306	0.7749996	1.0000000	0.987129	37	0.947
NME2	NME2	0.5301922	1.0000000	0.0323549	1.0000000	0.987129	492	0.947
NME3	NME3	0.7452549	0.9771922	0.0553396	1.0000000	0.987129	216	0.947
NME4	NME4	0.5415116	1.0000000	NA	NA	0.996304	671	0.947
NME5	NME5	0.4132178	0.9771922	0.2238250	1.0000000	0.987129	495	0.947
NME6	NME6	0.8870196	0.9352306	NA	NA	0.987129	434	0.947
NME7	NME7	3.0790893	0.9229450	0.7293105	1.0000000	0.819189	21	0.947
NPR1	NPR1	0.9026329	0.9352306	0.4250670	1.0000000	0.987129	313	0.947
NPR2	NPR2	0.7081504	0.9352306	NA	NA	0.987129	269	0.947
NRBP1	NRBP1	1.0059893	0.9771922	0.0529037	1.0000000	0.987129	284	0.991
NRG3	NRG3	NA	NA	NA	NA	0.996304	724	1.000
NTRK1	NTRK1	NA	NA	NA	NA	0.996304	800	1.000
NTRK2	NTRK2	0.6184220	0.9827536	0.3788609	1.0000000	0.987129	278	1.000
NTRK3	NTRK3	0.8040790	0.9266668	NA	NA	0.987129	377	1.000
NUAK1	NUAK1	0.4542698	0.9926949	0.1883989	1.0000000	0.987129	497	0.947
NUAK2	NUAK2	0.4508354	0.9827536	0.0874786	1.0000000	0.987129	213	1.000
OBSCN	OBSCN	0.9422407	0.9352306	0.0430081	1.0000000	0.987129	106	0.984
OXSR1	OXSR1	0.1396177	0.9827536	NA	NA	0.996304	750	0.947
PAC SIN1	PAC SIN1	0.1098829	0.9827536	NA	NA	0.996304	634	0.970
PAG1	PAG1	1.0007542	0.9779888	1.2017977	0.0000233	0.987129	119	0.947
PAK1	PAK1	0.8557338	0.9487700	0.6210651	1.0000000	0.987129	95	0.947
PAK2	PAK2	1.0322884	0.9229450	0.4028300	1.0000000	0.987129	206	0.947
PAK3	PAK3	0.7438416	0.9779888	NA	NA	0.987129	285	0.984
PAK4	PAK4	0.5706180	0.9487700	NA	NA	0.987129	531	0.947

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
PAK6	PAK6	0.5204805	0.9773178	NA	NA	0.987129	511	1.000
PAK7	PAK7	0.3464708	0.9771922	NA	NA	0.987129	452	1.000
PANK1	PANK1	0.3563350	1.0000000	NA	NA	0.987129	367	1.000
PANK3	PANK3	0.7395396	0.9948812	0.9584480	0.0394254	0.987129	170	0.970
PANK4	PANK4	0.2286479	0.9887617	NA	NA	0.996304	583	0.970
PAPSS1	PAPSS1	0.0928093	0.9352306	NA	NA	0.987129	527	1.000
PAPSS2	PAPSS2	NA	NA	NA	NA	0.996304	785	1.000
PASK	PASK	1.7812678	0.0228810	1.3056495	0.0000001	0.003713	4	0.471
PBK	PBK	1.1143614	0.9352306	0.7964466	0.3151842	0.987129	237	0.947
PCK1	PCK1	0.8291908	0.9779888	0.1364162	1.0000000	0.987129	204	0.947
PDGFRA	PDGFRA	0.2683805	1.0000000	NA	NA	0.987129	399	0.947
PDGFRB	PDGFRB	0.5384896	0.9352306	NA	NA	0.987129	279	0.984
PDIK1L	PDIK1L	1.5657414	0.9771922	0.0978438	1.0000000	0.987129	127	0.947
PDK1	PDK1	0.8403452	0.9819710	NA	NA	0.987129	407	0.947
PDK2	PDK2	0.7463213	0.9819710	0.2377588	1.0000000	0.987605	541	0.947
PDK3	PDK3	1.4812117	0.8987868	0.8166543	0.0362199	0.987129	54	0.947
PDK4	PDK4	NA	NA	NA	NA	0.996304	783	0.984
PDLIM5	PDLIM5	0.9166930	0.9779888	0.9167555	0.0237694	0.987129	212	0.947
PDPK1	PDPK1	0.6881419	0.9352306	NA	NA	0.996304	559	0.984
PDXK	PDXK	0.7371840	0.9779888	NA	NA	0.996304	625	0.991
PFKFB1	PFKFB1	0.5162469	0.9487700	NA	NA	0.987129	340	1.000
PFKFB2	PFKFB2	NA	NA	NA	NA	0.996304	761	0.970
PFKFB3	PFKFB3	0.7586638	0.9926949	0.0728014	1.0000000	0.987129	182	1.000
PFKFB4	PFKFB4	0.1303079	0.9487700	NA	NA	0.996304	685	0.984
PFKL	PFKL	0.6422200	0.9779888	NA	NA	0.987129	260	0.980
PFKM	PFKM	0.8598746	0.9771922	NA	NA	0.987129	230	0.991
PFKP	PFKP	0.7907030	0.9779888	0.3362159	1.0000000	0.987129	238	0.970
PGK2	PGK2	0.2747300	0.9352306	0.5717928	1.0000000	0.987129	420	0.947
PHKA2	PHKA2	0.4943604	0.9352306	0.1259010	1.0000000	0.987129	271	0.947
PHKG1	PHKG1	0.8135035	0.9779888	0.8256717	0.0752976	0.987129	92	1.000
PHKG2	PHKG2	0.1732027	1.0000000	NA	NA	0.996304	663	0.984
PI4K2B	PI4K2B	0.2995340	0.9779888	NA	NA	0.996304	729	0.970
PI4KA	PI4KA	0.6139646	1.0000000	NA	NA	0.996304	574	0.984
PI4KB	PI4KB	0.5807103	0.9352306	NA	NA	0.987129	365	0.947
PICK1	PICK1	0.5508905	0.9352306	NA	NA	0.987605	536	1.000
PIDD	PIDD	1.8795263	0.9779888	NA	NA	0.996304	744	0.947
PIK3C2A	PIK3C2A	0.7645092	0.9738007	0.1962738	1.0000000	0.987129	256	0.947
PIK3C2B	PIK3C2B	0.3857834	0.9827536	NA	NA	0.996304	621	0.947
PIK3C2G	PIK3C2G	1.0380669	0.9352306	0.4715453	1.0000000	0.987129	118	0.947
PIK3CA	PIK3CA	1.1565837	0.9266668	NA	NA	0.987129	241	0.947
PIK3CB	PIK3CB	NA	NA	NA	NA	0.997369	807	0.970
PIK3CG	PIK3CG	0.9715024	0.9827536	NA	NA	0.987129	315	0.976
PIK3R1	PIK3R1	0.9684819	0.9189454	0.4200582	1.0000000	0.987129	436	0.947
PIK3R2	PIK3R2	0.7659400	0.9606573	0.6184411	1.0000000	0.987129	103	0.947
PIK3R3	PIK3R3	NA	NA	NA	NA	0.997369	808	1.000
PIK3R4	PIK3R4	NA	NA	NA	NA	0.987129	479	1.000
PIM1	PIM1	0.1920825	1.0000000	NA	NA	0.991716	546	0.984
PINK1	PINK1	0.5215153	0.9698250	NA	NA	0.987129	371	0.947
PIP4K2A	PIP4K2A	0.1230107	0.9229450	0.1787308	1.0000000	0.987129	460	0.984
PIP4K2B	PIP4K2B	0.5453703	0.9352306	0.1484424	1.0000000	0.987129	329	0.947
PIP4K2C	PIP4K2C	1.1239906	0.9229450	0.4223154	1.0000000	0.987129	57	0.947
PIP5K1A	PIP5K1A	1.0211259	0.9948812	0.4283034	1.0000000	0.987129	150	1.000

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
PIP5KL1	PIP5KL1	0.7830548	0.9352306	0.4202354	1.0000000	0.987129	81	0.947
PKIA	PKIA	0.5543383	0.9378502	NA	NA	0.996304	584	0.947
PKIB	PKIB	0.2184448	0.9773178	NA	NA	0.990527	544	0.947
PKM	PKM	0.6771106	0.9773178	0.2476447	1.0000000	0.987129	312	0.984
PKMYT1	PKMYT1	NA	NA	NA	NA	0.996304	708	1.000
PKN1	PKN1	0.1237527	0.9771922	0.2290513	1.0000000	0.996304	586	0.984
PKN2	PKN2	NA	NA	NA	NA	0.996304	773	0.947
PKN3	PKN3	NA	NA	NA	NA	0.996304	770	0.970
PLK1	PLK1	0.4969297	0.9827536	NA	NA	0.996304	592	0.970
PLK2	PLK2	1.0292208	0.9352306	0.3846535	1.0000000	0.987129	359	0.947
PLK3	PLK3	1.2492644	0.9265915	0.2640582	1.0000000	0.987129	184	0.947
PLK4	PLK4	1.1878625	0.9229450	0.6914705	1.0000000	0.987129	246	0.947
PMAIP1	PMAIP1	0.6787999	0.9771922	0.5129958	1.0000000	0.987129	190	0.970
PMVK	PMVK	1.4712365	0.9229450	0.2784454	1.0000000	0.987129	90	0.947
PNKP	PNKP	0.2645635	0.9827536	0.1444269	1.0000000	0.987129	498	0.970
POM121L10P	POM121L10P	0.0828675	0.9914359	NA	NA	0.996304	606	0.947
PPP1R17	PPP1R17	0.7566671	0.9779888	0.3303555	1.0000000	0.987129	263	0.947
PPP1R1B	PPP1R1B	0.4946769	1.0000000	NA	NA	0.987129	523	1.000
PPP2CB	PPP2CB	0.9787633	0.9352306	0.5365264	1.0000000	0.987129	89	0.947
PPP4C	PPP4C	0.2125397	1.0000000	NA	NA	0.996304	717	0.984
PRKAA1	PRKAA1	0.1314506	0.9352306	NA	NA	0.996304	697	1.000
PRKAA2	PRKAA2	0.0120831	0.9819710	NA	NA	0.996304	772	0.947
PRKACA	PRKACA	1.4762968	0.9352306	NA	NA	0.987129	194	0.970
PRKACB	PRKACB	0.2098243	0.9229450	NA	NA	0.996304	769	1.000
PRKACG	PRKACG	0.3392546	0.9819710	NA	NA	0.987129	487	0.986
PRKAG3	PRKAG3	1.9870668	0.9352306	0.9230088	0.0033866	0.987129	93	0.947
PRKAR1A	PRKAR1A	1.3511150	0.9352306	1.3066797	0.0000000	0.987129	53	0.947
PRKAR2A	PRKAR2A	0.7688168	0.9352306	0.2018066	1.0000000	0.987129	363	0.947
PRKAR2B	PRKAR2B	0.4701875	0.9606573	NA	NA	0.996304	614	0.947
PRKCA	PRKCA	0.4303601	0.9352306	NA	NA	0.996304	628	0.947
PRKCB	PRKCB	NA	NA	NA	NA	0.996304	719	1.000
PRKCD	PRKCD	0.5182262	0.9827536	0.4757548	1.0000000	0.987129	291	0.984
PRKCE	PRKCE	NA	NA	NA	NA	0.997369	809	1.000
PRKCG	PRKCG	0.1461218	0.9827536	NA	NA	0.987129	453	0.970
PRKCH	PRKCH	1.3890738	0.9492743	1.2768183	0.0000003	0.987129	98	0.947
PRKCI	PRKCI	0.2153889	0.9698250	NA	NA	0.996304	739	0.991
PRKCQ	PRKCQ	NA	NA	NA	NA	0.996304	778	1.000
PRKCSH	PRKCSH	1.0511534	0.9698250	0.5546669	1.0000000	0.987129	156	0.947
PRKCZ	PRKCZ	1.2972453	0.9948812	1.1267946	0.0000217	0.987129	71	0.947
PRKD1	PRKD1	0.2560721	0.9606573	NA	NA	0.996304	556	0.984
PRKD2	PRKD2	1.1545217	0.9229450	0.5585946	1.0000000	0.987129	38	0.947
PRKD3	PRKD3	1.0387831	0.9352306	1.2469315	0.0000009	0.987129	72	0.947
PRKDC	PRKDC	0.3829477	1.0000000	NA	NA	0.987129	525	0.947
PRKG1	PRKG1	0.1223528	0.9771922	NA	NA	0.996304	602	1.000
PRKG2	PRKG2	NA	NA	NA	NA	0.997369	811	0.947
PRKRA	PRKRA	0.4051922	1.0000000	0.0381255	1.0000000	0.987605	542	0.947
PRKX	PRKX	0.9939863	1.0000000	0.5869604	1.0000000	0.987129	196	0.947
PRKY	PRKY	1.2648122	0.9352306	1.1629272	0.0000322	0.785149	8	0.471
PRPF4B	PRPF4B	0.2722994	0.9926949	0.1580221	1.0000000	0.987129	508	0.970
PRPS1	PRPS1	1.4940725	0.9779888	1.0154924	0.0010360	0.987129	39	0.947
PRPS1L1	PRPS1L1	0.0046190	0.9827536	NA	NA	0.996304	706	0.947
PRPS2	PRPS2	0.0392192	0.9771922	NA	NA	0.996304	771	0.970

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
PRPSAP1	PRPSAP1	0.5072084	0.9606573	NA	NA	0.987129	410	0.984
PRPSAP2	PRPSAP2	0.1874499	0.9926949	NA	NA	0.987129	475	0.984
PSKH1	PSKH1	1.0889051	0.9779888	NA	NA	0.987129	255	0.947
PTEN	PTEN	0.8716577	1.0000000	NA	NA	0.987129	155	0.984
PTK2	PTK2	0.3415261	0.9980938	NA	NA	0.996304	752	0.947
PTK2B	PTK2B	0.4549263	0.9352306	NA	NA	0.987129	388	0.947
PTK6	PTK6	NA	NA	NA	NA	0.996304	743	1.000
PTK7	PTK7	0.4358419	0.9771922	0.1026740	1.0000000	0.987129	325	1.000
PTPN5	PTPN5	NA	NA	NA	NA	0.996304	749	1.000
PTPRG	PTPRG	0.1989809	1.0000000	NA	NA	0.996304	624	1.000
PTPRJ	PTPRJ	0.6100891	0.9352306	0.3066707	1.0000000	0.987129	343	0.947
PTPRR	PTPRR	1.3619848	0.9352306	1.1714789	0.0000031	0.987129	66	0.947
PTPRT	PTPRT	0.4144189	0.9771922	0.0988436	1.0000000	0.987129	447	0.947
PUS10	PUS10	0.9633855	0.9779888	NA	NA	0.987129	499	0.947
PXK	PXK	1.0012062	0.9352306	0.3267076	1.0000000	0.987129	222	0.947
RAC1	RAC1	0.7778276	0.9779888	0.6828580	0.4732970	0.987129	102	0.984
RAF1	RAF1	0.3905257	0.9779888	NA	NA	0.987129	179	0.970
random	random	0.6696505	1.0000000	0.4064573	1.0000000	0.987129	63	1.000
RAPGEF3	RAPGEF3	1.1575808	1.0000000	0.4030594	1.0000000	0.987129	78	1.000
RAPGEF4	RAPGEF4	0.1405126	0.9827536	NA	NA	0.996304	693	0.947
RASGRF2	RASGRF2	0.3556482	0.9779888	0.0009588	1.0000000	0.987129	242	0.947
RET	RET	0.6153260	0.9771922	0.2388039	1.0000000	0.987129	489	0.947
RFK	RFK	0.7276941	0.9771922	0.1941861	1.0000000	0.987129	75	0.984
RIOK1	RIOK1	0.5616533	1.0000000	0.0174579	1.0000000	0.987129	425	0.947
RIOK3	RIOK3	0.7979882	0.9229450	0.3067839	1.0000000	0.987129	125	0.947
RIPK1	RIPK1	1.2300626	0.9229450	NA	NA	0.996304	571	1.000
RIPK2	RIPK2	1.3418578	0.9229450	0.9771641	0.0006398	0.987129	31	0.947
RIPK3	RIPK3	0.6853181	1.0000000	0.2291804	1.0000000	0.987129	172	0.947
RIPK4	RIPK4	0.3469490	0.9532607	NA	NA	0.996304	665	0.947
RNASEL	RNASEL	0.8529708	0.9827536	0.6122379	1.0000000	0.987129	138	0.947
ROCK1	ROCK1	0.3855548	0.9352306	NA	NA	0.996304	700	1.000
ROCK2	ROCK2	0.7138957	0.9352306	0.4026097	1.0000000	0.987129	131	0.947
ROPN1L	ROPN1L	0.1463412	1.0000000	NA	NA	0.987129	493	0.984
ROR1	ROR1	0.6756257	0.9771922	0.3263348	1.0000000	0.987129	116	0.984
ROR2	ROR2	0.7984261	0.9229450	0.4127949	1.0000000	0.785149	10	0.947
ROS1	ROS1	1.1755105	0.9771922	0.3232056	1.0000000	0.987129	113	0.947
RPRD1A	RPRD1A	0.2422217	0.9819710	NA	NA	0.996304	561	1.000
RPS6KA1	RPS6KA1	1.1959341	0.9229450	NA	NA	0.987129	281	0.947
RPS6KA2	RPS6KA2	0.8811210	0.9827536	0.0456040	1.0000000	0.987129	301	0.947
RPS6KA3	RPS6KA3	0.6621412	0.9779888	0.1938122	1.0000000	0.996304	563	0.947
RPS6KA4	RPS6KA4	0.6202580	0.9229450	0.1107784	1.0000000	0.987129	147	0.947
RPS6KA5	RPS6KA5	2.9173080	0.8987868	2.0613922	0.0000000	0.792340	16	0.947
RPS6KA6	RPS6KA6	0.2167099	0.9773178	NA	NA	0.996304	564	0.947
RPS6KB1	RPS6KB1	0.5980803	0.9352306	0.0131076	1.0000000	0.987129	120	0.947
RPS6KB2	RPS6KB2	0.0914947	1.0000000	NA	NA	0.987129	526	1.000
RPS6KC1	RPS6KC1	NA	NA	NA	NA	0.996304	788	0.984
RPS6KL1	RPS6KL1	0.3373170	0.9819710	NA	NA	0.987129	507	0.984
RYK	RYK	0.0214883	0.9827536	NA	NA	0.996304	732	0.947
SCYL1	SCYL1	0.9137163	0.9771922	0.4669108	1.0000000	0.987129	233	0.970
SCYL2	SCYL2	1.2051156	0.9352306	NA	NA	0.987129	299	0.998
SCYL3	SCYL3	NA	NA	NA	NA	0.996304	740	1.000
SEPHS1	SEPHS1	0.5753759	0.9352306	0.8714230	0.0059241	0.987129	202	0.947

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
SEPHS2	SEPHS2	1.0526095	0.9779888	0.8811896	0.0297100	0.987129	115	0.991
SGK1	SGK1	1.1393293	0.9229450	1.0027240	0.0169285	0.785149	14	0.947
SGK196	SGK196	0.1268792	0.9352306	NA	NA	0.996304	742	0.984
SGK2	SGK2	0.7479466	1.0000000	0.5012950	1.0000000	0.996304	786	1.000
SGK223	SGK223	0.7479466	1.0000000	0.5012950	1.0000000	0.987129	40	0.970
SGK3	SGK3	0.0319739	1.0000000	NA	NA	0.996304	735	0.970
SHC1	SHC1	NA	NA	NA	NA	0.996304	792	1.000
SHPK	SHPK	NA	NA	NA	NA	0.996304	705	0.984
SIAE	SIAE	0.5576179	0.9827536	0.1049247	1.0000000	0.987129	471	0.984
SIK1	SIK1	0.5048181	0.9773178	NA	NA	0.987129	462	1.000
SIK2	SIK2	2.3565310	0.9773178	NA	NA	0.987129	240	0.984
SIK3	SIK3	1.3407495	1.0000000	0.5818233	1.0000000	0.987129	143	0.947
SKAP1	SKAP1	0.8922317	0.9352306	0.1971643	1.0000000	0.987129	337	0.947
SLK	SLK	1.1031288	0.9698250	0.1578876	1.0000000	0.987129	412	0.947
SMAD7	SMAD7	0.5685886	0.9771922	NA	NA	0.987129	251	0.984
SMG1	SMG1	NA	NA	NA	NA	0.999373	813	1.000
SNRK	SNRK	0.6075350	1.0000000	0.6528529	1.0000000	0.987129	304	0.947
SOCS5	SOCS5	0.1997797	0.9779888	NA	NA	0.987129	448	1.000
SPA17	SPA17	1.1584255	0.6796230	0.6442567	0.7318362	0.903465	25	0.947
SPEG	SPEG	1.0344412	0.9779888	0.2315442	1.0000000	0.987129	277	0.947
SPHK1	SPHK1	0.2440449	0.9378502	NA	NA	0.996304	662	1.000
SPHK2	SPHK2	0.5451711	0.9721909	NA	NA	0.987129	469	0.970
SQSTM1	SQSTM1	0.3963255	0.9779888	NA	NA	0.987129	335	0.984
SRC	SRC	0.6754175	0.9773178	0.3895595	1.0000000	0.987129	140	1.000
SRMS	SRMS	0.9540864	0.9229450	0.5772064	1.0000000	0.987129	287	0.947
SRP72	SRP72	NA	NA	NA	NA	0.996304	745	0.970
SRPK1	SRPK1	0.0395194	0.9352306	NA	NA	0.987605	540	1.000
SRPK2	SRPK2	1.5221381	0.9352306	0.8655405	0.0257051	0.987129	41	0.947
STK10	STK10	0.4615792	0.9771922	0.1667583	1.0000000	0.987129	79	0.947
STK11	STK11	0.4243206	0.9819710	NA	NA	0.996304	631	0.984
STK16	STK16	NA	NA	NA	NA	0.996304	763	1.000
STK17A	STK17A	0.3368540	0.9819710	NA	NA	0.987129	211	0.947
STK17B	STK17B	0.8769329	0.9352306	0.3732989	1.0000000	0.987129	142	0.947
STK24	STK24	0.5895947	1.0000000	0.5452512	1.0000000	0.987129	346	0.984
STK25	STK25	0.5030836	0.9698250	NA	NA	0.987129	380	0.947
STK3	STK3	0.1900269	0.9827536	NA	NA	0.996304	632	0.980
STK31	STK31	0.6564341	0.9487700	0.1981110	1.0000000	0.987129	157	0.947
STK32A	STK32A	1.5506714	0.8987868	0.5301267	1.0000000	0.903465	26	0.947
STK32B	STK32B	1.0301793	0.9352306	0.3552791	1.0000000	0.987129	153	0.947
STK32C	STK32C	0.5898006	0.9926949	0.1390455	1.0000000	0.987129	375	0.986
STK33	STK33	1.0700636	0.9352306	0.5875381	1.0000000	0.987129	176	0.947
STK35	STK35	0.5310012	0.9819710	0.2891735	1.0000000	0.987129	187	0.947
STK36	STK36	0.3709115	0.9266668	0.2872190	1.0000000	0.987129	333	1.000
STK38	STK38	0.6328662	0.9378502	0.1200151	1.0000000	0.987129	358	0.947
STK38L	STK38L	0.4545827	0.9773178	0.1200151	1.0000000	0.987129	331	0.947
STK39	STK39	0.4934287	0.9819710	0.3082538	1.0000000	0.987129	327	0.947
STK4	STK4	0.0817526	0.9827536	0.1289184	1.0000000	0.996304	613	0.947
STK40	STK40	0.9178134	0.9771922	0.7196352	1.0000000	0.987129	136	0.970
STRADB	STRADB	1.8513990	0.9352306	NA	NA	0.987129	145	0.947
STYK1	STYK1	0.1076466	0.9817722	NA	NA	0.996304	675	0.984
SYK	SYK	0.6097195	0.9229450	0.0861414	1.0000000	0.987129	472	0.947
TAOK1	TAOK1	0.2924937	1.0000000	NA	NA	0.996304	791	0.947

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
TAOK2	TAOK2	0.9914769	0.9779888	NA	NA	0.987129	449	0.984
TAOK3	TAOK3	0.4358248	0.9771922	NA	NA	0.996304	643	0.947
TBCK	TBCK	0.7249699	0.9352306	0.2896142	1.0000000	0.987129	476	0.947
TBK1	TBK1	0.2703749	0.9819710	NA	NA	0.996304	594	0.947
TCF4	TCF4	0.9797772	0.9771922	0.0649149	1.0000000	0.987129	175	0.947
TEC	TEC	0.5357582	0.9771922	NA	NA	0.996304	690	0.984
TEK	TEK	0.5953634	0.9779888	0.3941493	1.0000000	0.987129	339	0.947
TESK1	TESK1	1.1057342	0.9229450	0.4786552	1.0000000	0.987129	61	0.947
TESK2	TESK2	0.5130487	0.9779888	NA	NA	0.987129	478	1.000
TEX14	TEX14	0.1846442	1.0000000	NA	NA	0.996304	579	0.947
TGFBR1	TGFBR1	1.4833683	0.9352306	0.9607698	0.0035763	0.987129	51	0.947
TGFBR2	TGFBR2	3.9534041	0.9819710	0.7527336	0.9092121	0.987129	48	0.947
THNSL1	THNSL1	0.3753205	0.9933695	0.0135935	1.0000000	0.996304	622	0.947
TIE1	TIE1	0.0044603	0.9352306	NA	NA	0.996304	642	1.000
TJP2	TJP2	0.6798104	0.9819710	NA	NA	0.996304	604	0.947
TK1	TK1	0.6212354	0.9229450	0.0656826	1.0000000	0.987129	433	0.947
TK2	TK2	1.2995228	0.9266668	0.4435478	1.0000000	0.987129	36	0.947
TLK1	TLK1	0.2061705	0.9771922	NA	NA	0.996304	610	0.947
TLK2	TLK2	0.1141152	1.0000000	NA	NA	0.996304	764	0.947
TLR1	TLR1	0.1699263	0.9779888	NA	NA	0.997369	806	0.998
TLR3	TLR3	1.5119783	0.9378502	0.7014952	1.0000000	0.987129	168	0.947
TLR4	TLR4	1.0349046	0.9698250	0.8786311	0.0237501	0.987129	261	0.947
TNFRSF10A	TNFRSF10A	0.1412818	0.9492743	0.1170063	1.0000000	0.987129	520	0.984
TNFRSF10B	TNFRSF10B	0.4720935	1.0000000	0.4247073	1.0000000	0.987129	439	0.947
TNFRSF10C	TNFRSF10C	0.1754927	0.9352306	NA	NA	0.987129	438	1.000
TNFRSF10D	TNFRSF10D	0.2860547	0.9827536	NA	NA	0.996304	645	0.947
TNFRSF11A	TNFRSF11A	0.4049188	0.3285571	1.0021224	0.0088570	0.987129	96	1.000
TNFRSF11B	TNFRSF11B	1.1590811	0.9819710	0.9509991	0.0036486	0.987129	86	1.000
TNFRSF12A	TNFRSF12A	1.0999790	0.9771922	0.0205906	1.0000000	0.987129	42	0.984
TNFRSF13B	TNFRSF13B	0.3504228	0.9352306	NA	NA	0.987129	344	1.000
TNFRSF13C	TNFRSF13C	NA	NA	NA	NA	0.996031	555	1.000
TNFRSF14	TNFRSF14	0.2089914	0.9827536	0.0093257	1.0000000	0.987129	409	0.984
TNFRSF18	TNFRSF18	NA	NA	NA	NA	0.996304	686	1.000
TNFRSF19	TNFRSF19	0.4942807	0.9352306	NA	NA	0.987129	384	0.947
TNFRSF1A	TNFRSF1A	1.1982688	0.9771922	0.3369081	1.0000000	0.987129	203	0.947
TNFRSF1B	TNFRSF1B	1.2823246	0.9771922	0.7654227	0.1916957	0.987129	82	0.947
TNFRSF21	TNFRSF21	NA	NA	NA	NA	0.996304	755	0.947
TNFRSF25	TNFRSF25	0.6880236	0.9779888	NA	NA	0.987129	505	0.970
TNFRSF4	TNFRSF4	NA	NA	NA	NA	0.996304	765	1.000
TNFRSF8	TNFRSF8	1.2901344	0.9771922	0.8932955	1.0000000	0.919967	30	0.947
TNFRSF9	TNFRSF9	0.5643127	1.0000000	0.3252723	1.0000000	0.987129	348	0.947
TNIK	TNIK	0.4939203	0.9773178	0.0811119	1.0000000	0.987129	217	0.984
TNK1	TNK1	0.2648340	0.9771922	NA	NA	0.991716	548	0.991
TNK2	TNK2	NA	NA	NA	NA	0.996304	760	1.000
TNNI3K	TNNI3K	0.9276023	0.9352306	0.9544830	0.2431811	0.987129	254	0.947
TP53	TP53	1.4482813	0.9484899	1.7263896	0.0000000	0.987129	73	0.947
TP53AIP1	TP53AIP1	0.7832238	0.9229450	0.6379373	0.7260855	0.987129	151	0.947
TP53BP1	TP53BP1	0.6468472	0.9487700	NA	NA	0.987129	395	0.984
TP53BP2	TP53BP2	0.3743756	0.9484899	NA	NA	0.987129	427	0.947
TP53I11	TP53I11	0.7790060	0.9926949	0.2118162	1.0000000	0.987129	110	0.984
TP53RK	TP53RK	0.6131461	0.9352306	0.7100796	1.0000000	0.987129	360	0.947
TPD52L3	TPD52L3	0.1854630	0.9771922	NA	NA	0.996304	659	0.984

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
TPK1	TPK1	0.0272642	0.9445445	NA	NA	0.996304	738	1.000
TRADD	TRADD	0.1705212	0.9771922	NA	NA	0.994367	550	0.984
TRAT1	TRAT1	0.3619466	0.9926949	NA	NA	0.996304	723	0.947
TRIB1	TRIB1	NA	NA	NA	NA	0.996304	797	0.947
TRIB2	TRIB2	0.8235772	0.9229450	0.0787626	1.0000000	0.987129	62	1.000
TRIB3	TRIB3	0.0993096	0.9779888	NA	NA	0.996304	599	1.000
TRIO	TRIO	0.5594002	0.9352306	NA	NA	0.996304	598	0.970
TRPM6	TRPM6	NA	NA	NA	NA	0.996304	798	0.984
TRPM7	TRPM7	0.2053303	0.9827536	NA	NA	0.996304	649	0.947
TSKS	TSKS	1.8040726	0.9698250	0.3721538	1.0000000	0.987129	74	0.947
TSSK3	TSSK3	0.0576106	0.9266668	NA	NA	0.996304	570	1.000
TSSK6	TSSK6	0.0780253	0.9352306	NA	NA	0.996304	698	1.000
TTBK1	TTBK1	1.6845513	0.9771922	NA	NA	0.987129	52	1.000
TTBK2	TTBK2	0.4833386	0.9819710	0.4150149	1.0000000	0.987129	322	0.970
TTK	TTK	0.1129094	0.9827536	NA	NA	0.996304	681	0.947
TTN	TTN	NA	NA	NA	NA	0.996304	780	0.947
TWF1	TWF1	0.6847756	0.9771922	0.1623125	1.0000000	0.987129	529	0.947
TXK	TXK	0.3596525	0.9771922	NA	NA	0.996304	701	0.984
TYK2	TYK2	0.6485464	0.9352306	NA	NA	0.987129	189	0.976
TYRO3	TYRO3	1.5580964	0.9229450	0.6568340	1.0000000	0.659241	5	0.947
UCK1	UCK1	1.2136663	0.9229450	0.8130611	0.0389347	0.903465	24	0.947
UCK2	UCK2	0.9616341	0.9487700	0.6289609	1.0000000	0.987129	117	0.947
UCKL1	UCKL1	0.4324786	0.9779888	NA	NA	0.987129	391	0.982
UGP2	UGP2	0.6347961	0.9229450	0.1863048	1.0000000	0.987129	134	0.947
UHMK1	UHMK1	0.7026423	0.9229450	0.2844995	1.0000000	0.987129	59	0.947
ULK1	ULK1	0.4454579	0.9779888	0.0322065	1.0000000	0.987129	444	0.991
ULK2	ULK2	0.1307968	0.9352306	0.0125168	1.0000000	0.987129	308	1.000
ULK3	ULK3	1.2824662	0.9771922	0.3024582	1.0000000	0.987129	91	0.970
ULK4	ULK4	0.4027639	0.9352306	0.3501239	1.0000000	0.987129	455	0.980
VRK1	VRK1	2.0158797	0.9771922	0.1745024	1.0000000	0.987129	227	0.947
VRK2	VRK2	NA	NA	NA	NA	0.996304	789	0.970
VRK3	VRK3	0.3950649	0.9827536	NA	NA	0.996304	590	1.000
WEE1	WEE1	1.1316953	0.9229450	NA	NA	0.987129	353	0.947
WIF1	WIF1	NA	NA	NA	NA	0.996304	799	1.000
WNK1	WNK1	0.0918255	0.9266668	NA	NA	0.987129	501	0.993
WNK2	WNK2	0.5232563	1.0000000	NA	NA	0.987129	530	0.947
WNK4	WNK4	0.3341660	1.0000000	NA	NA	0.996304	603	0.970
XIAP	XIAP	0.5838840	0.9352306	0.0649774	1.0000000	0.987129	502	0.947
XYLB	XYLB	0.6407573	0.9948812	0.2060050	1.0000000	0.987129	243	0.984
YES1	YES1	1.9455344	0.9698250	0.8197785	0.1843005	0.987129	65	0.947
YWHAH	YWHAH	NA	NA	NA	NA	0.996304	655	0.984
YWHAQ	YWHAQ	1.4057082	1.0000000	0.5244582	1.0000000	0.987129	195	0.984
ZAP70	ZAP70	0.1488638	0.9352306	NA	NA	0.996304	605	1.000

Depleted

List

Moreover, the **5 % top depleted hits** sorted according to MAGECK are stored in **TRAILSscreen-COMPARE-HITS.xls** and are listed below:

```
## Warning in rm(dXML): Objekt 'dXML' nicht gefunden
```

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
AAK1	AAK1	NA	NA	NA	NA	0.994232	744	0.980
AATK	AATK	NA	NA	NA	NA	0.973911	88	0.980
ABI1	ABI1	NA	NA	NA	NA	0.994232	764	0.980
ABL1	ABL1	NA	NA	-0.0796955	1.0000000	0.993066	320	0.980
ABL2	ABL2	NA	NA	NA	NA	0.993066	302	0.980
ACAD10	ACAD10	NA	NA	-0.4424874	1.0000000	0.994232	659	0.980
ACVR1	ACVR1	-0.1681604	0.9352306	-0.2631069	1.0000000	0.993066	171	0.980
ACVR1B	ACVR1B	-0.1681604	0.9352306	-0.5533595	1.0000000	0.993066	268	0.980
ACVR1C	ACVR1C	NA	NA	-0.3001864	1.0000000	0.994232	541	0.980
ACVR2A	ACVR2A	NA	NA	NA	NA	0.994232	516	0.980
ACVR2B	ACVR2B	NA	NA	-0.0749991	1.0000000	0.994232	655	0.980
ACVRL1	ACVRL1	NA	NA	-0.4256669	1.0000000	0.808760	40	0.431
ADAM9	ADAM9	NA	NA	NA	NA	0.994232	767	0.980
ADCK1	ADCK1	NA	NA	NA	NA	0.994232	544	0.980
ADCK2	ADCK2	NA	NA	NA	NA	0.973911	64	0.718
ADCK4	ADCK4	-0.0776972	0.9229450	-0.0529507	1.0000000	0.993066	309	0.980
ADCK5	ADCK5	-0.0030677	0.9914359	-0.0543597	1.0000000	0.994232	667	0.980
ADK	ADK	NA	NA	NA	NA	0.993066	220	0.980
ADRA1A	ADRA1A	NA	NA	NA	NA	0.994232	437	0.980
ADRA1B	ADRA1B	NA	NA	NA	NA	0.994232	381	0.980
ADRB2	ADRB2	NA	NA	NA	NA	0.994232	499	0.980
ADRBK1	ADRBK1	NA	NA	-0.4186041	1.0000000	0.845227	53	0.704
ADRBK2	ADRBK2	NA	NA	-0.0839419	1.0000000	0.994232	400	0.980
AK1	AK1	-0.3712969	0.8585728	-0.7584758	0.1097052	0.790240	35	0.736
AK2	AK2	NA	NA	NA	NA	0.994232	534	0.980
AK3	AK3	NA	NA	NA	NA	0.994232	413	0.980
AK4	AK4	NA	NA	NA	NA	0.994232	585	0.980
AK5	AK5	NA	NA	NA	NA	0.973911	89	0.859
AK7	AK7	NA	NA	-0.1427939	1.0000000	0.994232	747	0.980
AK8	AK8	NA	NA	NA	NA	0.994232	714	0.980
AKAP1	AKAP1	NA	NA	NA	NA	0.993066	179	0.980
AKAP11	AKAP11	NA	NA	-0.3248494	1.0000000	0.994232	584	0.980
AKAP13	AKAP13	NA	NA	-0.3640613	1.0000000	0.994232	483	0.980
AKAP6	AKAP6	NA	NA	NA	NA	0.994232	701	0.980
AKAP7	AKAP7	NA	NA	NA	NA	0.994232	519	0.989
AKAP8	AKAP8	NA	NA	NA	NA	0.994232	575	0.980
AKT1	AKT1	NA	NA	NA	NA	0.993066	175	0.980
AKT2	AKT2	NA	NA	NA	NA	0.993066	323	0.837
AKT3	AKT3	NA	NA	-0.0679642	1.0000000	0.994410	805	0.980
ALDH18A1	ALDH18A1	NA	NA	NA	NA	0.994232	690	0.980
ALK	ALK	NA	NA	NA	NA	0.994232	608	0.980
ALPK1	ALPK1	NA	NA	NA	NA	0.994232	555	0.980
ALPK2	ALPK2	NA	NA	NA	NA	0.994232	469	0.980

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
ALPK3	ALPK3	-0.6174251	0.6399275	-0.7916102	0.1493037	0.872030	55	0.888
AMHR2	AMHR2	NA	NA	NA	NA	0.994410	796	0.998
ANGPT4	ANGPT4	NA	NA	-0.0732806	1.0000000	0.994232	528	0.831
ANKK1	ANKK1	NA	NA	NA	NA	0.993066	196	0.980
APAF1	APAF1	NA	NA	NA	NA	0.994232	522	0.980
APPL1	APPL1	NA	NA	-0.0322198	1.0000000	0.994232	476	0.980
ARAF	ARAF	NA	NA	-0.3361460	1.0000000	0.994232	556	0.980
ASB14	ASB14	NA	NA	NA	NA	0.994232	723	0.980
ATM	ATM	NA	NA	-0.0060996	1.0000000	0.994232	517	0.980
ATR	ATR	NA	NA	-0.5398491	1.0000000	0.993066	157	0.980
AURKA	AURKA	NA	NA	-0.1312312	1.0000000	0.701894	12	0.431
AURKB	AURKB	NA	NA	-0.0707469	1.0000000	0.994232	490	0.980
AURKC	AURKC	NA	NA	-0.3435800	1.0000000	0.994232	456	0.801
AVPR1A	AVPR1A	NA	NA	-0.6766566	1.0000000	0.973911	84	0.980
AVPR1B	AVPR1B	NA	NA	NA	NA	0.994232	500	0.980
AXL	AXL	NA	NA	NA	NA	0.994232	691	0.980
AZU1	AZU1	-0.3522706	0.8585728	-0.6156798	1.0000000	0.701894	16	0.407
BAD	BAD	NA	NA	NA	NA	0.994232	447	0.980
BAK1	BAK1	NA	NA	-0.3698939	1.0000000	0.994232	385	0.980
BAX	BAX	NA	NA	NA	NA	0.994232	775	1.000
BBC3	BBC3	-0.2960766	0.9189454	-0.7995261	0.0491891	0.973911	72	0.738
BCKDK	BCKDK	NA	NA	-0.6826688	1.0000000	0.973911	93	0.980
BCL2	BCL2	-0.2793005	0.9229450	-0.0792045	1.0000000	0.994232	664	0.980
BCL2A1	BCL2A1	NA	NA	NA	NA	0.993066	141	0.464
BCL2L1	BCL2L1	-0.2793005	0.9229450	NA	NA	0.993066	248	0.980
BCL2L10	BCL2L10	NA	NA	-0.4678119	1.0000000	0.993066	303	0.980
BCL2L11	BCL2L11	NA	NA	-0.3011961	1.0000000	0.993066	182	0.784
BCL2L12	BCL2L12	-0.2793005	0.9229450	-0.8493349	0.0182295	0.701894	20	0.120
BCL2L13	BCL2L13	NA	NA	-0.1243711	1.0000000	0.994232	728	0.980
BCL2L14	BCL2L14	NA	NA	NA	NA	0.994410	795	0.980
BCL2L2	BCL2L2	NA	NA	-0.0669353	1.0000000	0.993066	281	0.980
BCL3	BCL3	-0.2488980	0.9352306	-0.7351915	0.5119468	0.994232	373	0.718
BCL6	BCL6	NA	NA	NA	NA	0.994232	425	0.980
BCL6B	BCL6B	NA	NA	NA	NA	0.994232	782	0.980
BCL7A	BCL7A	NA	NA	NA	NA	0.973911	69	0.980
BCL7C	BCL7C	-0.1834985	0.9352306	-0.6504031	1.0000000	0.994232	397	0.777
BCL9	BCL9	-0.6030263	0.9229450	-1.0340905	1.0000000	0.993066	185	0.980
BCL9L	BCL9L	NA	NA	NA	NA	0.993066	333	0.980
BCLAF1	BCLAF1	NA	NA	-0.2100317	1.0000000	0.993066	230	0.980
BCR	BCR	NA	NA	NA	NA	0.994232	466	0.980
BDKRB2	BDKRB2	NA	NA	NA	NA	0.994232	580	0.980
BID	BID	NA	NA	NA	NA	0.994410	798	0.980
BIK	BIK	NA	NA	-0.2784891	1.0000000	0.993066	227	0.892
BIRC2	BIRC2	NA	NA	NA	NA	0.994232	711	0.980
BIRC3	BIRC3	NA	NA	NA	NA	0.994450	808	0.980
BIRC5	BIRC5	NA	NA	NA	NA	0.993066	177	0.980
BIRC6	BIRC6	NA	NA	-0.1791898	1.0000000	0.994232	619	0.980
BIRC7	BIRC7	NA	NA	NA	NA	0.973911	75	0.718
BIRC8	BIRC8	NA	NA	-0.4912186	1.0000000	0.981079	104	0.765
BLK	BLK	NA	NA	NA	NA	0.994232	638	0.980
BMF	BMF	NA	NA	-0.3582229	1.0000000	0.701894	9	0.980
BMP2K	BMP2K	NA	NA	NA	NA	0.994232	492	0.992

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
BMPR1A	BMPR1A	NA	NA	NA	NA	0.994232	637	1.000
BMPR1B	BMPR1B	NA	NA	NA	NA	0.994232	428	0.993
BMPR2	BMPR2	NA	NA	NA	NA	0.994232	780	0.980
BMX	BMX	NA	NA	-0.1550034	1.0000000	0.993066	334	0.980
BNIP1	BNIP1	-0.1279681	0.9771922	-0.3042340	1.0000000	0.993066	184	0.980
BNIP2	BNIP2	NA	NA	NA	NA	0.994232	785	0.980
BNIP3	BNIP3	-0.1904573	0.9229450	-0.3856101	1.0000000	0.993066	306	0.888
BNIP3L	BNIP3L	NA	NA	NA	NA	0.994232	482	0.980
BNIPL	BNIPL	NA	NA	-0.3563463	1.0000000	0.993066	273	0.980
BRAF	BRAF	NA	NA	NA	NA	0.993066	267	0.980
BRDT	BRDT	NA	NA	-0.1235596	1.0000000	0.994232	750	0.980
BRSK1	BRSK1	NA	NA	NA	NA	0.993066	224	0.980
BRSK2	BRSK2	NA	NA	-0.1327723	1.0000000	0.994232	733	0.980
BUB1	BUB1	NA	NA	-0.4235129	1.0000000	0.993066	195	0.831
BUB1B	BUB1B	NA	NA	NA	NA	0.973911	85	0.784
C9orf96	C9orf96	NA	NA	-0.7498465	0.1990927	0.845227	51	0.431
CALM3	CALM3	NA	NA	NA	NA	0.994232	484	0.994
CAMK1D	CAMK1D	NA	NA	-0.1877588	1.0000000	0.994232	784	0.980
CAMK1G	CAMK1G	-0.0174620	0.9229450	-0.4575927	1.0000000	0.790240	27	0.438
CAMK2A	CAMK2A	NA	NA	-0.4213437	1.0000000	0.872030	54	0.718
CAMK2B	CAMK2B	NA	NA	-0.0198322	1.0000000	0.993066	277	0.980
CAMK2D	CAMK2D	NA	NA	-0.1974693	1.0000000	0.993066	328	0.980
CAMK2G	CAMK2G	-0.0916773	0.9352306	-0.6341180	0.9965267	0.973911	68	0.784
CAMK4	CAMK4	NA	NA	-0.0725846	1.0000000	0.993066	325	0.980
CAMKK1	CAMKK1	NA	NA	-0.2920005	1.0000000	0.994232	406	0.980
CAMKK2	CAMKK2	NA	NA	NA	NA	0.994232	778	0.980
CAMKV	CAMKV	NA	NA	NA	NA	0.994232	537	0.980
CARD10	CARD10	NA	NA	-0.4423838	1.0000000	0.993066	242	0.784
CARD14	CARD14	NA	NA	NA	NA	0.994232	631	0.980
CASK	CASK	NA	NA	-0.1489616	1.0000000	0.981079	115	0.718
CASP1	CASP1	NA	NA	-0.5334422	1.0000000	0.994232	727	0.980
CASP10	CASP10	NA	NA	-0.1806648	1.0000000	0.993066	305	0.980
CASP14	CASP14	NA	NA	-0.4564282	1.0000000	0.993066	258	0.784
CASP2	CASP2	NA	NA	NA	NA	0.994232	470	0.980
CASP3	CASP3	NA	NA	NA	NA	0.994232	698	0.980
CASP4	CASP4	NA	NA	NA	NA	0.994232	540	0.980
CASP5	CASP5	NA	NA	-0.2116863	1.0000000	0.994232	721	0.980
CASP6	CASP6	NA	NA	NA	NA	0.994232	765	0.980
CASP7	CASP7	NA	NA	NA	NA	0.994232	666	0.991
CASP8	CASP8	NA	NA	-0.6220767	1.0000000	0.994410	804	1.000
CASP8AP2	CASP8AP2	NA	NA	-0.6220767	1.0000000	0.994232	532	0.980
CASP9	CASP9	NA	NA	NA	NA	0.994232	558	0.980
CCL2	CCL2	NA	NA	-0.3425480	1.0000000	0.993066	327	0.980
CCL4	CCL4	NA	NA	-0.1624051	1.0000000	0.994232	643	0.980
CD3E	CD3E	NA	NA	NA	NA	0.994232	416	0.980
CD7	CD7	NA	NA	NA	NA	0.994232	409	0.980
CDADC1	CDADC1	NA	NA	NA	NA	0.994232	360	0.980
CDC42BPA	CDC42BPA	NA	NA	NA	NA	0.994232	761	0.980
CDC42BPB	CDC42BPB	NA	NA	-0.2268870	1.0000000	0.993066	191	0.980
CDC42BPG	CDC42BPG	-0.5295004	0.6796230	-0.9735155	0.0633304	0.701894	3	0.431
CDC42SE2	CDC42SE2	NA	NA	-0.1443949	1.0000000	0.808760	39	0.980
CDC7	CDC7	NA	NA	-0.3499900	1.0000000	0.994232	615	0.980

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
CDK1	CDK1	NA	NA	NA	NA	0.994232	770	0.986
CDK10	CDK10	NA	NA	-0.1014616	1.0000000	0.981079	107	0.784
CDK11B	CDK11B	NA	NA	-0.2238500	1.0000000	0.994232	634	0.980
CDK12	CDK12	NA	NA	-0.0220103	1.0000000	0.994232	687	0.980
CDK13	CDK13	NA	NA	-0.3870238	1.0000000	0.994232	350	0.980
CDK14	CDK14	NA	NA	NA	NA	0.994232	669	0.980
CDK15	CDK15	NA	NA	NA	NA	0.994232	387	0.980
CDK16	CDK16	NA	NA	-0.0737445	1.0000000	0.994232	365	0.980
CDK17	CDK17	NA	NA	NA	NA	0.994232	533	0.991
CDK18	CDK18	NA	NA	NA	NA	0.984074	125	0.784
CDK19	CDK19	NA	NA	NA	NA	0.994232	495	0.980
CDK20	CDK20	NA	NA	NA	NA	0.994232	762	0.980
CDK4	CDK4	NA	NA	NA	NA	0.994232	523	0.980
CDK5	CDK5	-0.0904327	0.9773178	-0.4862185	1.0000000	0.808760	45	0.801
CDK5R1	CDK5R1	NA	NA	-0.0844208	1.0000000	0.994232	407	0.980
CDK5R2	CDK5R2	-0.0904327	0.9773178	-0.2950384	1.0000000	0.994232	573	0.888
CDK5RAP1	CDK5RAP1	NA	NA	NA	NA	0.993066	219	0.980
CDK5RAP3	CDK5RAP3	NA	NA	NA	NA	0.994450	807	0.989
CDK6	CDK6	NA	NA	NA	NA	0.993066	269	0.980
CDK8	CDK8	-0.1759044	0.9229450	NA	NA	0.845227	52	0.761
CDK9	CDK9	NA	NA	NA	NA	0.994232	493	0.980
CDKL1	CDKL1	NA	NA	-0.0249981	1.0000000	0.993066	254	0.980
CDKL2	CDKL2	NA	NA	NA	NA	0.993066	174	0.980
CDKL3	CDKL3	NA	NA	NA	NA	0.994232	358	0.980
CDKL5	CDKL5	NA	NA	NA	NA	0.994232	635	0.980
CDKN1A	CDKN1A	NA	NA	-0.0096953	1.0000000	0.994232	654	0.980
CDKN1B	CDKN1B	-0.3146840	0.9266668	-0.7810259	0.0954487	0.993066	208	0.980
CDKN1C	CDKN1C	NA	NA	-0.0334821	1.0000000	0.994232	455	0.980
CDKN2C	CDKN2C	NA	NA	-0.3343261	1.0000000	0.994232	754	0.980
CDKN2D	CDKN2D	NA	NA	-0.1902842	1.0000000	0.993066	314	0.980
CDKN3	CDKN3	NA	NA	NA	NA	0.994410	794	0.980
CERK	CERK	NA	NA	NA	NA	0.984074	126	0.980
CFLAR	CFLAR	NA	NA	-0.2547926	1.0000000	0.994232	593	0.980
CGREF1	CGREF1	NA	NA	NA	NA	0.981079	114	0.980
CHEK1	CHEK1	-0.2808495	0.9229450	-0.8384986	0.1231337	0.701894	4	0.718
CHEK2	CHEK2	NA	NA	-0.0102278	1.0000000	0.993066	130	0.980
CHKA	CHKA	NA	NA	NA	NA	0.994232	630	0.980
CHKB	CHKB	NA	NA	NA	NA	0.994232	719	0.980
CHRM1	CHRM1	NA	NA	NA	NA	0.984074	129	0.980
CHUK	CHUK	NA	NA	-0.5351626	1.0000000	0.993066	215	0.929
CIAPIN1	CIAPIN1	-0.0693182	0.9352306	-0.2118077	1.0000000	0.994232	611	0.980
CINP	CINP	NA	NA	NA	NA	0.994232	736	0.980
CIT	CIT	NA	NA	-0.3755848	1.0000000	0.994232	427	0.980
CKB	CKB	NA	NA	-0.0525646	1.0000000	0.993066	190	0.784
CKM	CKM	NA	NA	-0.0205883	1.0000000	0.994232	560	0.980
CKMT1B	CKMT1B	NA	NA	-0.2314786	1.0000000	0.994232	676	0.980
CKS2	CKS2	NA	NA	NA	NA	0.993066	294	0.980
CLK1	CLK1	NA	NA	NA	NA	0.993066	155	0.980
CLK3	CLK3	-0.0729527	0.9229450	-0.4754391	1.0000000	0.808760	36	0.431
CLK4	CLK4	NA	NA	-0.3296122	1.0000000	0.994232	467	0.980
CMPK1	CMPK1	NA	NA	NA	NA	0.994232	636	0.980
CNKS1	CNKS1	NA	NA	-0.2014558	1.0000000	0.993066	249	0.980

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
COASY	COASY	NA	NA	NA	NA	0.984074	122	0.980
COL4A3BP	COL4A3BP	NA	NA	-0.3905337	1.0000000	0.994232	496	0.980
COPB2	COPB2	NA	NA	NA	NA	0.994232	632	0.980
CRKL	CRKL	-0.2286336	0.9352306	-0.5464770	1.0000000	0.994232	529	0.972
CSF1R	CSF1R	-0.5495651	0.6522926	-0.7419327	0.1115685	0.701894	7	0.375
CSK	CSK	NA	NA	-0.2735871	1.0000000	0.994232	369	0.980
CSNK1A1	CSNK1A1	NA	NA	-0.4230571	1.0000000	0.993066	290	0.980
CSNK1A1L	CSNK1A1L	NA	NA	-0.4230571	1.0000000	0.736436	24	0.633
CSNK1D	CSNK1D	NA	NA	NA	NA	0.993066	317	0.980
CSNK1E	CSNK1E	NA	NA	-0.3082278	1.0000000	0.994232	653	0.980
CSNK1G1	CSNK1G1	NA	NA	-0.0974320	1.0000000	0.994232	569	0.980
CSNK1G2	CSNK1G2	NA	NA	-0.4318646	1.0000000	0.984074	120	0.718
CSNK1G3	CSNK1G3	-0.1419537	0.9266668	-0.5301760	1.0000000	0.994232	377	0.980
CSNK2A1	CSNK2A1	NA	NA	NA	NA	0.993066	318	0.980
CSNK2A2	CSNK2A2	NA	NA	NA	NA	0.994232	440	0.980
CYCS	CYCS	NA	NA	-0.2977557	1.0000000	0.993066	166	0.831
DAK	DAK	NA	NA	-0.1285192	1.0000000	0.994232	363	0.980
DAPK1	DAPK1	NA	NA	-0.5172729	1.0000000	0.973911	92	0.980
DAPK2	DAPK2	NA	NA	NA	NA	0.993066	301	0.980
DAPK3	DAPK3	NA	NA	NA	NA	0.994232	399	0.980
DBF4	DBF4	NA	NA	NA	NA	0.994232	686	0.980
DCK	DCK	NA	NA	NA	NA	0.994232	551	0.980
DCLK1	DCLK1	NA	NA	-0.4045112	1.0000000	0.993066	154	0.980
DCLK2	DCLK2	NA	NA	-0.0116171	1.0000000	0.996669	811	0.980
DCLK3	DCLK3	NA	NA	NA	NA	0.994232	564	0.980
DDR2	DDR2	-0.0523546	0.9779888	-0.7240033	1.0000000	0.993066	300	0.980
DFFA	DFFA	NA	NA	-0.5711267	1.0000000	0.981079	113	0.786
DFFB	DFFB	-0.1806437	0.9352306	-0.5129807	1.0000000	0.994232	552	0.980
DGCR14	DGCR14	-0.4050255	0.9229450	-0.7534509	0.8173098	0.993066	147	0.594
DGKA	DGKA	NA	NA	NA	NA	0.994232	694	0.980
DGKB	DGKB	NA	NA	NA	NA	0.994232	650	0.980
DGKD	DGKD	NA	NA	NA	NA	0.994232	717	0.980
DGKE	DGKE	NA	NA	-0.4473211	1.0000000	0.994232	370	0.980
DGKG	DGKG	NA	NA	-0.7204221	0.2753605	0.872030	60	0.784
DGKI	DGKI	NA	NA	NA	NA	0.994232	609	0.991
DGKQ	DGKQ	NA	NA	NA	NA	0.993066	145	0.718
DGKZ	DGKZ	NA	NA	-0.2962737	1.0000000	0.994232	514	0.980
DGUOK	DGUOK	NA	NA	NA	NA	0.994410	797	0.980
DLG1	DLG1	NA	NA	-0.3045939	1.0000000	0.994232	419	0.980
DLG2	DLG2	NA	NA	NA	NA	0.994232	597	0.980
DLG3	DLG3	NA	NA	NA	NA	0.994232	472	0.980
DLG4	DLG4	NA	NA	NA	NA	0.993066	316	0.980
DMPK	DMPK	NA	NA	NA	NA	0.994232	708	0.980
DNAJC3	DNAJC3	NA	NA	NA	NA	0.994232	657	0.980
DOK1	DOK1	NA	NA	NA	NA	0.993066	205	0.761
DTYMK	DTYMK	NA	NA	NA	NA	0.973911	76	0.718
DUSP10	DUSP10	NA	NA	NA	NA	0.994232	633	0.991
DUSP2	DUSP2	-0.1639428	0.9229450	-0.8839585	0.0109028	0.973911	87	0.761
DUSP22	DUSP22	NA	NA	-0.3018358	1.0000000	0.994232	424	0.980
DUSP4	DUSP4	NA	NA	NA	NA	0.994232	577	0.991
DUSP5	DUSP5	NA	NA	-0.4660140	1.0000000	0.993066	297	0.888
DUSP6	DUSP6	-0.1775334	0.9229450	-0.5409030	1.0000000	0.993066	156	0.817

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
DUSP7	DUSP7	NA	NA	-0.1164578	1.0000000	0.993066	238	0.888
DUSP8	DUSP8	NA	NA	NA	NA	0.981079	116	0.837
DVL2	DVL2	NA	NA	-0.7423257	1.0000000	0.993066	298	0.438
DYRK1A	DYRK1A	NA	NA	-0.0215675	1.0000000	0.994232	518	0.980
DYRK1B	DYRK1B	NA	NA	-0.0607674	1.0000000	0.994232	371	0.980
DYRK2	DYRK2	-0.0620949	0.9229450	-0.1075289	1.0000000	0.701894	2	0.431
DYRK4	DYRK4	NA	NA	NA	NA	0.994232	567	0.980
EDN2	EDN2	-0.1625363	0.9352306	-0.0414905	1.0000000	0.994232	366	0.980
EEF2K	EEF2K	NA	NA	-0.2433579	1.0000000	0.993066	178	0.980
EGFR	EGFR	-0.0660983	0.9352306	-0.5776360	1.0000000	0.845227	50	0.718
EIF2AK1	EIF2AK1	NA	NA	-0.1906098	1.0000000	0.994232	396	0.980
EIF2AK2	EIF2AK2	NA	NA	NA	NA	0.994232	515	0.980
EIF2AK3	EIF2AK3	NA	NA	NA	NA	0.981079	108	0.980
EIF2AK4	EIF2AK4	NA	NA	-0.2996512	1.0000000	0.993066	272	0.980
ENDOG	ENDOG	NA	NA	-0.0575176	1.0000000	0.993066	164	0.784
EPHA1	EPHA1	NA	NA	NA	NA	0.994232	621	0.980
EPHA2	EPHA2	NA	NA	NA	NA	0.973911	90	0.980
EPHA3	EPHA3	NA	NA	NA	NA	0.994232	539	0.980
EPHA4	EPHA4	NA	NA	NA	NA	0.994232	404	0.980
EPHA5	EPHA5	-0.0219988	0.9265915	-0.5443737	1.0000000	0.973911	73	0.431
EPHA6	EPHA6	-0.0833284	0.9352306	-0.6107000	1.0000000	0.993066	326	0.980
EPHA7	EPHA7	NA	NA	NA	NA	0.993066	165	0.980
EPHA8	EPHA8	NA	NA	NA	NA	0.994232	561	0.980
EPHB1	EPHB1	NA	NA	NA	NA	0.994232	749	0.980
EPHB2	EPHB2	NA	NA	-0.3590553	1.0000000	0.993066	181	0.891
EPHB4	EPHB4	NA	NA	NA	NA	0.994232	776	0.980
EPHB6	EPHB6	NA	NA	NA	NA	0.993066	194	0.980
ERBB2	ERBB2	NA	NA	NA	NA	0.994232	618	0.991
ERBB3	ERBB3	NA	NA	-0.0907096	1.0000000	0.994410	803	0.980
ERBB4	ERBB4	NA	NA	-0.2172716	1.0000000	0.994232	378	0.980
ERN1	ERN1	NA	NA	NA	NA	0.993066	211	0.980
ETNK1	ETNK1	NA	NA	NA	NA	0.994232	473	0.980
ETNK2	ETNK2	NA	NA	-0.4807975	1.0000000	0.993066	176	0.888
EVI5L	EVI5L	NA	NA	NA	NA	0.994232	382	0.980
EXOSC10	EXOSC10	-0.1126675	0.9771922	-0.7261455	1.0000000	0.994232	460	0.980
FADD	FADD	NA	NA	NA	NA	0.994410	792	1.000
FASTK	FASTK	NA	NA	-0.8297426	0.1427661	0.790240	34	0.484
FER	FER	NA	NA	NA	NA	0.994232	707	0.991
FES	FES	NA	NA	NA	NA	0.994232	756	0.980
FGFR1	FGFR1	NA	NA	NA	NA	0.994232	464	0.980
FGFR2	FGFR2	NA	NA	NA	NA	0.994232	435	0.983
FGFR3	FGFR3	NA	NA	NA	NA	0.994232	530	0.786
FGFR4	FGFR4	-0.0521243	0.9537466	-0.3296895	1.0000000	0.993066	134	0.980
FGR	FGR	NA	NA	NA	NA	0.993066	310	0.982
FLT1	FLT1	NA	NA	NA	NA	0.994232	616	0.980
FLT3	FLT3	NA	NA	-0.2438698	1.0000000	0.994450	806	0.980
FLT4	FLT4	NA	NA	-0.3433294	1.0000000	0.993066	282	0.980
FN3K	FN3K	NA	NA	-0.1548707	1.0000000	0.994232	730	1.000
FN3KRP	FN3KRP	NA	NA	-0.1548707	1.0000000	0.993066	278	0.888
FRK	FRK	NA	NA	NA	NA	0.994232	786	0.980
FUK	FUK	NA	NA	-0.3070041	1.0000000	0.993066	226	0.784
FXN	FXN	NA	NA	NA	NA	0.994232	759	0.980

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
FYB	FYB	NA	NA	NA	NA	0.994232	605	0.980
FYN	FYN	NA	NA	-0.0328616	1.0000000	0.994232	535	0.980
GADD45A	GADD45A	NA	NA	-0.1149171	1.0000000	0.994232	508	0.980
GADD45B	GADD45B	NA	NA	NA	NA	0.993066	218	0.980
GADD45G	GADD45G	NA	NA	-0.5216439	1.0000000	0.993066	245	0.888
GAK	GAK	NA	NA	NA	NA	0.994232	527	0.980
GALK1	GALK1	NA	NA	NA	NA	0.994232	675	0.980
GALK2	GALK2	NA	NA	-0.2360116	1.0000000	0.994232	729	0.980
GAP43	GAP43	NA	NA	NA	NA	0.993066	139	0.980
GCK	GCK	NA	NA	-0.3781602	1.0000000	0.994232	656	0.980
GFRA2	GFRA2	NA	NA	NA	NA	0.984074	123	0.431
GK	GK	NA	NA	-0.5322352	1.0000000	0.994232	731	0.980
GK2	GK2	NA	NA	-0.5322352	1.0000000	0.973911	86	0.718
GMFB	GMFB	-0.1372208	0.9352306	-0.6324777	1.0000000	0.994232	354	0.980
GMFG	GMFG	NA	NA	NA	NA	0.994232	549	0.980
GRK1	GRK1	NA	NA	NA	NA	0.994232	386	0.980
GRK4	GRK4	NA	NA	NA	NA	0.994232	629	0.980
GRK5	GRK5	NA	NA	NA	NA	0.994232	364	0.980
GRK6	GRK6	NA	NA	-0.3677108	1.0000000	0.994232	361	0.980
GRK7	GRK7	NA	NA	NA	NA	0.994232	742	0.986
GSK3A	GSK3A	-0.2459212	0.9229450	-0.5209767	1.0000000	0.993066	189	0.980
GSK3B	GSK3B	NA	NA	-0.0126345	1.0000000	0.993066	203	0.846
GTF2H1	GTF2H1	NA	NA	-0.2971785	1.0000000	0.993066	257	0.980
GUCY2C	GUCY2C	NA	NA	NA	NA	0.993066	201	0.980
GUCY2D	GUCY2D	NA	NA	-0.3771769	1.0000000	0.993066	239	0.980
GUCY2F	GUCY2F	NA	NA	NA	NA	0.994232	445	0.980
GUK1	GUK1	NA	NA	-0.0032620	1.0000000	0.994232	423	0.980
HCK	HCK	NA	NA	-0.4185759	1.0000000	0.993066	183	0.980
HIPK1	HIPK1	NA	NA	-0.3292299	1.0000000	0.994232	392	0.980
HIPK2	HIPK2	NA	NA	-0.0131528	1.0000000	0.994232	512	0.888
HIPK3	HIPK3	NA	NA	-0.3722446	1.0000000	0.994232	525	0.980
HIPK4	HIPK4	NA	NA	-0.1949768	1.0000000	0.993066	170	0.718
HK1	HK1	NA	NA	-0.5504935	1.0000000	0.993066	341	0.980
HK2	HK2	NA	NA	-0.1646695	1.0000000	0.994232	511	0.980
HK3	HK3	NA	NA	-0.8896877	0.0161867	0.701894	19	0.718
HRK	HRK	NA	NA	NA	NA	0.993066	237	0.992
HSPB8	HSPB8	NA	NA	-0.0789090	1.0000000	0.993066	279	0.980
HUNK	HUNK	NA	NA	NA	NA	0.994232	442	0.980
ICK	ICK	NA	NA	NA	NA	0.994232	572	0.980
IGF1R	IGF1R	NA	NA	-0.1476981	1.0000000	0.994232	779	0.980
IKBKAP	IKBKAP	-0.0089529	1.0000000	-0.3326729	1.0000000	0.994232	646	0.980
IKBKB	IKBKB	NA	NA	NA	NA	0.994232	610	0.980
IKBKE	IKBKE	-0.2420979	0.9827536	-0.5874857	1.0000000	0.994232	536	0.783
IL2	IL2	NA	NA	-0.1087579	1.0000000	0.994232	709	0.980
ILK	ILK	NA	NA	-0.2824445	1.0000000	0.994232	649	0.980
ILKAP	ILKAP	NA	NA	NA	NA	0.994232	538	0.980
INSR	INSR	NA	NA	NA	NA	0.993066	291	0.980
IP6K1	IP6K1	NA	NA	NA	NA	0.993066	288	0.980
IP6K2	IP6K2	NA	NA	NA	NA	0.994232	401	0.980
IP6K3	IP6K3	NA	NA	NA	NA	0.994232	678	0.991
IPMK	IPMK	NA	NA	NA	NA	0.994232	383	0.980
IPPK	IPPK	NA	NA	NA	NA	0.993066	149	0.831

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
IQCH	IQCH	NA	NA	NA	NA	0.994232	462	0.980
IRAK1BP1	IRAK1BP1	NA	NA	NA	NA	0.994232	713	0.980
IRAK2	IRAK2	-0.2404806	0.9352306	-0.4987980	1.0000000	0.994232	545	0.801
IRAK3	IRAK3	NA	NA	NA	NA	0.994232	372	0.980
IRAK4	IRAK4	NA	NA	-0.0239122	1.0000000	0.993066	332	0.980
IRS1	IRS1	NA	NA	-0.1244351	1.0000000	0.994232	725	0.980
ITGB1BP1	ITGB1BP1	NA	NA	-0.1561609	1.0000000	0.993066	159	0.980
ITK	ITK	NA	NA	NA	NA	0.994232	402	0.980
ITPK1	ITPK1	NA	NA	-0.3455892	1.0000000	0.993066	186	0.888
ITPKA	ITPKA	-0.0882334	0.9352306	-0.9804692	0.1123445	0.701894	22	0.484
ITPKB	ITPKB	NA	NA	-0.6359371	1.0000000	0.984074	124	0.888
ITPKC	ITPKC	-0.0448782	0.9229450	-0.3989317	1.0000000	0.993066	199	0.736
JAK1	JAK1	NA	NA	-0.2009033	1.0000000	0.993066	210	0.980
JAK2	JAK2	NA	NA	NA	NA	0.993066	236	0.980
JAK3	JAK3	-0.0079739	0.9265915	NA	NA	0.701894	23	0.718
KALRN	KALRN	NA	NA	NA	NA	0.994232	773	0.980
KDR	KDR	NA	NA	NA	NA	0.993066	256	0.980
KHK	KHK	NA	NA	NA	NA	0.994232	620	0.980
KIF13B	KIF13B	NA	NA	-0.1720521	1.0000000	0.994232	751	0.980
KIT	KIT	NA	NA	NA	NA	0.994232	677	0.980
KSR2	KSR2	NA	NA	NA	NA	0.994232	771	0.980
LAMTOR3	LAMTOR3	NA	NA	NA	NA	0.996669	812	0.980
LATS1	LATS1	NA	NA	NA	NA	0.993066	315	0.980
LATS2	LATS2	NA	NA	NA	NA	0.994232	665	0.980
LCK	LCK	-0.0674416	0.9378502	-0.6660242	0.5781374	0.993066	207	0.784
LCP2	LCP2	NA	NA	-0.1714488	1.0000000	0.994232	458	0.980
LIMK2	LIMK2	NA	NA	NA	NA	0.808760	44	0.980
LMTK2	LMTK2	NA	NA	NA	NA	0.993066	270	0.980
LMTK3	LMTK3	NA	NA	NA	NA	0.994232	673	0.994
LRRK1	LRRK1	NA	NA	-0.2383675	1.0000000	0.993066	144	0.761
LTK	LTK	NA	NA	-0.3668036	1.0000000	0.993066	250	0.980
LYN	LYN	NA	NA	NA	NA	0.994232	433	0.980
MAGI3	MAGI3	NA	NA	-0.1117767	1.0000000	0.993066	286	0.980
MALT1	MALT1	NA	NA	-0.0448387	1.0000000	0.993066	229	0.980
MAP2K1	MAP2K1	NA	NA	NA	NA	0.994232	420	0.980
MAP2K2	MAP2K2	NA	NA	NA	NA	0.993066	163	0.980
MAP2K3	MAP2K3	NA	NA	NA	NA	0.993066	137	0.891
MAP2K4	MAP2K4	NA	NA	-0.0295553	1.0000000	0.994232	474	0.980
MAP2K5	MAP2K5	NA	NA	NA	NA	0.994232	443	0.980
MAP2K6	MAP2K6	NA	NA	NA	NA	0.994232	357	0.980
MAP2K7	MAP2K7	NA	NA	NA	NA	0.950888	62	0.992
MAP3K1	MAP3K1	NA	NA	-0.2251517	1.0000000	0.994232	683	0.980
MAP3K10	MAP3K10	NA	NA	NA	NA	0.993066	295	0.980
MAP3K11	MAP3K11	NA	NA	NA	NA	0.994232	481	0.980
MAP3K12	MAP3K12	NA	NA	NA	NA	0.994232	421	0.980
MAP3K13	MAP3K13	NA	NA	NA	NA	0.993066	214	0.986
MAP3K14	MAP3K14	NA	NA	NA	NA	0.994232	509	0.980
MAP3K2	MAP3K2	-0.1913691	0.9229450	-0.5578325	1.0000000	0.973911	99	0.786
MAP3K3	MAP3K3	NA	NA	-0.1121465	1.0000000	0.994232	599	0.980
MAP3K4	MAP3K4	NA	NA	-0.0188549	1.0000000	0.993066	234	0.980
MAP3K5	MAP3K5	NA	NA	NA	NA	0.994232	450	0.980
MAP3K6	MAP3K6	NA	NA	NA	NA	0.790240	26	0.623

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
MAP3K7	MAP3K7	NA	NA	NA	NA	0.994232	674	0.980
MAP3K8	MAP3K8	NA	NA	NA	NA	0.994232	368	0.980
MAP3K9	MAP3K9	NA	NA	-0.2101475	1.0000000	0.993066	235	0.980
MAP4K1	MAP4K1	NA	NA	-0.0386709	1.0000000	0.993066	151	0.738
MAP4K2	MAP4K2	NA	NA	NA	NA	0.994232	432	0.980
MAP4K3	MAP4K3	NA	NA	-0.2278158	1.0000000	0.994232	601	0.980
MAP4K4	MAP4K4	NA	NA	NA	NA	0.996669	810	0.980
MAP4K5	MAP4K5	NA	NA	NA	NA	0.994232	557	0.980
MAPK1	MAPK1	NA	NA	-0.6939262	1.0000000	0.973911	70	0.783
MAPK10	MAPK10	NA	NA	-0.1638936	1.0000000	0.994232	379	0.980
MAPK11	MAPK11	NA	NA	-0.0420169	1.0000000	0.994232	410	0.980
MAPK12	MAPK12	NA	NA	NA	NA	0.994232	568	0.980
MAPK13	MAPK13	NA	NA	NA	NA	0.994232	393	0.991
MAPK14	MAPK14	NA	NA	NA	NA	0.993066	330	0.980
MAPK3	MAPK3	-0.0332157	0.9352306	-0.8874385	0.0120925	0.845227	48	0.784
MAPK4	MAPK4	NA	NA	-0.4665726	1.0000000	0.994232	554	0.980
MAPK6	MAPK6	NA	NA	NA	NA	0.994232	448	0.980
MAPK7	MAPK7	-0.1609767	0.9229450	-0.7443061	0.1051081	0.701894	18	0.407
MAPK8	MAPK8	NA	NA	-0.2567768	1.0000000	0.994232	639	0.980
MAPK8IP1	MAPK8IP1	NA	NA	-0.0981609	1.0000000	0.994232	526	0.980
MAPK8IP2	MAPK8IP2	NA	NA	NA	NA	0.994232	403	0.992
MAPK8IP3	MAPK8IP3	NA	NA	-0.0030230	1.0000000	0.981079	101	0.980
MAPK9	MAPK9	NA	NA	NA	NA	0.994232	758	0.980
MAPKAPK3	MAPKAPK3	NA	NA	-0.3877240	1.0000000	0.994232	604	0.980
MAPKAPK5	MAPKAPK5	NA	NA	NA	NA	0.808760	37	0.980
MARK1	MARK1	NA	NA	-0.0143077	1.0000000	0.994232	542	0.980
MARK2	MARK2	NA	NA	-0.0071294	1.0000000	0.994232	648	0.980
MARK3	MARK3	NA	NA	NA	NA	0.994232	699	0.980
MARK4	MARK4	NA	NA	NA	NA	0.994232	672	0.980
MAST1	MAST1	NA	NA	NA	NA	0.993066	299	0.888
MAST2	MAST2	NA	NA	-0.3806342	1.0000000	0.993066	153	0.873
MAST3	MAST3	NA	NA	NA	NA	0.994232	688	0.980
MASTL	MASTL	NA	NA	-0.7723763	0.3629620	0.993066	284	0.891
MATK	MATK	NA	NA	NA	NA	0.981079	110	0.980
MBIP	MBIP	NA	NA	NA	NA	0.994232	772	0.980
MCL1	MCL1	NA	NA	NA	NA	0.994232	353	0.980
MDM1	MDM1	NA	NA	NA	NA	0.994232	769	0.980
MDM2	MDM2	NA	NA	NA	NA	0.994410	799	0.980
MDM4	MDM4	NA	NA	NA	NA	0.994232	412	0.980
MECOM	MECOM	NA	NA	NA	NA	0.994232	774	0.980
MELK	MELK	NA	NA	-0.3739855	1.0000000	0.973911	79	0.888
MERTK	MERTK	NA	NA	-0.2983757	1.0000000	0.993066	212	0.888
MET	MET	NA	NA	-0.0976971	1.0000000	0.994232	384	0.980
MINK1	MINK1	NA	NA	-0.0065428	1.0000000	0.993066	241	0.980
MKNK1	MKNK1	NA	NA	NA	NA	0.994232	502	0.980
MKNK2	MKNK2	NA	NA	NA	NA	0.994232	380	0.980
MLKL	MLKL	NA	NA	NA	NA	0.993202	343	0.980
MOK	MOK	NA	NA	-0.2392159	1.0000000	0.950888	63	0.464
MOS	MOS	NA	NA	NA	NA	0.994232	732	0.980
MPP2	MPP2	NA	NA	NA	NA	0.993066	336	0.980
MPP3	MPP3	-0.0333504	0.9352306	-0.8573709	0.0825529	0.994232	426	0.980
MPZL1	MPZL1	NA	NA	-0.2010756	1.0000000	0.994232	566	0.891

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
MRC2	MRC2	NA	NA	NA	NA	0.994232	689	0.983
MST1R	MST1R	NA	NA	-0.5120476	1.0000000	0.993066	167	0.784
MST4	MST4	NA	NA	-0.3969679	1.0000000	0.994232	344	0.980
MTOR	MTOR	NA	NA	-0.4675458	1.0000000	0.993066	161	0.980
MUSK	MUSK	NA	NA	NA	NA	0.994232	702	0.980
MVD	MVD	-0.5918498	0.3285571	-1.0079883	0.0124369	0.845227	47	0.438
MVK	MVK	NA	NA	NA	NA	0.994232	695	0.989
MYC	MYC	NA	NA	NA	NA	0.994232	740	0.991
MYD88	MYD88	NA	NA	-0.1449480	1.0000000	0.994232	388	0.980
MYLK	MYLK	NA	NA	-0.3875257	1.0000000	0.994232	624	0.986
MYLK2	MYLK2	NA	NA	-0.3875257	1.0000000	0.993066	206	0.817
MYLK3	MYLK3	NA	NA	NA	NA	0.994232	422	0.980
MYO3A	MYO3A	NA	NA	-0.1982619	1.0000000	0.994232	546	0.980
MYO3B	MYO3B	NA	NA	NA	NA	0.994232	739	0.980
NADK	NADK	NA	NA	-0.4407625	1.0000000	0.993066	339	0.980
NAGK	NAGK	-0.0864902	0.9606573	-0.3875274	1.0000000	0.994232	506	0.980
NBEA	NBEA	NA	NA	-0.2033686	1.0000000	0.993066	266	0.980
NEK1	NEK1	NA	NA	-0.3316556	1.0000000	0.994232	606	0.980
NEK11	NEK11	NA	NA	NA	NA	0.994232	752	0.989
NEK2	NEK2	NA	NA	NA	NA	0.994232	783	0.980
NEK3	NEK3	NA	NA	-0.2069779	1.0000000	0.994232	395	0.980
NEK4	NEK4	NA	NA	-0.1184255	1.0000000	0.994232	697	0.980
NEK6	NEK6	NA	NA	NA	NA	0.993066	172	0.980
NEK7	NEK7	NA	NA	-0.1177450	1.0000000	0.994232	446	0.980
NEK8	NEK8	-0.0959192	0.9352306	-0.6734080	0.6928860	0.993066	160	0.831
NEK9	NEK9	NA	NA	-0.2712113	1.0000000	0.994232	559	0.980
NIM1	NIM1	NA	NA	-0.2268755	1.0000000	0.994232	553	0.980
NLK	NLK	NA	NA	NA	NA	0.994232	663	0.986
NME2	NME2	NA	NA	NA	NA	0.994232	745	0.980
NME3	NME3	NA	NA	NA	NA	0.994232	607	0.980
NME4	NME4	NA	NA	-0.1505505	1.0000000	0.994232	563	0.980
NME5	NME5	NA	NA	NA	NA	0.996669	813	0.980
NME6	NME6	NA	NA	-0.0307905	1.0000000	0.994232	768	0.980
NME7	NME7	NA	NA	NA	NA	0.994232	359	0.991
NPR1	NPR1	NA	NA	NA	NA	0.994232	376	0.980
NPR2	NPR2	NA	NA	-0.0632378	1.0000000	0.994232	757	0.980
NRBP1	NRBP1	NA	NA	NA	NA	0.973911	96	0.980
NRG3	NRG3	-0.3669911	0.9229450	-0.7790845	0.0723033	0.701894	14	0.718
NTRK1	NTRK1	-0.3245931	0.8987868	-0.7545015	0.6563060	0.808760	43	0.718
NTRK2	NTRK2	NA	NA	NA	NA	0.973911	95	0.784
NTRK3	NTRK3	NA	NA	-0.1207013	1.0000000	0.790240	33	0.614
NUAK1	NUAK1	NA	NA	NA	NA	0.994232	431	0.980
NUAK2	NUAK2	NA	NA	NA	NA	0.701894	11	0.831
OBSCN	OBSCN	NA	NA	NA	NA	0.973911	65	0.980
OXSR1	OXSR1	NA	NA	-0.5367225	1.0000000	0.994232	501	0.980
PAC SIN1	PAC SIN1	NA	NA	-0.3530237	1.0000000	0.993066	173	0.980
PAG1	PAG1	NA	NA	NA	NA	0.981079	111	0.992
PAK1	PAK1	NA	NA	NA	NA	0.994232	491	0.980
PAK2	PAK2	NA	NA	NA	NA	0.994232	716	0.980
PAK3	PAK3	NA	NA	-0.1989940	1.0000000	0.993066	143	0.980
PAK4	PAK4	NA	NA	-0.0477247	1.0000000	0.993066	255	0.980
PAK6	PAK6	NA	NA	-0.2629634	1.0000000	0.993066	319	0.888

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
PAK7	PAK7	NA	NA	-0.2202468	1.0000000	0.736436	25	0.718
PANK1	PANK1	NA	NA	-0.1477846	1.0000000	0.993066	204	0.888
PANK3	PANK3	NA	NA	NA	NA	0.973911	78	0.980
PANK4	PANK4	NA	NA	-0.0265839	1.0000000	0.994232	628	0.980
PAPSS1	PAPSS1	NA	NA	-0.4826401	1.0000000	0.808760	41	0.888
PAPSS2	PAPSS2	-0.2008144	0.9229450	-0.7670113	1.0000000	0.950888	61	0.583
PASK	PASK	NA	NA	NA	NA	0.994410	800	1.000
PBK	PBK	NA	NA	NA	NA	0.994232	488	0.986
PCK1	PCK1	NA	NA	NA	NA	0.994232	520	0.980
PDGFRA	PDGFRA	NA	NA	-0.4525390	1.0000000	0.994232	679	0.980
PDGFRB	PDGFRB	NA	NA	-0.3753148	1.0000000	0.994232	390	0.980
PDIK1L	PDIK1L	NA	NA	NA	NA	0.994232	614	0.980
PDK1	PDK1	NA	NA	-0.0636745	1.0000000	0.994232	436	0.980
PDK2	PDK2	NA	NA	NA	NA	0.994232	579	0.980
PDK3	PDK3	NA	NA	NA	NA	0.994232	712	0.991
PDK4	PDK4	-0.2072283	0.9352306	-0.7204333	0.7067081	0.993066	335	0.980
PDLIM5	PDLIM5	NA	NA	NA	NA	0.993066	259	0.989
PDPK1	PDPK1	NA	NA	-0.2612030	1.0000000	0.993066	169	0.980
PDXK	PDXK	NA	NA	-0.2738277	1.0000000	0.993066	158	0.980
PFKFB1	PFKFB1	NA	NA	-0.2941408	1.0000000	0.790240	28	0.431
PFKFB2	PFKFB2	-0.3077672	0.9229450	-0.5846957	1.0000000	0.994232	417	0.980
PFKFB3	PFKFB3	NA	NA	NA	NA	0.984074	119	0.888
PFKFB4	PFKFB4	NA	NA	-0.3411460	1.0000000	0.993066	197	0.980
PFKL	PFKL	NA	NA	-0.1705458	1.0000000	0.994232	571	0.980
PFKM	PFKM	NA	NA	-0.1088367	1.0000000	0.993066	140	0.980
PFKP	PFKP	NA	NA	NA	NA	0.994232	348	0.980
PGK2	PGK2	NA	NA	NA	NA	0.994232	415	0.980
PHKA2	PHKA2	NA	NA	NA	NA	0.984074	121	0.980
PHKG1	PHKG1	NA	NA	NA	NA	0.981079	103	0.957
PHKG2	PHKG2	NA	NA	-0.3552904	1.0000000	0.993066	264	0.980
PI4K2B	PI4K2B	NA	NA	-0.3955804	1.0000000	0.993066	240	0.980
PI4KA	PI4KA	NA	NA	-0.1464583	1.0000000	0.994232	453	0.980
PI4KB	PI4KB	NA	NA	-0.2109543	1.0000000	0.994232	588	0.980
PICK1	PICK1	NA	NA	-0.1855594	1.0000000	0.984074	128	0.888
PIDD	PIDD	NA	NA	-0.2664741	1.0000000	0.994232	692	0.980
PIK3C2A	PIK3C2A	NA	NA	NA	NA	0.993066	322	0.980
PIK3C2B	PIK3C2B	NA	NA	-0.2545737	1.0000000	0.994232	391	0.980
PIK3C2G	PIK3C2G	NA	NA	NA	NA	0.994232	710	0.983
PIK3CA	PIK3CA	NA	NA	-0.1063599	1.0000000	0.994232	485	0.980
PIK3CB	PIK3CB	-0.2477463	0.9352306	-0.7376748	0.7653496	0.994232	351	0.980
PIK3CG	PIK3CG	NA	NA	-0.1537948	1.0000000	0.993066	251	0.980
PIK3R1	PIK3R1	NA	NA	NA	NA	0.994232	760	0.980
PIK3R2	PIK3R2	NA	NA	NA	NA	0.994232	497	0.980
PIK3R3	PIK3R3	-0.3128493	0.9266668	-0.8057038	0.2741052	0.994232	439	0.831
PIK3R4	PIK3R4	-0.1735760	0.5021597	-0.1506212	1.0000000	0.845227	49	0.555
PIM1	PIM1	NA	NA	-0.4178801	1.0000000	0.973911	71	0.980
PINK1	PINK1	NA	NA	-0.2282320	1.0000000	0.994232	521	0.980
PIP4K2A	PIP4K2A	NA	NA	NA	NA	0.993066	138	0.980
PIP4K2B	PIP4K2B	NA	NA	NA	NA	0.994232	531	0.980
PIP4K2C	PIP4K2C	NA	NA	NA	NA	0.994232	651	0.981
PIP5K1A	PIP5K1A	NA	NA	NA	NA	0.973911	80	0.888
PIP5KL1	PIP5KL1	NA	NA	NA	NA	0.994232	452	0.980

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
PKIA	PKIA	NA	NA	-0.2579935	1.0000000	0.994232	459	0.980
PKIB	PKIB	NA	NA	-0.0772718	1.0000000	0.994232	550	0.980
PKM	PKM	-0.3145825	0.9229450	-0.6395897	0.8398298	0.993066	293	0.980
PKMYT1	PKMYT1	-0.3145825	0.9229450	-0.6395897	0.8398298	0.790240	31	0.484
PKN1	PKN1	NA	NA	NA	NA	0.994232	510	0.980
PKN2	PKN2	-0.1745788	0.9352306	-0.2562625	1.0000000	0.994232	352	0.980
PKN3	PKN3	-0.0028347	0.9827536	-0.3423652	1.0000000	0.994232	753	0.980
PLK1	PLK1	NA	NA	-0.4189717	1.0000000	0.994232	414	0.980
PLK2	PLK2	NA	NA	NA	NA	0.994232	430	0.980
PLK3	PLK3	NA	NA	NA	NA	0.994232	645	0.980
PLK4	PLK4	NA	NA	NA	NA	0.994232	668	0.980
PMAIP1	PMAIP1	NA	NA	NA	NA	0.994232	641	0.980
PMVK	PMVK	NA	NA	NA	NA	0.994232	693	0.980
PNKP	PNKP	NA	NA	NA	NA	0.994232	543	0.980
POM121L10P	POM121L10P	NA	NA	-0.2740064	1.0000000	0.994232	722	0.980
PPP1R17	PPP1R17	NA	NA	NA	NA	0.993066	340	0.980
PPP1R1B	PPP1R1B	NA	NA	-0.0026161	1.0000000	0.993066	188	0.873
PPP2CB	PPP2CB	NA	NA	NA	NA	0.994232	581	0.989
PPP4C	PPP4C	NA	NA	-0.4081777	1.0000000	0.993066	280	0.980
PRKAA1	PRKAA1	NA	NA	-0.5851408	1.0000000	0.790240	30	0.837
PRKAA2	PRKAA2	NA	NA	-0.6071125	1.0000000	0.994232	583	0.980
PRKACA	PRKACA	NA	NA	-0.2779979	1.0000000	0.993066	246	0.980
PRKACB	PRKACB	NA	NA	-1.3268439	0.0000011	0.701894	13	0.583
PRKACG	PRKACG	NA	NA	-0.1557370	1.0000000	0.994232	367	0.980
PRKAG3	PRKAG3	NA	NA	NA	NA	0.994232	741	0.980
PRKAR1A	PRKAR1A	NA	NA	NA	NA	0.994232	408	0.995
PRKAR2A	PRKAR2A	NA	NA	NA	NA	0.994232	471	0.980
PRKAR2B	PRKAR2B	NA	NA	-0.1740746	1.0000000	0.994410	788	0.980
PRKCA	PRKCA	NA	NA	-0.0373453	1.0000000	0.994410	793	0.980
PRKCB	PRKCB	-0.1638474	0.9229450	-0.5644300	1.0000000	0.973911	66	0.718
PRKCD	PRKCD	NA	NA	NA	NA	0.994232	374	0.980
PRKCE	PRKCE	-0.3536902	0.9229450	-0.7937112	0.2892502	0.973911	82	0.555
PRKCG	PRKCG	NA	NA	-0.1431192	1.0000000	0.994232	461	0.980
PRKCH	PRKCH	NA	NA	NA	NA	0.994232	576	0.991
PRKCI	PRKCI	NA	NA	-0.6679583	1.0000000	0.994232	489	0.980
PRKCQ	PRKCQ	-0.3573556	0.8987868	-0.8650269	0.0587241	0.981079	112	0.956
PRKCSH	PRKCSH	NA	NA	NA	NA	0.994232	626	0.989
PRKCZ	PRKCZ	NA	NA	NA	NA	0.993066	136	0.992
PRKD1	PRKD1	NA	NA	-0.5681615	1.0000000	0.994232	457	0.980
PRKD2	PRKD2	NA	NA	NA	NA	0.994232	444	0.989
PRKD3	PRKD3	NA	NA	NA	NA	0.993066	312	0.992
PRKDC	PRKDC	NA	NA	-0.0710642	1.0000000	0.994232	418	0.980
PRKG1	PRKG1	NA	NA	-0.3628690	1.0000000	0.994232	647	0.891
PRKG2	PRKG2	-0.1713148	0.9229450	-0.8289301	0.3145684	0.994232	355	0.980
PRKRA	PRKRA	NA	NA	NA	NA	0.993066	311	0.980
PRKX	PRKX	NA	NA	NA	NA	0.994232	478	0.980
PRKY	PRKY	NA	NA	NA	NA	0.994232	479	1.000
PRPF4B	PRPF4B	NA	NA	NA	NA	0.993066	228	0.980
PRPS1	PRPS1	NA	NA	-0.1818982	1.0000000	0.993066	247	0.991
PRPS1L1	PRPS1L1	NA	NA	-0.1818982	1.0000000	0.994232	586	0.980
PRPS2	PRPS2	NA	NA	-0.5401246	1.0000000	0.994232	441	0.980
PRPSAP1	PRPSAP1	NA	NA	-0.0254770	1.0000000	0.993066	337	0.980

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
PRPSAP2	PRPSAP2	NA	NA	-0.1953508	1.0000000	0.994232	570	0.980
PSKH1	PSKH1	NA	NA	-0.1492233	1.0000000	0.994232	503	0.980
PTEN	PTEN	NA	NA	-0.1636815	1.0000000	0.993066	342	0.980
PTK2	PTK2	NA	NA	-0.2969639	1.0000000	0.994232	548	0.980
PTK2B	PTK2B	NA	NA	-0.1076985	1.0000000	0.994232	726	0.980
PTK6	PTK6	-0.1255333	0.8987868	-0.4113096	1.0000000	0.701894	8	0.438
PTK7	PTK7	NA	NA	NA	NA	0.993066	168	0.888
PTPN5	PTPN5	-0.1250191	0.9352306	-0.6449082	0.8737800	0.993066	133	0.738
PTPRG	PTPRG	NA	NA	-0.2841110	1.0000000	0.808760	38	0.583
PTPRJ	PTPRJ	NA	NA	NA	NA	0.994232	703	0.980
PTPRR	PTPRR	NA	NA	NA	NA	0.993066	217	0.991
PTPRT	PTPRT	NA	NA	NA	NA	0.994232	434	0.980
PUS10	PUS10	NA	NA	-0.3110372	1.0000000	0.994232	622	0.980
PXK	PXK	NA	NA	NA	NA	0.994232	696	0.980
RAC1	RAC1	NA	NA	NA	NA	0.994232	349	0.980
RAF1	RAF1	NA	NA	-0.1022109	1.0000000	0.994232	644	0.980
random	random	NA	NA	NA	NA	0.981079	117	0.019
RAPGEF3	RAPGEF3	NA	NA	NA	NA	0.701894	5	0.555
RAPGEF4	RAPGEF4	NA	NA	-0.4277297	1.0000000	0.994232	623	0.980
RASGRF2	RASGRF2	NA	NA	NA	NA	0.994232	480	0.980
RET	RET	NA	NA	NA	NA	0.994232	463	0.980
RFK	RFK	NA	NA	NA	NA	0.993066	193	0.980
RIOK1	RIOK1	NA	NA	NA	NA	0.993066	275	0.980
RIOK3	RIOK3	NA	NA	NA	NA	0.994232	346	0.980
RIPK1	RIPK1	NA	NA	-0.6784082	1.0000000	0.808760	42	0.431
RIPK2	RIPK2	NA	NA	NA	NA	0.994232	524	0.991
RIPK3	RIPK3	NA	NA	NA	NA	0.994232	389	0.980
RIPK4	RIPK4	NA	NA	-0.1683349	1.0000000	0.994232	738	0.980
RNASEL	RNASEL	NA	NA	NA	NA	0.994232	449	0.980
ROCK1	ROCK1	NA	NA	-0.8921263	0.0241872	0.993066	131	0.777
ROCK2	ROCK2	NA	NA	NA	NA	0.994232	704	0.980
ROPN1L	ROPN1L	NA	NA	-0.1209437	1.0000000	0.994232	640	0.980
ROR1	ROR1	NA	NA	NA	NA	0.993066	253	0.980
ROR2	ROR2	NA	NA	NA	NA	0.994232	734	0.980
ROS1	ROS1	NA	NA	NA	NA	0.994232	671	0.980
RPRD1A	RPRD1A	NA	NA	-0.2741074	1.0000000	0.973911	97	0.831
RPS6KA1	RPS6KA1	NA	NA	-0.1178453	1.0000000	0.994232	487	0.980
RPS6KA2	RPS6KA2	NA	NA	NA	NA	0.993066	244	0.980
RPS6KA3	RPS6KA3	NA	NA	NA	NA	0.994232	394	0.980
RPS6KA4	RPS6KA4	NA	NA	NA	NA	0.994232	735	0.980
RPS6KA5	RPS6KA5	NA	NA	NA	NA	0.994410	802	0.991
RPS6KA6	RPS6KA6	NA	NA	-0.2564268	1.0000000	0.994232	613	0.980
RPS6KB1	RPS6KB1	NA	NA	NA	NA	0.994232	504	0.980
RPS6KB2	RPS6KB2	NA	NA	-0.4321332	1.0000000	0.872030	59	0.761
RPS6KC1	RPS6KC1	-0.0172771	0.9779888	-0.6152116	1.0000000	0.993066	200	0.980
RPS6KL1	RPS6KL1	NA	NA	-0.2810859	1.0000000	0.993066	321	0.980
RYK	RYK	NA	NA	-0.5589600	1.0000000	0.993066	307	0.980
SCYL1	SCYL1	NA	NA	NA	NA	0.981079	105	0.980
SCYL2	SCYL2	NA	NA	-0.2499574	1.0000000	0.984074	127	0.980
SCYL3	SCYL3	-0.1408964	0.7629067	-0.7831114	0.1613076	0.973911	67	0.718
SEPHS1	SEPHS1	NA	NA	NA	NA	0.994410	789	0.980
SEPHS2	SEPHS2	NA	NA	NA	NA	0.993066	331	0.980

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
SGK1	SGK1	NA	NA	-0.6626015	0.8815142	0.994232	562	0.991
SGK196	SGK196	NA	NA	-0.6626015	0.8815142	0.993066	296	0.980
SGK2	SGK2	-0.3060238	0.8987868	-0.7987094	0.0493829	0.790240	29	0.407
SGK223	SGK223	NA	NA	NA	NA	0.993066	289	0.980
SGK3	SGK3	NA	NA	-0.4213287	1.0000000	0.994232	746	0.980
SHC1	SHC1	-0.2716176	0.9229450	-0.8360697	0.1483839	0.973911	91	0.120
SHPK	SHPK	-0.2942080	0.9771922	-0.4797804	1.0000000	0.994232	565	0.980
SIAE	SIAE	NA	NA	NA	NA	0.973911	83	0.980
SIK1	SIK1	NA	NA	-0.0666931	1.0000000	0.993066	222	0.950
SIK2	SIK2	NA	NA	-0.0915886	1.0000000	0.994232	468	0.980
SIK3	SIK3	NA	NA	NA	NA	0.993066	132	0.980
SKAP1	SKAP1	NA	NA	NA	NA	0.994232	718	0.980
SLK	SLK	NA	NA	NA	NA	0.993066	287	0.980
SMAD7	SMAD7	NA	NA	-0.2313730	1.0000000	0.993066	198	0.980
SMG1	SMG1	-0.7283665	0.4317636	-1.4299818	0.0000000	0.993066	263	0.980
SNRK	SNRK	NA	NA	NA	NA	0.994232	574	0.980
SOCS5	SOCS5	NA	NA	-0.4960933	1.0000000	0.994232	375	0.784
SPA17	SPA17	NA	NA	NA	NA	0.994232	781	0.989
SPEG	SPEG	NA	NA	NA	NA	0.993066	283	0.980
SPHK1	SPHK1	NA	NA	-0.2954257	1.0000000	0.994232	438	0.948
SPHK2	SPHK2	NA	NA	-0.1737370	1.0000000	0.994232	587	0.980
SQSTM1	SQSTM1	NA	NA	-0.0892769	1.0000000	0.993066	338	0.980
SRC	SRC	NA	NA	NA	NA	0.973911	81	0.784
SRMS	SRMS	NA	NA	NA	NA	0.994232	787	0.980
SRP72	SRP72	-0.1915442	0.9352306	-0.4696140	1.0000000	0.994232	720	0.980
SRPK1	SRPK1	NA	NA	-0.4613880	1.0000000	0.981079	118	0.784
SRPK2	SRPK2	NA	NA	NA	NA	0.994232	658	0.980
STK10	STK10	NA	NA	NA	NA	0.994232	578	0.980
STK11	STK11	NA	NA	-0.3475505	1.0000000	0.994232	598	0.980
STK16	STK16	-0.2327328	0.9229450	-0.3874971	1.0000000	0.973911	77	0.892
STK17A	STK17A	NA	NA	-0.1245239	1.0000000	0.994232	547	0.980
STK17B	STK17B	NA	NA	NA	NA	0.994232	715	0.980
STK24	STK24	NA	NA	NA	NA	0.993066	152	0.980
STK25	STK25	NA	NA	-0.0992241	1.0000000	0.994232	429	0.980
STK3	STK3	NA	NA	-0.3529932	1.0000000	0.994232	755	0.980
STK31	STK31	NA	NA	NA	NA	0.994232	705	0.980
STK32A	STK32A	NA	NA	NA	NA	0.994232	596	0.980
STK32B	STK32B	NA	NA	NA	NA	0.994232	465	0.980
STK32C	STK32C	NA	NA	NA	NA	0.993066	148	0.980
STK33	STK33	NA	NA	NA	NA	0.994232	743	0.980
STK35	STK35	NA	NA	NA	NA	0.993066	313	0.980
STK36	STK36	NA	NA	NA	NA	0.993066	232	0.888
STK38	STK38	NA	NA	-0.2332232	1.0000000	0.993066	223	0.980
STK38L	STK38L	NA	NA	NA	NA	0.994232	595	0.980
STK39	STK39	NA	NA	NA	NA	0.994232	590	0.980
STK4	STK4	NA	NA	NA	NA	0.994232	682	0.980
STK40	STK40	NA	NA	NA	NA	0.993066	265	0.980
STRADB	STRADB	NA	NA	-0.0517626	1.0000000	0.994232	475	0.980
STYK1	STYK1	NA	NA	-0.5170023	1.0000000	0.994232	347	0.980
SYK	SYK	NA	NA	NA	NA	0.994450	809	0.980
TAOK1	TAOK1	NA	NA	-0.2844676	1.0000000	0.994232	763	0.980
TAOK2	TAOK2	NA	NA	-0.1609954	1.0000000	0.994232	670	0.980

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
TAOK3	TAOK3	NA	NA	-0.2021053	1.0000000	0.994232	507	0.980
TBCK	TBCK	NA	NA	NA	NA	0.994232	724	0.980
TBK1	TBK1	NA	NA	-0.1634884	1.0000000	0.994232	612	0.980
TCF4	TCF4	NA	NA	NA	NA	0.994232	405	0.980
TEC	TEC	NA	NA	-0.3574546	1.0000000	0.973911	74	0.980
TEK	TEK	NA	NA	NA	NA	0.994232	592	0.980
TESK1	TESK1	NA	NA	NA	NA	0.993066	261	0.980
TESK2	TESK2	NA	NA	-0.4762269	1.0000000	0.701894	10	0.784
TEX14	TEX14	NA	NA	-0.2807792	1.0000000	0.994232	600	0.980
TGFBR1	TGFBR1	NA	NA	NA	NA	0.994232	603	0.991
TGFBR2	TGFBR2	NA	NA	NA	NA	0.993066	192	0.980
THNSL1	THNSL1	NA	NA	NA	NA	0.993066	243	0.980
TIE1	TIE1	NA	NA	-0.3728578	1.0000000	0.973911	100	0.784
TJP2	TJP2	NA	NA	-0.0060155	1.0000000	0.994232	627	0.980
TK1	TK1	NA	NA	NA	NA	0.994410	801	0.980
TK2	TK2	NA	NA	NA	NA	0.994232	602	0.980
TLK1	TLK1	NA	NA	-0.4723150	1.0000000	0.981079	102	0.980
TLK2	TLK2	NA	NA	-0.2194810	1.0000000	0.994232	661	0.980
TLR1	TLR1	NA	NA	-0.7084222	0.6941480	0.994232	642	0.980
TLR3	TLR3	NA	NA	NA	NA	0.994232	700	0.980
TLR4	TLR4	NA	NA	NA	NA	0.994232	652	0.980
TNFRSF10A	TNFRSF10A	NA	NA	NA	NA	0.993066	216	0.980
TNFRSF10B	TNFRSF10B	NA	NA	NA	NA	0.994232	505	0.980
TNFRSF10C	TNFRSF10C	NA	NA	-0.4838707	1.0000000	0.973911	94	0.837
TNFRSF10D	TNFRSF10D	NA	NA	-0.2701293	1.0000000	0.994232	362	0.980
TNFRSF11A	TNFRSF11A	NA	NA	NA	NA	0.701894	6	0.431
TNFRSF11B	TNFRSF11B	NA	NA	NA	NA	0.993066	162	0.888
TNFRSF12A	TNFRSF12A	NA	NA	NA	NA	0.973911	98	0.980
TNFRSF13B	TNFRSF13B	NA	NA	-0.1269107	1.0000000	0.701894	15	0.484
TNFRSF13C	TNFRSF13C	-0.0623956	0.9352306	-0.0773571	1.0000000	0.701894	1	0.888
TNFRSF14	TNFRSF14	NA	NA	NA	NA	0.993066	209	0.980
TNFRSF18	TNFRSF18	-0.2110298	0.9229450	-0.3739695	1.0000000	0.872030	58	0.431
TNFRSF19	TNFRSF19	NA	NA	-0.1031715	1.0000000	0.994232	680	0.980
TNFRSF1A	TNFRSF1A	NA	NA	NA	NA	0.994232	498	0.980
TNFRSF1B	TNFRSF1B	NA	NA	NA	NA	0.993066	262	0.991
TNFRSF21	TNFRSF21	-0.1017611	0.9352306	-0.3564220	1.0000000	0.994232	684	0.980
TNFRSF25	TNFRSF25	NA	NA	-0.2105276	1.0000000	0.993066	146	0.980
TNFRSF4	TNFRSF4	-0.4359703	0.8987868	-0.8135550	0.7082275	0.872030	56	0.375
TNFRSF8	TNFRSF8	NA	NA	NA	NA	0.993066	225	0.991
TNFRSF9	TNFRSF9	NA	NA	NA	NA	0.994232	411	0.980
TNIK	TNIK	NA	NA	NA	NA	0.993066	231	0.980
TNK1	TNK1	NA	NA	-0.1681249	1.0000000	0.993066	252	0.980
TNK2	TNK2	-0.1466383	0.9352306	-0.4409113	1.0000000	0.993066	202	0.738
TNNI3K	TNNI3K	NA	NA	NA	NA	0.994232	766	0.980
TP53	TP53	NA	NA	NA	NA	0.994232	594	0.991
TP53AIP1	TP53AIP1	NA	NA	NA	NA	0.994232	591	0.980
TP53BP1	TP53BP1	NA	NA	-0.0432170	1.0000000	0.701894	21	0.980
TP53BP2	TP53BP2	NA	NA	-0.3311529	1.0000000	0.994232	356	0.980
TP53I11	TP53I11	NA	NA	NA	NA	0.993066	308	0.980
TP53RK	TP53RK	NA	NA	NA	NA	0.994410	791	0.980
TPD52L3	TPD52L3	NA	NA	-0.4598968	1.0000000	0.993066	285	0.980
TPK1	TPK1	NA	NA	-0.5649612	1.0000000	0.993066	142	0.831

	genes	wilcox.log2fc	wilcox.pval	deseq.log2fc	deseq.pval	mageck.fdr	mageck.rank	rse
TRADD	TRADD	NA	NA	-0.1763536	1.0000000	0.994232	681	0.980
TRAT1	TRAT1	NA	NA	-0.3034040	1.0000000	0.994232	737	0.980
TRIB1	TRIB1	-0.2345656	0.9352306	-0.4977338	1.0000000	0.994232	454	0.980
TRIB2	TRIB2	NA	NA	NA	NA	0.994232	398	0.438
TRIB3	TRIB3	NA	NA	-0.1902359	1.0000000	0.994232	486	0.888
TRIO	TRIO	NA	NA	-0.2656021	1.0000000	0.994232	662	0.980
TRPM6	TRPM6	-0.2196952	0.9229450	-0.5528178	1.0000000	0.993066	324	0.980
TRPM7	TRPM7	NA	NA	-0.3328617	1.0000000	0.994232	617	0.980
TSKS	TSKS	NA	NA	NA	NA	0.994232	706	0.980
TSSK3	TSSK3	NA	NA	-0.4741866	1.0000000	0.790240	32	0.464
TSSK6	TSSK6	NA	NA	-0.1960194	1.0000000	0.993066	213	0.888
TTBK1	TTBK1	NA	NA	-0.1285945	1.0000000	0.993066	221	0.718
TTBK2	TTBK2	NA	NA	NA	NA	0.993066	233	0.980
TTK	TTK	NA	NA	-0.4291349	1.0000000	0.994232	451	0.980
TTN	TTN	-0.0099600	0.9771922	-0.4018783	1.0000000	0.994232	660	0.980
TWF1	TWF1	NA	NA	NA	NA	0.993066	304	0.980
TXK	TXK	NA	NA	-0.5342759	1.0000000	0.994232	345	0.980
TYK2	TYK2	NA	NA	-0.0622677	1.0000000	0.872030	57	0.980
TYRO3	TYRO3	NA	NA	NA	NA	0.981079	109	0.991
UCK1	UCK1	NA	NA	NA	NA	0.994410	790	0.991
UCK2	UCK2	NA	NA	NA	NA	0.994232	477	0.980
UCKL1	UCKL1	NA	NA	-0.1111404	1.0000000	0.993066	180	0.980
UGP2	UGP2	NA	NA	NA	NA	0.994232	582	0.980
UHMK1	UHMK1	NA	NA	NA	NA	0.994232	777	0.980
ULK1	ULK1	NA	NA	NA	NA	0.993066	292	0.980
ULK2	ULK2	NA	NA	NA	NA	0.981079	106	0.831
ULK3	ULK3	NA	NA	NA	NA	0.994232	685	0.980
ULK4	ULK4	NA	NA	NA	NA	0.993066	276	0.980
VRK1	VRK1	NA	NA	NA	NA	0.994232	494	0.980
VRK2	VRK2	-0.2048493	0.9378502	-0.5850295	1.0000000	0.994232	513	0.980
VRK3	VRK3	NA	NA	-0.3245485	1.0000000	0.993066	135	0.888
WEE1	WEE1	NA	NA	-0.0267153	1.0000000	0.994232	748	0.980
WIF1	WIF1	-0.0344848	0.9819710	-0.8396864	0.0242731	0.701894	17	0.718
WNK1	WNK1	NA	NA	-0.3417551	1.0000000	0.993066	187	0.980
WNK2	WNK2	NA	NA	-0.0414873	1.0000000	0.993066	271	0.980
WNK4	WNK4	NA	NA	-0.3085212	1.0000000	0.993066	274	0.980
XIAP	XIAP	NA	NA	NA	NA	0.994232	589	0.980
XYLB	XYLB	NA	NA	NA	NA	0.993066	150	0.980
YES1	YES1	NA	NA	NA	NA	0.994232	625	0.980
YWHAH	YWHAH	-0.1388869	0.9266668	-0.0718805	1.0000000	0.993066	329	0.980
YWHAQ	YWHAQ	NA	NA	NA	NA	0.993066	260	0.980
ZAP70	ZAP70	NA	NA	-0.5816059	1.0000000	0.808760	46	0.484

Final Gene Table

A final table with all information for each gene is stored in
`./data/TRAILscreen_FINAL.xls`.

Annotate Hit Candidates

All genes are annotated with additional information from **biomaRt**.

The following information is retrieved: **Database:** ENSEMBL_MART_ENSEMBL **Dataset:** hsapiens_gene_ensembl **Filters:** ensembl_gene_id description name_1006 mim_gene_description family_description ensembl_peptide_id

The annotated list of all genes is stored in

```
./data  
** TRAILscreen_ANNOTATION.xlsx **
```

Data Extraction, Mapping and Files

The data is located in

```
./data
```

and the script files for data extraction and mapping are located in

```
./scripts
```

All file-based output (e.g. tables) from MAGeCK is stored in:

/Users/janwinter/Documents/PhD/GitHub/scripts/CRISPR/caRpools-development.

Parameter | Value --- | --- Reverse Complement Sequence | FALSE Pattern of Data Extraction | ACC.{20,21})GT{2,4}AGAGC Maschine Identifier FASTq | Create Bowtie2 Index? | Reference.fasta File | pilot-screen-library.fasta Bt2 Threads | 4 Bt2 Sensitivity | very-sensitive-local sgRNA Oligo Match | perfect