

OCI-AML2-Cas9

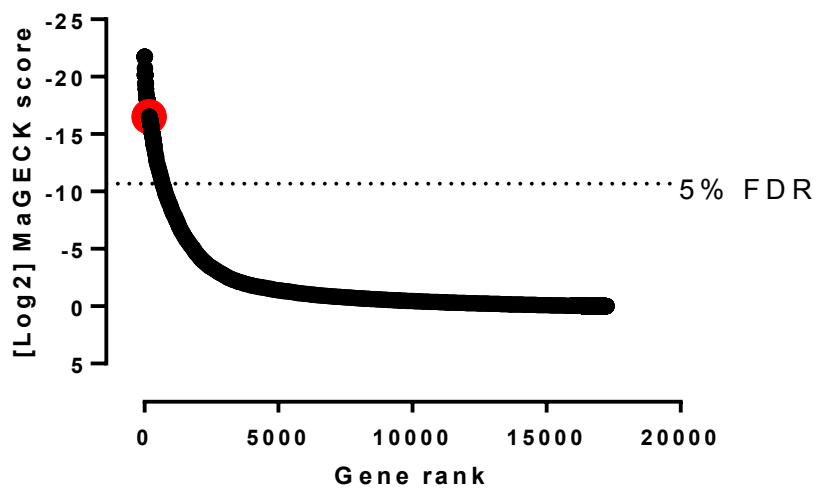


Figure S1

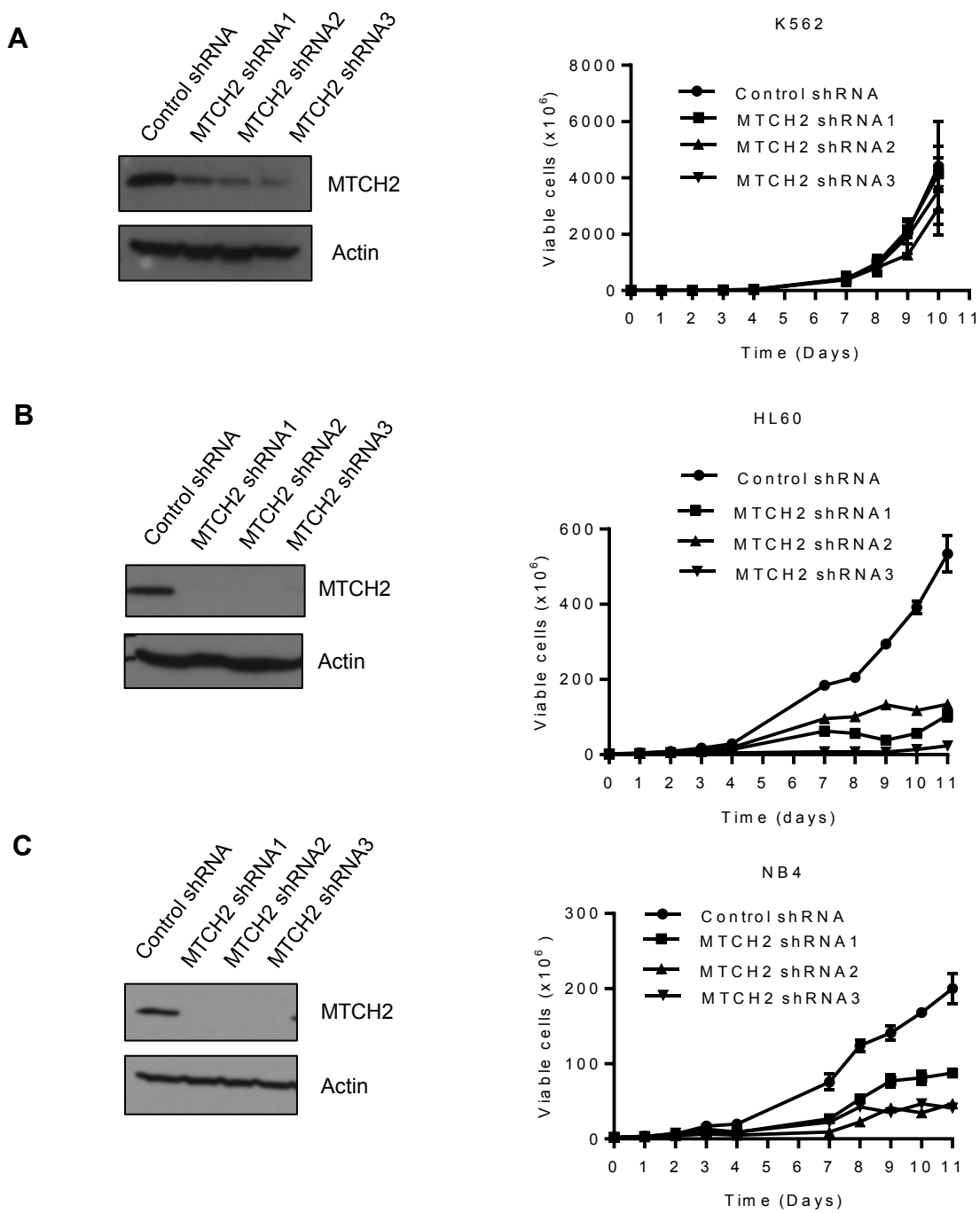


Figure S2

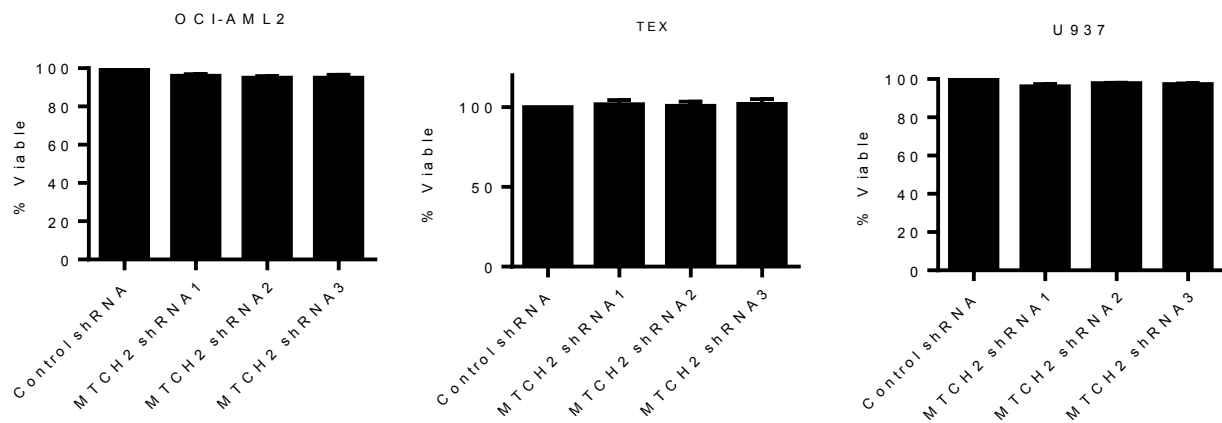
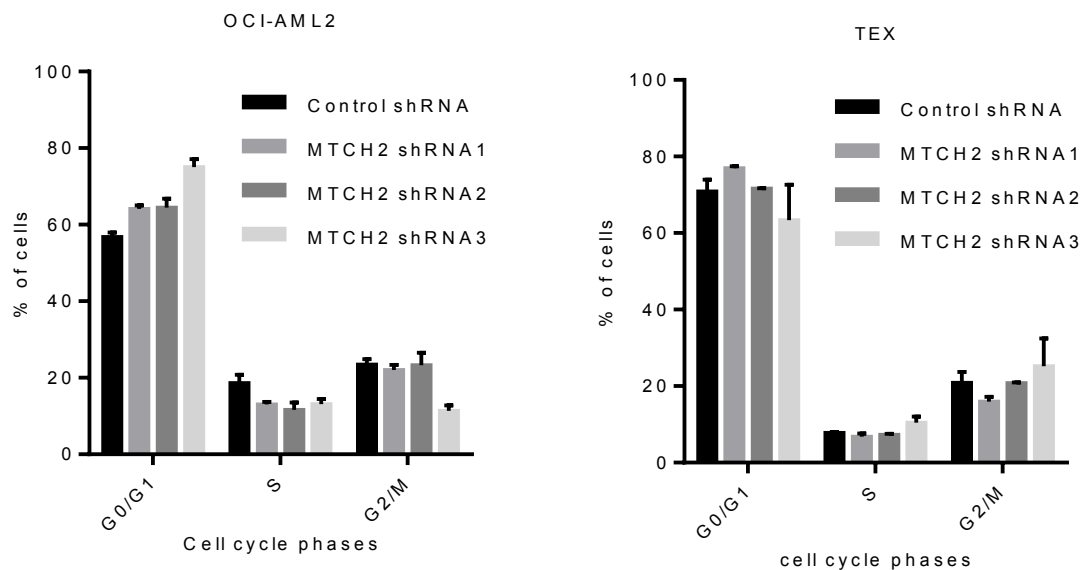
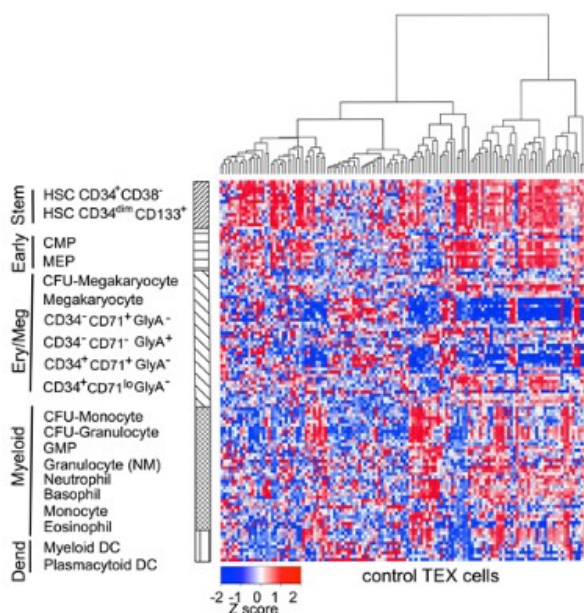
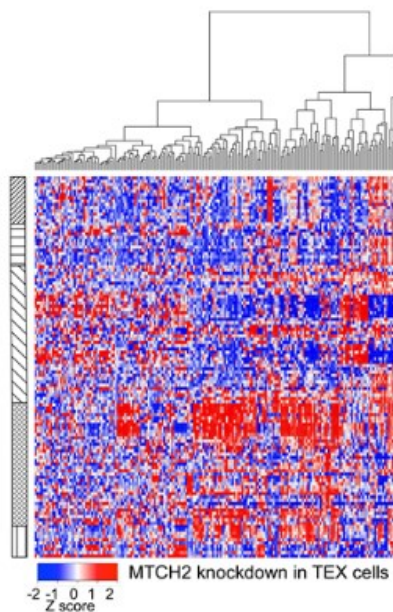
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Figure S3

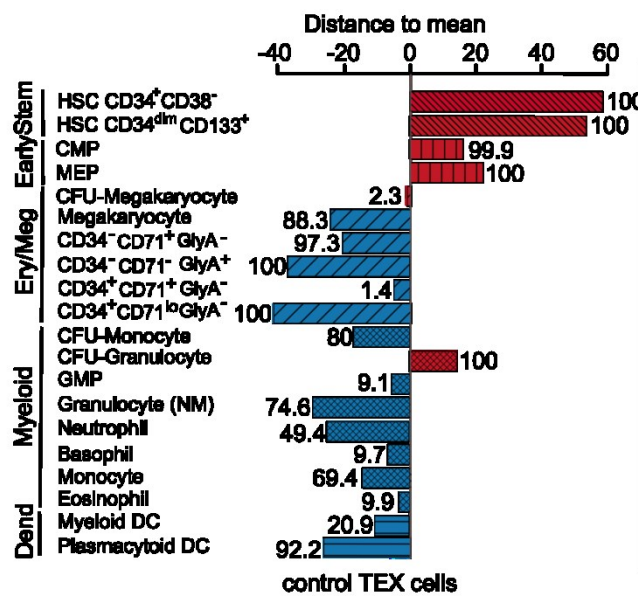
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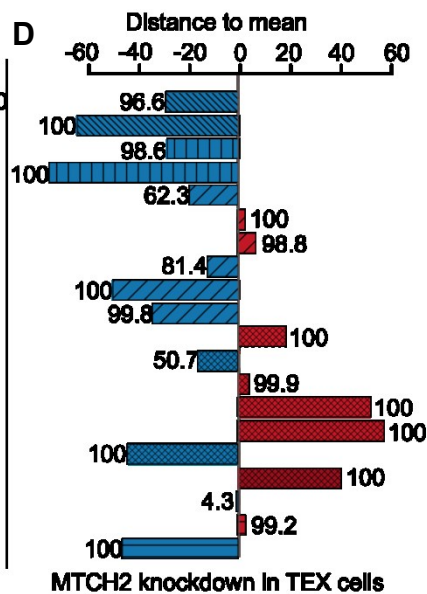
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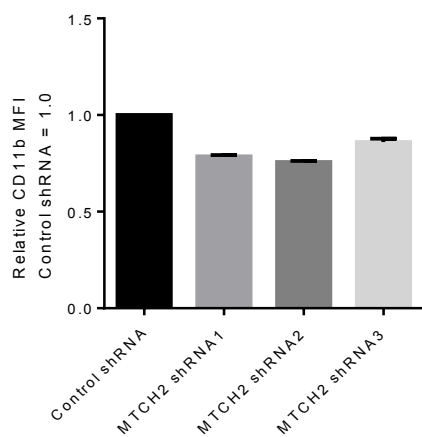
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D



E



F

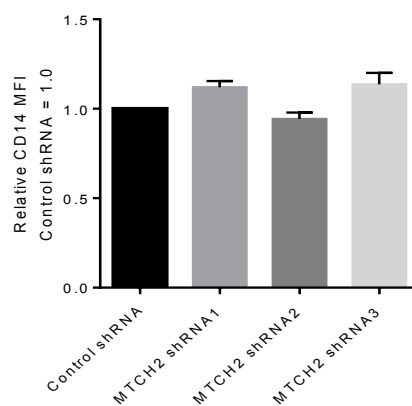


Figure S4

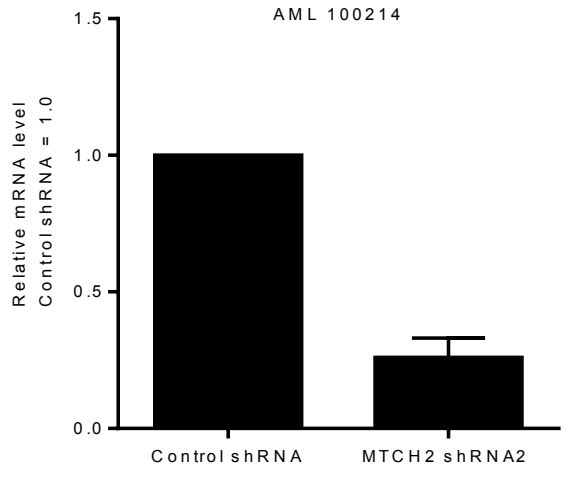
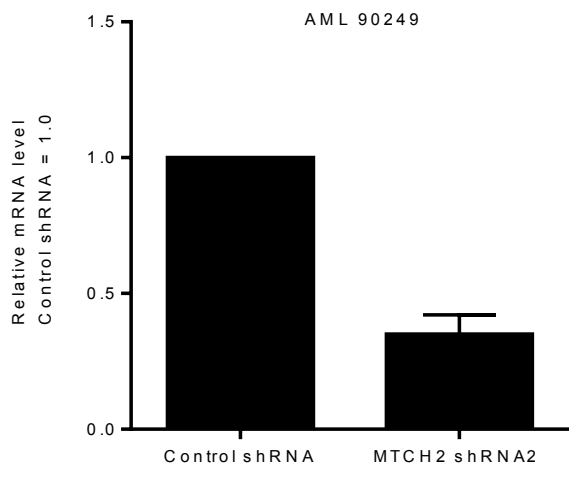


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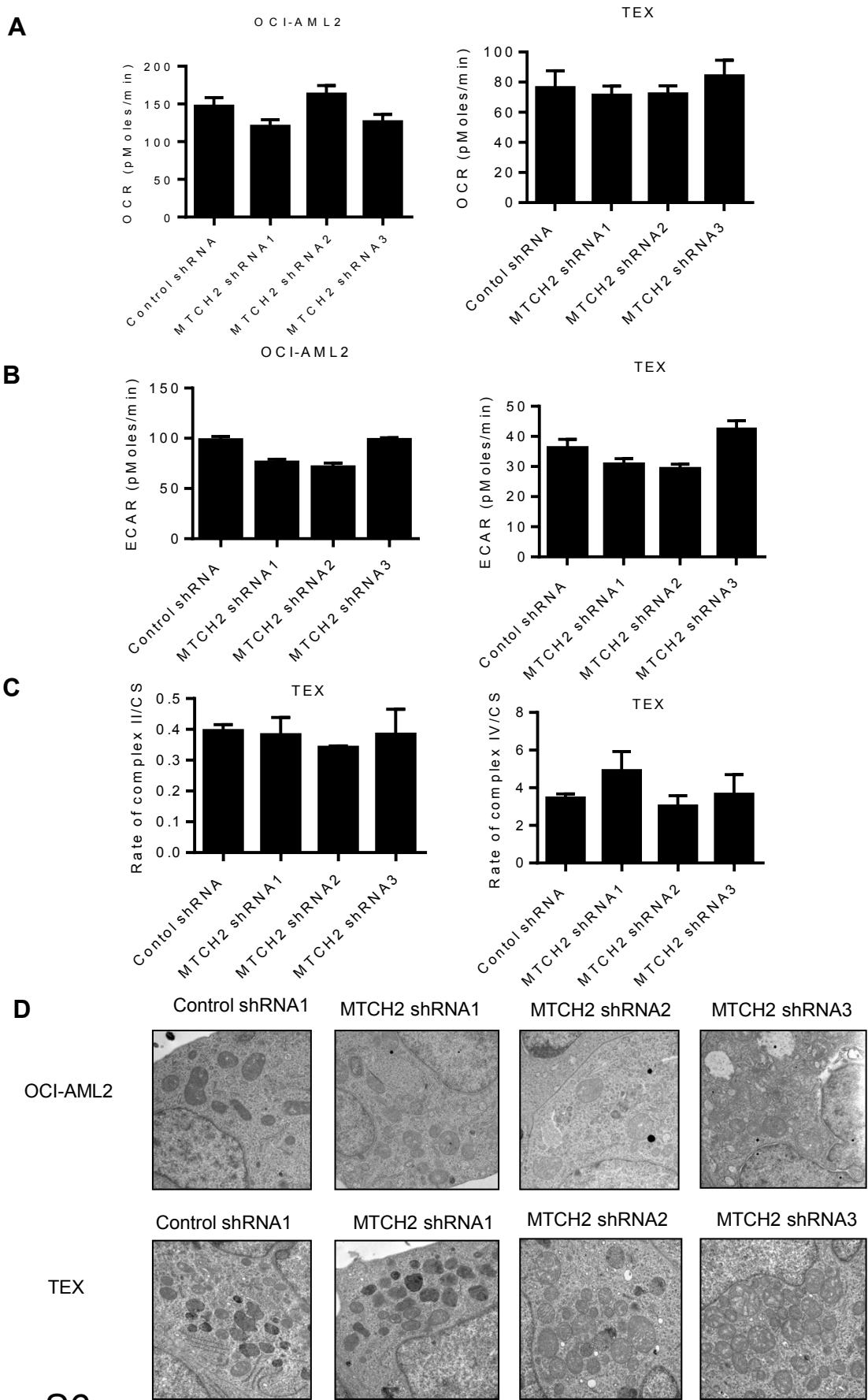


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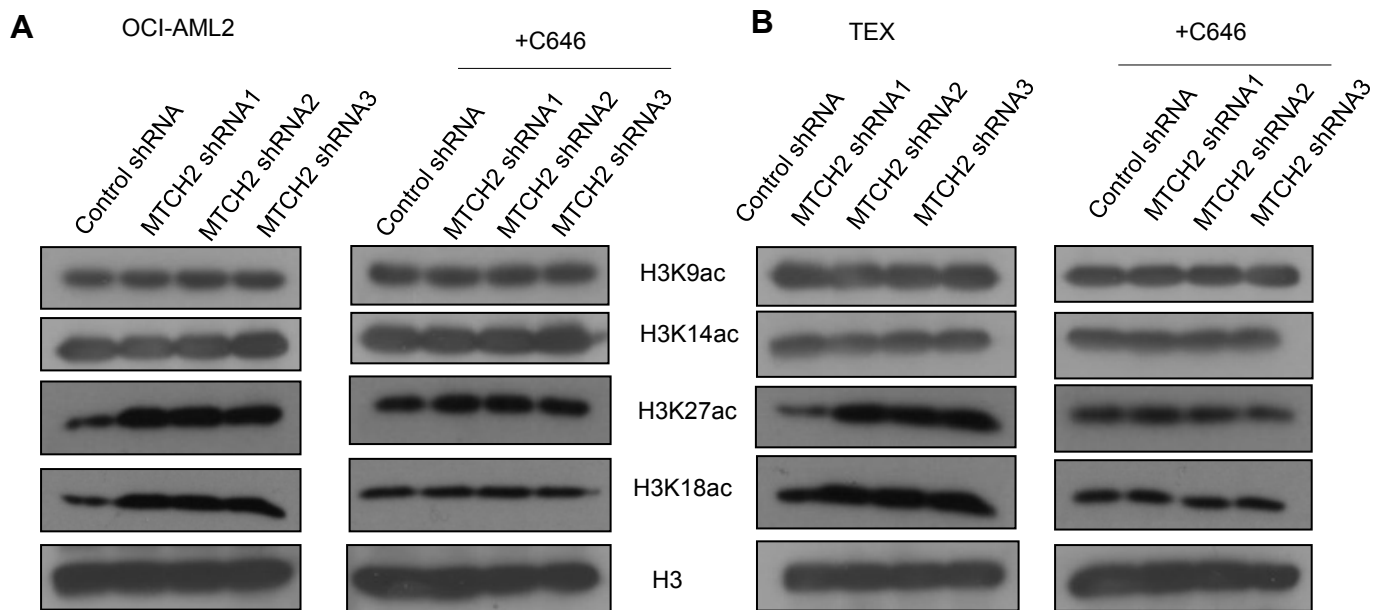


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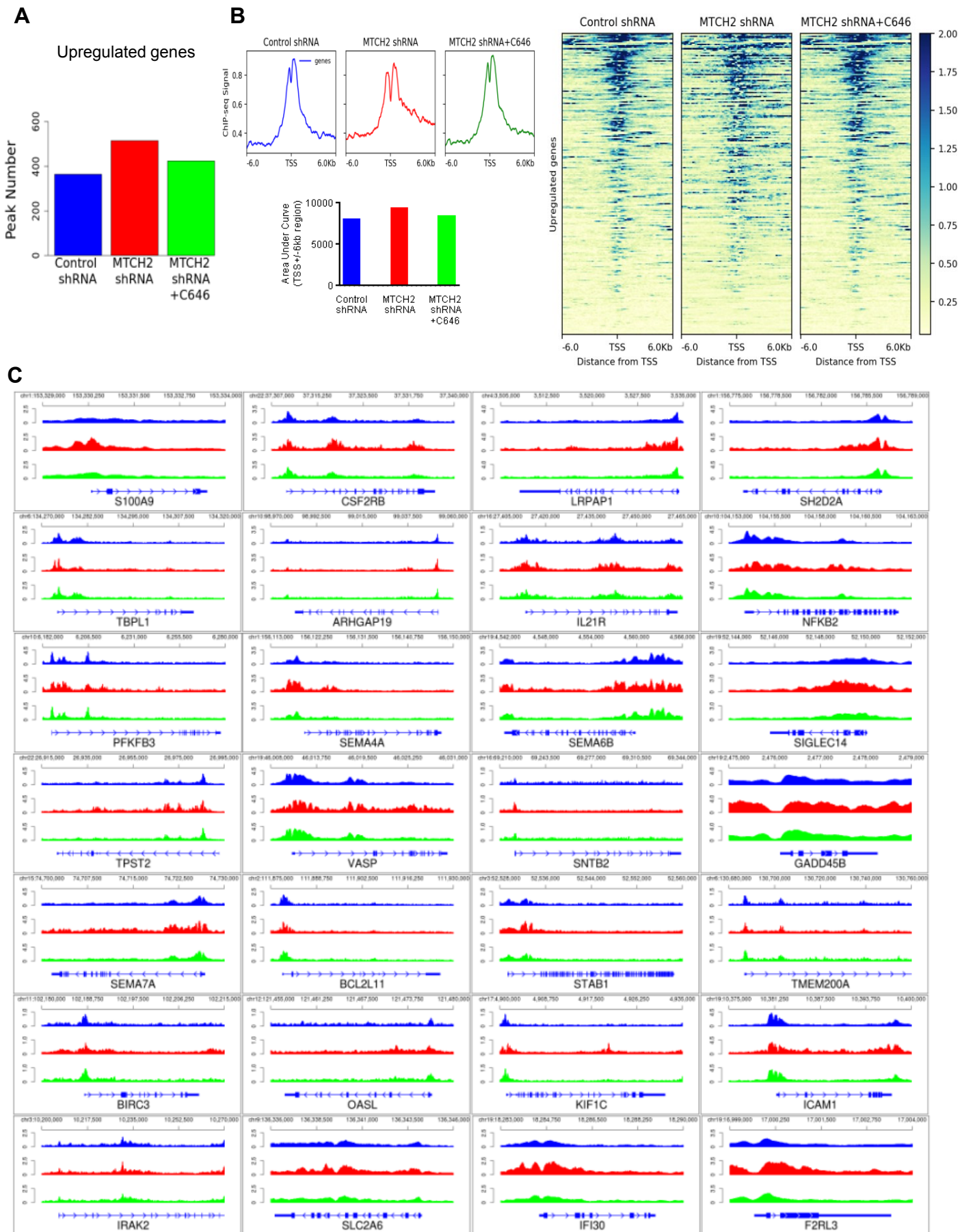


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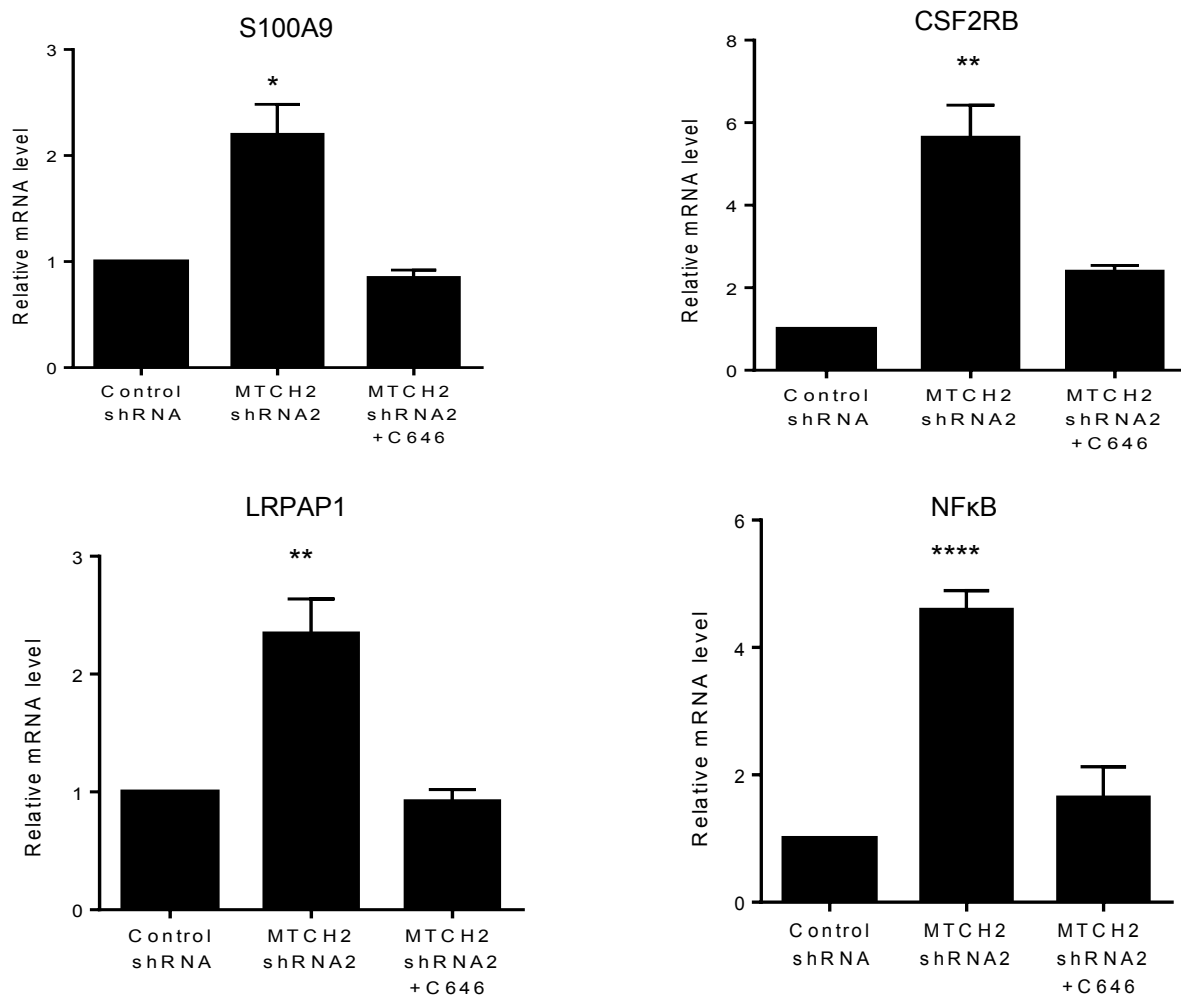
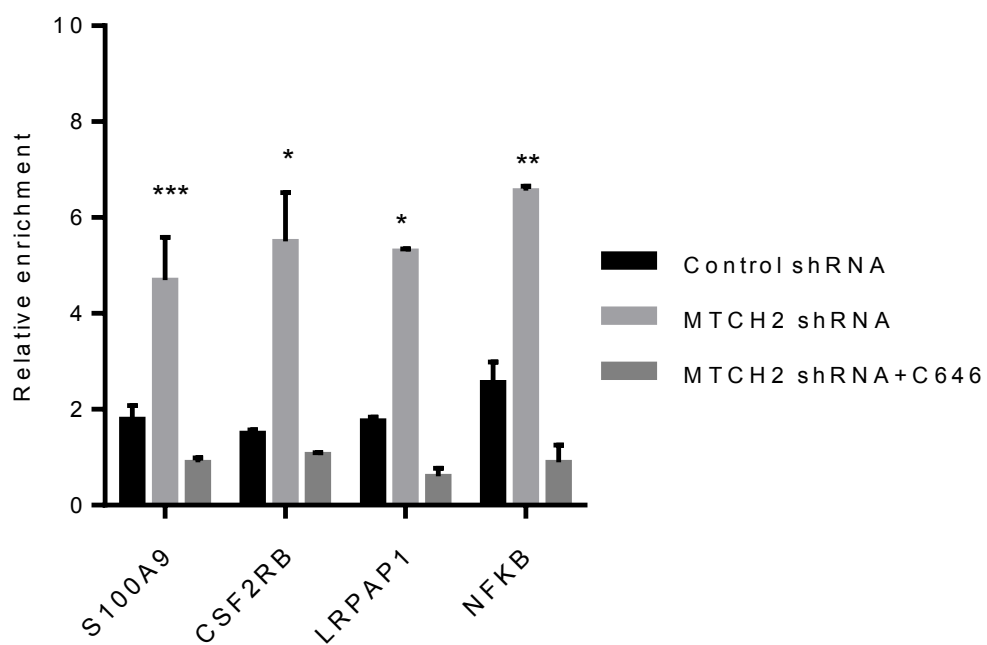
A**B**

Figure S9

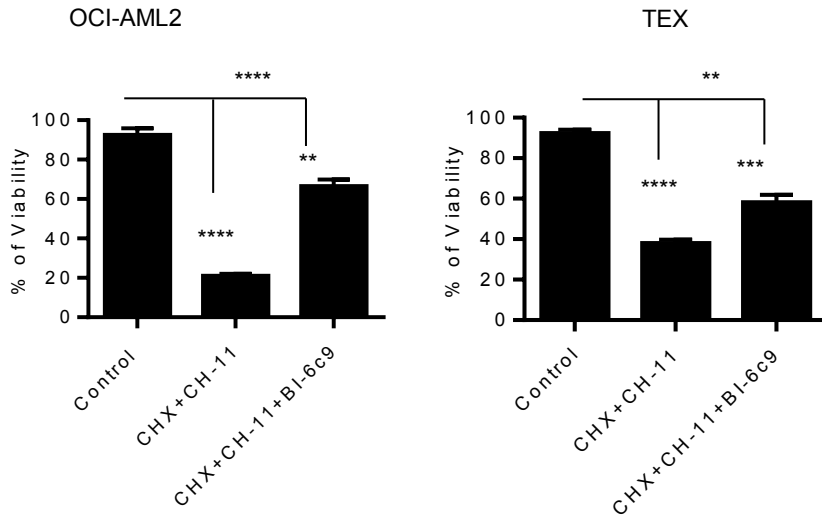


Figure S10

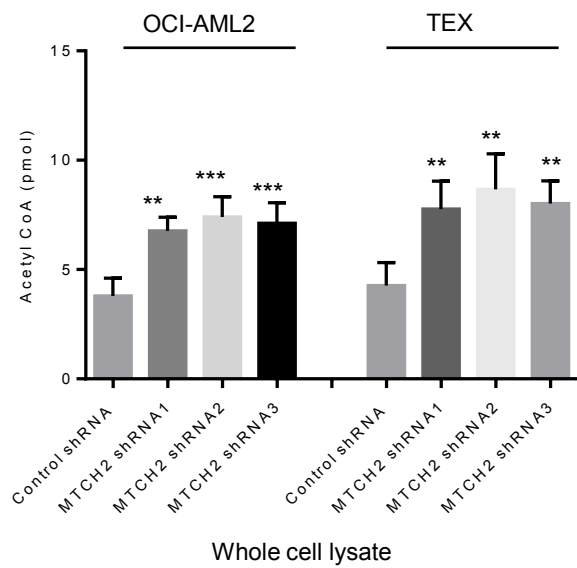
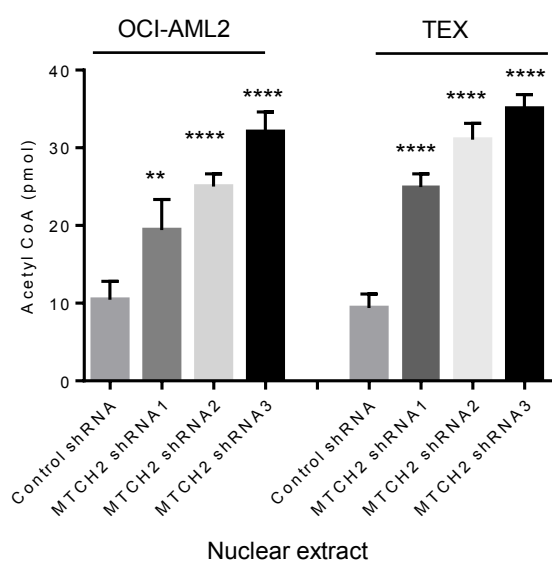
A**B**

Figure S11

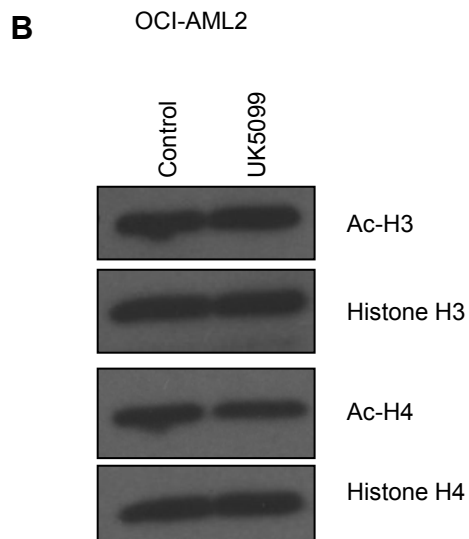
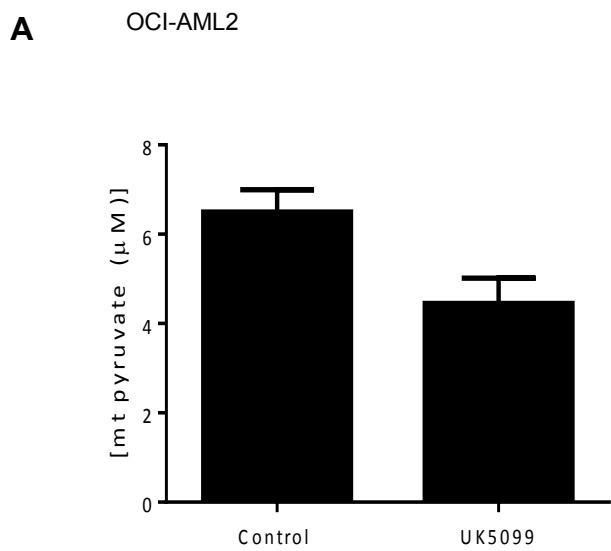


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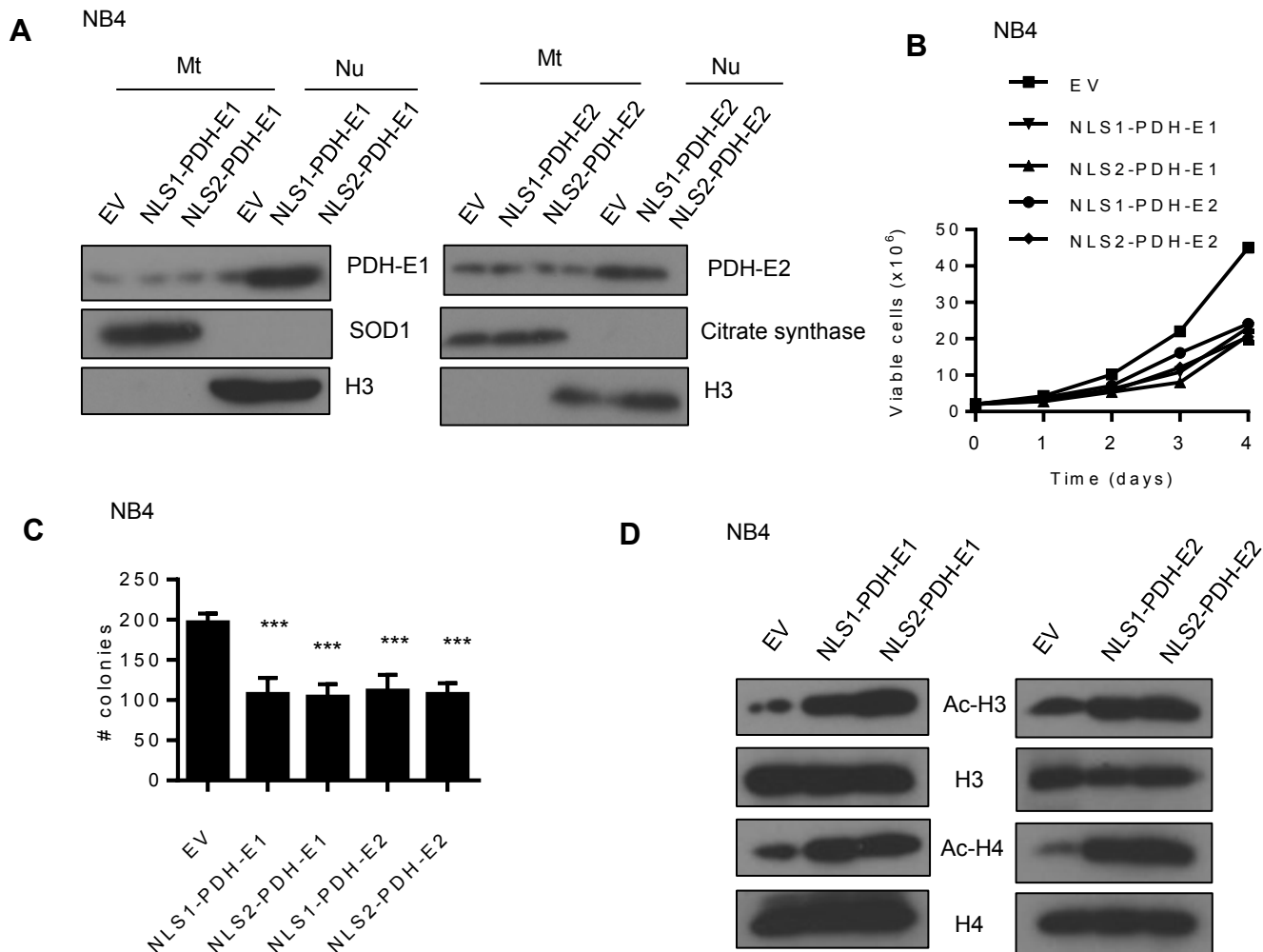
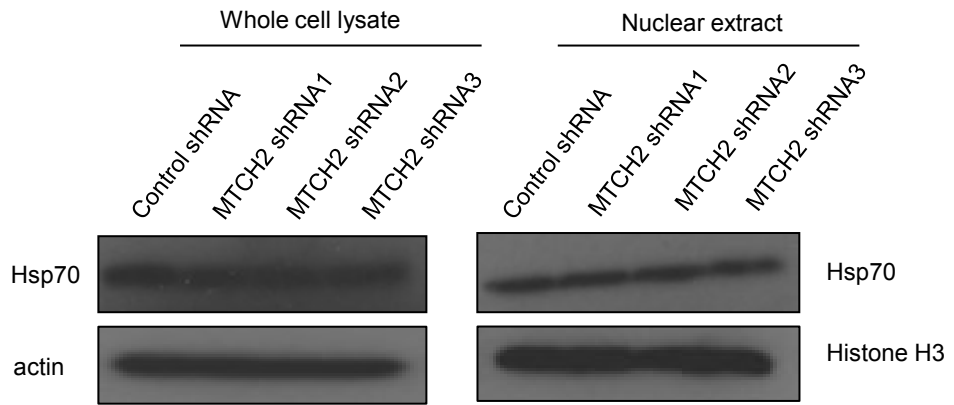


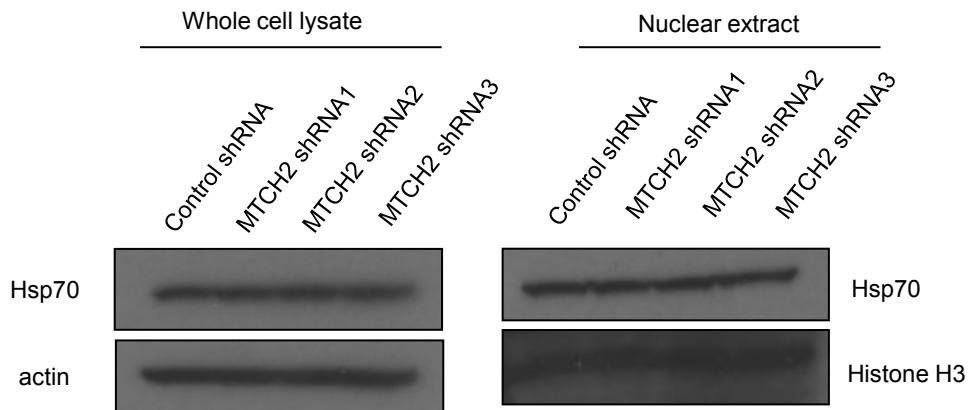
Figure S13

A

OCI-AML2

**B**

TEX



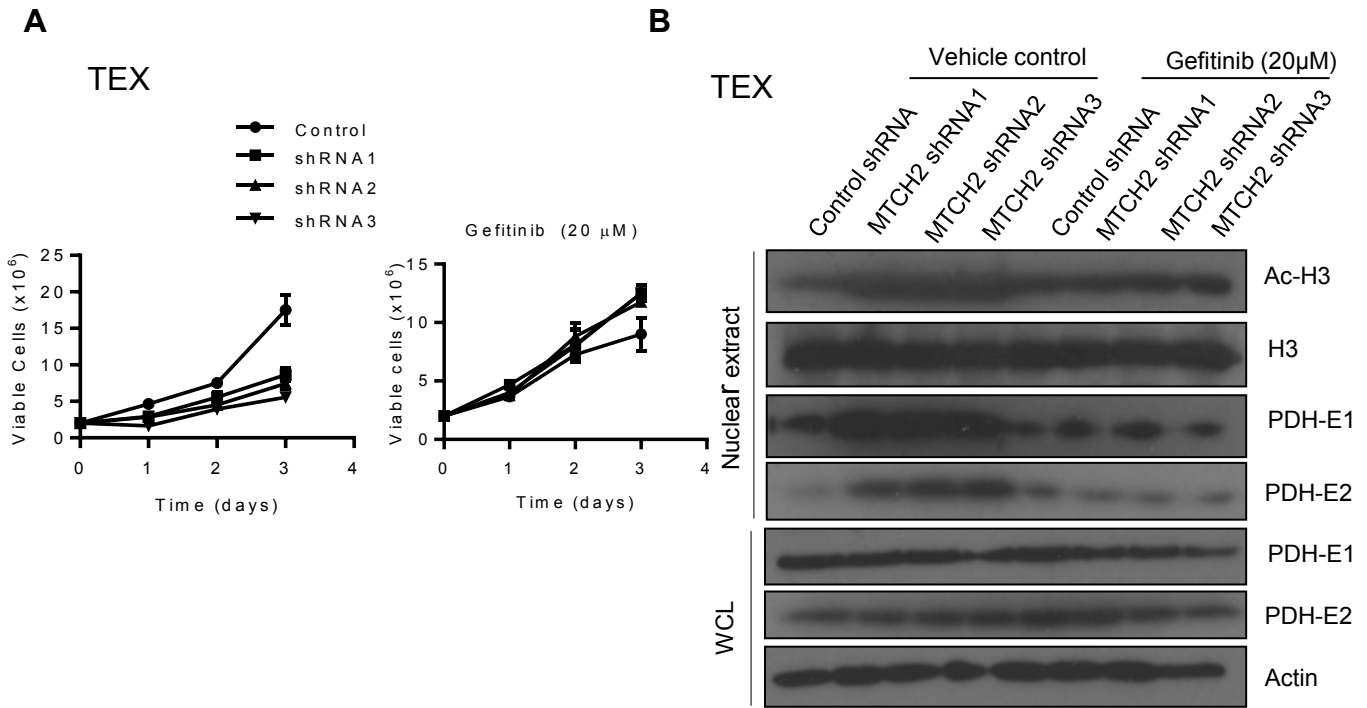


Figure S15

Supplemental figure legends

Figure S1: CRISPR knockout screen identifies MTCH2 as top hit

A CRISPR screen in Cas9-OCI-AML2 cells identified depleted sgRNAs that target 17,237 genes. Positive-hits were identified at a false discovery rate (FDR) <5%. Genes are ranked based on MAGeCK scores [Log₂ of p-values] as calculated by the MAGeCK algorithm.

Figure S2: MTCH2 knockdown decreased proliferation of AML cells

K562 (A), HL60 (B) and NB4 (C) cells were transduced with shRNA targeting MTCH2 or control sequences. Cell growth and viability were determined over time using the trypan blue exclusion assay. Data represent mean cell counts \pm SD from representative experiments. The expression of MTCH2 and actin in these cells 7 days after transduction was measured by immunoblotting.

Figure S3: Knockdown of MTCH2 does not induce apoptosis or cell cycle arrest in AML cells

(A) Apoptosis was measured by Annexin V and PI staining 7 days after transducing OCI-AML2, TEX and U937 cells with shRNA targeting MTCH2 or control sequences. Data represent mean \pm SD of annexin V positive cells.

(B) Cell cycle analysis with PI staining was performed on control and MTCH2 knockdown clones of OCI-AML2 and TEX cells, seven days after transduction. Data represent mean \pm SD of cells in each cell cycle phases.

Figure S4: Inhibition of MTCH2 increases expression of genes associated with differentiated hematopoietic cells

(A-D) TEX cells were transduced with shRNA targeting *MTCH2* or control sequences. RNA was isolated and sequenced 8 days after transduction. Changes in gene expression after *MTCH2* knockdown were mapped to fractions of normal hematopoietic cells (Gene Expression Omnibus dataset GSE24759 (DMAP)).

(E-F) CD11b (E) and CD14 (F) expression in TEX cells after *MTCH2* knockdown. Data are relative mean fluorescent intensity (MFI) \pm SD (n = 3, Control shRNA = 1.0).

Figure S5: *MTCH2* knockdown in primary AML cells

Expression analysis of *MTCH2* by qRT-PCR in primary AML cells after *MTCH2* knockdown. Data are relative mean \pm SD (n = 2, control shRNA = 1.0).

Figure S6: Mitochondrial structure and function after *MTCH2* knockdown in AML cells

(A-B) Basal oxygen consumption rate (A) and extracellular acidification rate (B) of control and *MTCH2* knockdown in OCI-AML2 and TEX cells were measured with the Seahorse XF96 analyzer 7 days post transduction. Data represent mean percentage \pm SD relative to control cells.

(C) Enzymatic activities of complex II and IV were determined after *MTCH2* knockdown in OCI-AML2 and TEX cells and expressed relative to citrate synthase activity. Enzyme activities were determined as described in the supplementary methods. Values shown are averaged from 2 independent experiments.

(D) Mitochondrial morphology was assessed by transmission electron microscopy in OCI-AML2 and TEX cells following *MTCH2* knockdown. Representative images of 8000x magnification are shown.

Figure S7: C646 regulates specific lysine acetylation of histone H3 in MTCH2 knockdown cells

Levels of total and acetylated H3 histones (H3K9ac, H3K14ac, H3K27ac and H3K18ac) were measured in OCI-AML2 (A) and TEX cells (B) after MTCH2 knockdown and co-treatment with 5 μ M C646 for 4 days. Representative immunoblots are shown.

Figure S8: Changes in H3K27ac after MTCH2 knockdown by ChIP-seq analysis

(A) The bar plot represents the number of H3K27ac peaks in control, MTCH2 knockdown and MTCH2 knockdown cells treated with C646 that overlap with \pm 6kb regions centered at the TSS of the genes that are upregulated in MTCH2 knockdown cells compared to control.

(B) Heatmaps of the H3K27ac ChIP-seq signal in control, MTCH2 knockdown and MTCH2 knockdown cells treated with C646 at \pm 6kb of TSS of the genes that are upregulated in MTCH2 knockdown cells compared to control. The bar plot represents the relative area under the curve (AUC) of TSS \pm 6kb regions of these genes in control, MTCH2 knockdown and MTCH2 knockdown cells treated with C646.

(C) H3K27ac ChIP-seq tracks for representative myeloid-like (LSC-) genes (FDR \leq 0.05) in Control (blue), MTCH2 knockdown cells (red) and MTCH2 knockdown cells that were treated with C646 (green).

Figure S9: Validation of changes in gene expression and H3K27ac level after MTCH2 knockdown

(A) Expression analysis of, S100A9, CSF2RB, LRPAP1 and NF κ B genes by qRT-PCR in TEX cells after MTCH2 knockdown with or without C646 treatment. Data are relative

mean \pm SD (n = 2–3, control shRNA = 1.0). **p < 0.01, ***p < 0.001 and ****p < 0.0001 by ANOVA.

(E) Equal amounts of input and immunoprecipitated DNA after H3K27ac pull down from control, MTCH2 knockdown and MTCH2 knockdown cells treated with C646, were quantified by real-time quantitative PCR at the enhancer/promoter regions of the genes. Enrichment values (relative to input) are the mean of two independent experiments, and the error bars represent the SD. *p < 0.05, **p < 0.01, and ***p < 0.001 by ANOVA.

Figure S10: BID inhibitor BI-6c9 prevented cell death after Fas activation

OCI-AML2 and TEX cells were treated with or without BI-6c9 (10 μ M) with Fas induction conditions (cyclohexamide and CH-11). Cell viability was measured with MTS assay.

Figure S11: Level of Acetyl CoA after MTCH2 knockdown in AML cells

Total levels of acetyl-CoA (whole cell lysates and nuclear extracts) were estimated in Control and MTCH2 knockdown cells in OCI-AML2 and TEX using deproteinized samples (100 μ g) in a fluorescent-based assay and a standard acetyl-CoA curve. Data represent mean \pm SD (N=3).

Figure S12: Mitochondrial Pyruvate Carrier does not increase histone acetylation level in AML

(A) Levels of mitochondrial pyruvate was measured in OCI-AML2 cells treated with UK5099 (40 μ M) for 3 days as described in materials and methods.

(B) The level of total and acetylated H3 and H4 histones were measured by immunoblotting of histones isolated from OCI-AML2 cells treated with UK5099 (40 μ M) or vehicle control for 3 days.

Figure S13: Overexpression of pyruvate dehydrogenase complex in nucleus recapitulates the effects of MTCH2 knockdown

(A) NB4 cells were transduced with cDNA encoding PDH-E1 (E1 α) or PDH-E2 tagged with one of two different nuclear localization signal (NLS1 or NLS2) or empty vector. PDH-E1 α or PDH-E2 expression was analyzed by immunoblotting in nuclear and mitochondrial fractions.

(B) Growth and viability of NB4 cells overexpressing PDH-E1 (E1 α) or PDH-E2 with a nuclear localizing tag (NLS1 or NLS2) were measured with the trypan blue exclusion assay.

(C) Colony formation assay of NB4 cells overexpressing PDH with a nuclear localizing tag. Mean \pm SD colony counts are shown. ***P= 0.001 by ANOVA.

(D) Histones were isolated from NB4 cells transduced with empty vector (EV), PDH-E1 (E1 α) or PDH-E2 cDNAs with NLS1 or NLS2 signals. Levels of total and acetylated H3 and H4 histones were measured by immunoblotting.

Figure S14: Level of Hsp70 after MTCH2 knockdown in AML cells

Total levels of HSp70 (whole cell lysates and nuclear extracts) were analyzed in Control and MTCH2 knockdown cells in OCI-AML2 and TEX by immunoblotting. Representative immunoblots are shown.

Figure S15: Gefitinib treatment restored the effects of MTCH2 knockdown

(A) Proliferation curves of TEX cells transduced with shRNAs targeting MTCH2 and co-treatment with Gefitinib (20 μ M) for three days.

(B) Levels of total and acetylated H3 histones, levels of PDH-E1 (E1 α) and E2 in whole cell lysate and nuclear extracts were measured in TEX after MTCH2 knockdown that were treated with vehicle control (DMSO) or Gefitinib (20 μ M) for 3 days. Representative immunoblots are shown.

Supplemental methods

Clonogenic growth

OCI-AML2, TEX and U937 cells (500 cells/mL) were plated at equal volumes in duplicate dishes in methylcellulose with IMDM and FCS. The number of colonies containing ≥ 10 cells was counted on an inverted microscope³².

MAGECK Analysis for CRISPR screen

sgRNA sequences were first extracted from FASTQ files by trimming and then aligned to a reference library via Bowtie. Mapped sgRNA counts for samples were analyzed using MAGECK 0.5.5, using default parameters. Essential genes were identified at a FDR < 5%, by comparing of D14 sgRNA to D0 sgRNA.

Differential gene expression analysis

Illumina beadchip transcriptomics data containing LSC+ and LSC- sorted AML fractions were obtained from Gene Expression Omnibus data portal (GSE76008)²³ and differential expression between LSC+ and LSC- fractions was calculated using a moderated t-test available in limma R package 3.28.21 incorporating array batch effects in linear model. A score that ranks genes from top up regulated in LSC+ fractions to top down regulated when compared to LSC- fractions was calculated.

RNA-Seq read counts from 11 diagnosis AML samples by RNA sequencing classified as RO_C (relapse origin-committed) or RO_P (relapse origin-primitive) based on their origin of relapse²⁴. Genes with CPM<0.45 in at least two samples were removed (noise reduction) and the data were normalized using edgeR TMM normalization. Differential expression was estimated in edgeR using a generalized linear model and genes were ranked from top upregulated to top downregulated (RO_C versus RO_P).

MTCH2 knockdown (233 genes) and control genes (209 genes) were used as signature gene sets in gene set enrichment analysis (GSEA) to compare with LSC+/LSC- and RO_C/RO_P cell populations. GSEA was used with LSC+/LSC- and RO_C/RO_P rank lists using 2000 permutations and default parameters.

Changes in gene expression after MTCH2 knockdown were also mapped to Gene Expression Omnibus dataset GSE24759 (DMAP)²², containing Affymetrix GeneChip HT-HG_U133A Early Access Array gene expression data of 20 distinct hematopoietic cell states. GSE24759 data were background corrected using RMA, quantile normalized using `expresso` function of `affy` Bioconductor package (`affy_1.38.1`, R 3.0.1), array batch corrected using `ComBat` function of `sva` package (`sva_3.6.0`), and standardized using Z score for each gene across samples. Bar graphs were created by selecting genes that were up- and down-regulated in MTCH2 knockdown, and summing the number of standardized data points that were above (>0) or below (<0) the mean for each DMAP cell population, corrected by number of samples/population and results obtained from 1,000 random selection of DMAP genes.

Mice engraftment

Fifteen days after transduction of TEX cells with control or MTCH2 shRNA, equal numbers of cells were injected into the right femur of sub-lethally irradiated NOD/SCID-GF mice with human transgenes producing IL-3, GM-CSF, and Steel factor (n = 10/group). Mice were pretreated with anti-mouse CD122 (200 μ g). Five weeks after the injection, human CD45⁺ cells (%) in the non-injected femur was determined by flow cytometry. Animal studies were performed according to the regulations of Canadian Council on Animal Care and with the approval of Ontario Cancer Institute.

ChIP-Seq data analysis

The ChIP-seq analysis was performed in Control and MTCH2 knockdown TEX cells that were treated with or without C646. Prior to analysis, read adapters were removed using Trim_Galore v. 0.4.0 with removing reads that have length less than 35 bp after trimming. In addition, a base pair quality score cutoff (q=30) was used for filtering low quality base pairs. Reads were aligned against hg19 (UCSC version) using Bowtie2 v2.3.2. Secondary and supplementary alignments were removed, and only primary alignments were kept. Alignment reads were deduplicated to remove duplicate reads and keep unique reads using picard v. 1.9.1. Broad peaks were identified from the alignment files using MACS2 v.2.1.1 with a cutoff score $q < 0.05$. The peaks were annotated with all the potential genomic features based on hg19 GENCODE v24 gene assembly which was downloaded from UCSC database. As MTCH2 knockdown cells had more diffuse signal than localized signal (indication of global increase in histone acetylation), normalized reads using only total count may lead to an underestimation of histone acetylation changes, and thus quantile normalization was performed on the genomic tracks after the total read count normalization. The genome track bigwig files were prepared from the alignment files using

the bamCoverage command in the deeptools package v.3.3.0. The ChIP-seq signal profile of the +/- 6Kbp regions centered at the TSS of the LSC- genes and MTCH2 shRNA upregulated gene were plotted using the plotProfile command from the deeptools package. Genome tracks of selected genes were visualized and plotted using customized Python and R script based on hg19 GENCODE v24 gene reference. ChIP-seq peaks at the +/-6 Kbp regions centered at the TSS of the LSC- genes and MTCH2 shRNA upregulated genes were counted by intersecting the identified ChIP-seq peaks with these TSS regions using bedtools v. 2.27.1. Differential binding was performed on the called peaks by the edgeR tool in the R package. Fold change (FC) and FDR cutoff were used to determine the peaks that are differentially bound. The ChIP-seq data have been deposited in Gene Expression Omnibus database under the accession code GEO: GSE147508. Primers sequences are listed in supplemental table S4.

RNA Isolation and Quantitative Reverse Transcriptase-Real Time Polymerase Chain Reaction

Total RNA was isolated from TEX using the RNeasy Plus Mini Kit (QIAGEN), and cDNA was prepared using SuperScript IV Reverse Transcriptase (ThermoFisher) (Waltham, MA, USA). Equal amounts of cDNA for each sample were added to a prepared master mix (Power SYBR Green PCR Master mix) (Applied Biosystems) (Foster city, CA, USA). Quantitative real time polymerase chain (qRT-PCR) reactions were performed on an ABI Prism 7900 sequence detection system (Applied Biosystems). To normalize for equal amounts of cDNA the transcript levels of 18srRNA gene were used. The comparative CT

method was calculated as per manufacturer's instructions. Primers that were used are listed in supplemental table S5.

Cell viability assays

Cell death was measured by flow cytometry with annexin V fluorescein isothiocyanate (FITC) and propidium iodide (PI) (Biovision Research Products, Mountain View, CA) staining according to the manufacturer's instructions.

Non-specific esterase staining

Cytospin slides were prepared for cells and subsequently stained for nonspecific esterase activity, following manufacturer's instructions (Sigma-Aldrich). The stain intensity was quantitatively analyzed by ImageJ.

Mitochondria-nuclear fractionation

Mitochondria and nuclear fractions were isolated from 2×10^7 cells for each treatment condition using mitochondria isolation method³³ and nuclei isolation kit (Sigma-Aldrich) (St. Louis, MO, USA), respectively, as per manufacturer's instructions.

Pyruvate concentration determination

Mitochondria were isolated from 2×10^7 cells using Cytochrome c Releasing Apoptosis Assay Kit (Abcam). Pyruvate levels were determined by Pyruvate Assay kit (BioAssay Systems) (Hayward, CA, USA) following manufacturer's instructions³⁴.

Overexpression of pyruvate dehydrogenase (PDH)

To overexpress PDH-E1 α and E2 subunit, OCI-AML2 and NB4 cells were transduced with lentiviral constructs (pLenti-C-MYC-DDK) containing an EF1 α promoter, human-PDH-E1 α or PDH-E2 cDNA (BlueHeron) (Bothel, Washington, USA), N-terminal nuclear localization signal [NLS1 =SV40 large T-antigen NLS (PKKKRKV), NLS2= c-Myc-NLS (PAAKRVKLD)] and a C-terminal-FLAG. Lentiviral infections were performed and transduced cells were selected with blasticidin (10 days). Equal numbers of cells in each condition were plated for downstream assays.

Flow Cytometry

Flow cytometry analysis was performed on FACSCANTO II (BD BioSciences) or LSR FortessaX-20 (BD Biosciences) using FACS DIVA software. Data was analyzed post-acquisition with FlowJo V 7.7.1 (Treestar).

Cell cycle analysis

Cells (2×10^6) were washed twice with PBS and resuspended in cold 80% ethanol in PBS followed by incubation overnight at -20°C . Cells were then washed twice with PBS and treated with 5 $\mu\text{g}/\text{mL}$ DNase free RNase A in PBS, and incubated at 37°C for 30 minutes. After the incubation period, propidium iodide was added to the cells at a concentration of 5 $\mu\text{g}/\text{ml}$. DNA content was analyzed by flow cytometry. The percentage of cells in each phase of the cell cycle was analyzed with FlowJo software.

Metabolic Analysis

Basal oxygen consumption rate (OCR) and ECAR was measured using the XF96 Seahorse extracellular flux analysis (Agilent Technologies) (Santa Clara, California, US). XF96 well plates were coated with Corning Cell-Tak at 0.15ug/well according to the manufacturer's instructions. On the day of the assay, cells were resuspended in unbuffered Alpha-MEM media supplemented with 2% fetal calf serum and plated at 100,000 cells/well.

Respiratory chain complex enzymatic activity

Treated cells were centrifuged, and cell pellets were prepared for assessment of mitochondrial respiratory chain complex activity as previously described ²¹. Complex II activity was measured by monitoring malonate-sensitive reduction of 2,6-dichloroindophenol when coupled to complex II-catalyzed reduction of decylubiquinol. Complex IV activity was measured by KCN-sensitive oxidation of ferrocytochrome c. Ferrocytochrome c was prepared by reducing cytochrome c with sodium ascorbate followed by dialysis for 24 hours. The method of citrate synthase activity was based on the chemical coupling of CoASH, released from acetyl-CoA during the enzymatic synthesis of citrate to DTNB (Ellman's reagent, 5, 5'-dithiobis (2-nitrobenzoic acid), and the release of the absorbing mercaptide ion was monitored at 412 nm. The enzyme activity was of Complexes II, and IV was normalized to citrate synthase activity.

Electron microscopy

Transmission electron microscopy of mitochondria was performed on OCI-AML2 and TEX cells with lentiviral knockdown of MTCH2. Images are shown at 8000x magnification.

Measurement of metabolites by NMR

OCI-AML2 and TEX cell pellets (2×10^7 cells per replicate) frozen in 1 mL of 80% MeOH in H₂O were thawed on ice and briefly sonicated. The resulting mixtures were incubated on ice for 30 mins and the insoluble debris was removed by centrifugation. The supernatants were transferred to clean tubes and the solvent was removed on a spin-vac at room temperature. The resulting metabolites were resuspended in 120 μ L of NMR buffer (50 mM Na₂HPO₄, 0.1% NaN₃, pH 7.0, 100% D₂O) to which 0.5 mM DSS was added as an internal standard. The samples were transferred into 3 mm NMR tubes and ¹H NMR spectra were acquired on an Avance Bruker 800 spectrometer equipped with triple resonance a cryoprobe. A total of 128 scans were collected over a 14 ppm spectral width using a 90° pulse angle with a recycle delay of 1.5 s. The data was processed and the metabolites were quantified using the Chenomx NMR suite v7.7.

Immunoblotting

Cell lysates were prepared in RIPA buffer. Equal amounts of protein were loaded, fractionated on 10-12% SDS-PAGE and stained immunochemically with antibodies against MTCH2 (Abcam), pyruvate dehydrogenase-E1 α , E2 (Abcam), FLAG (Sigma), β -actin (Santa Cruz), citrate synthase (Abcam), and VDAC (Abcam).

Supplemental Table S1. shRNA sequences

Gene shRNA name	Accession #	shRNA Sequence
Control shRNA	clonetechGfp_587s1c1	5'-CCGGTGCCCGACA ACC ACTACCTGA CTCGAG TCAGGTAGTGGTTGT CGG GCATTTTT-3'
<i>MTCH2</i> shRNA1	NM_014342	5'-CCGGGCCTTCTAGGTGACATCCTTTCTCGAGAAAGGATGTCACCTAGAAGGCTTTTTG-3'
<i>MTCH2</i> shRNA2	NM_014342	5'-CCGGGCCTACCTCGTCAATACCTATCTCGAGATAGGTATTGACGAGGTAGGCTTTTTG -3'
<i>MTCH2</i> shRNA3	NM_014342	5'- CCGGCCCTTGTGCTTGTCTCCAATCTCGAGATTGGAGACAAGCACAAAGGGTTTTTG -3'

Supplemental Table S2: Genome wide CRISPR screen results of OCI-AML2 cells

id	Mitochondrial genome				whole screen									
	neg rank	neg score	neg p-value	neg fdr	neg rank	neg good	neg lfc	pos score	pos p-val	pos fdr	pos rank	pos good	pos lfc	
SLC25A1	1	4.39E-09		2.87E-07	0.000381	12	6	-2.8484	1	1	1	17229	0	-2.8484
COX10	2	1.57E-08		8.62E-07	0.000464	20	6	-6.8205	1	1	1	17222	0	-6.8205
SARS2	3	2.61E-08		8.62E-07	0.000464	27	6	-5.9647	1	1	1	17216	0	-5.9647
PPWD1	4	6.74E-08		1.44E-06	0.000495	44	6	-2.48	1	1	1	17199	0	-2.48
DHODH	5	9.55E-08		1.44E-06	0.000495	50	6	-4.3555	1	1	1	17194	0	-4.3555
CCT7	6	1.19E-07		2.01E-06	0.000587	55	6	-6.4309	1	1	1	17189	0	-6.4309
SHMT2	7	1.41E-07		2.58E-06	0.000601	61	5	-4.2543	0.87346	0.89603	1	14294	1	-4.2543
KARS	8	2.22E-07		3.16E-06	0.000601	73	6	-4.322	1	1	1	17176	0	-4.322
BCL2	9	2.26E-07		3.16E-06	0.000601	75	6	-3.3256	1	1	1	17174	0	-3.3256
MRPS24	10	2.34E-07		3.16E-06	0.000601	76	6	-5.6023	1	1	1	17173	0	-5.6023
TAZ	11	2.51E-07		3.16E-06	0.000601	82	6	-3.9059	1	1	1	17167	0	-3.9059
UQCRC2	12	3.66E-07		3.73E-06	0.000601	93	5	-2.6923	1	1	1	17159	0	-2.6923
MRPS15	13	4.61E-07		3.73E-06	0.000601	107	6	-3.1085	1	1	1	17147	0	-3.1085
POLRMT	14	5.07E-07		4.31E-06	0.00064	111	5	-2.6082	0.78615	0.85457	1	13569	1	-2.6082
IBA57	15	5.79E-07		4.88E-06	0.000679	118	6	-2.6956	1	1	1	17141	0	-2.6956
ISCU	16	1.10E-06		9.48E-06	0.001011	151	5	-3.7346	1	1	1	17121	0	-3.7346
AARS2	17	1.15E-06		9.48E-06	0.001011	153	6	-2.4739	1	1	1	17119	0	-2.4739
FECH	18	1.18E-06		1.01E-05	0.001011	156	6	-2.4978	1	1	1	17118	0	-2.4978
LIAS	19	1.39E-06		1.06E-05	0.001011	167	5	-2.8294	1	1	1	17110	0	-2.8294
MTCH2	20	1.39E-06		1.06E-05	0.001011	168	5	-2.0768	1	1	1	17109	0	-2.0768
FPGS	21	1.40E-06		1.06E-05	0.001011	169	6	-2.4547	0.99988	0.99988	1	16866	0	-2.4547
DNA2	22	1.63E-06		1.12E-05	0.001011	182	6	-4.4544	0.99998	0.99998	1	16981	0	-4.4544
CPOX	23	2.12E-06		1.24E-05	0.001046	200	6	-6.5673	1	1	1	17077	0	-6.5673
MARS2	24	2.12E-06		1.24E-05	0.001046	201	5	-5.8263	1	1	1	17088	0	-5.8263
MRPL13	25	2.14E-06		1.24E-05	0.001046	202	5	-3.2861	1	1	1	17087	0	-3.2861
FARS2	26	2.14E-06		1.24E-05	0.001046	203	6	-3.7271	0.99997	0.99997	1	16972	0	-3.7271
DLST	27	2.20E-06		1.29E-05	0.001046	205	5	-5.7002	0.91924	0.9252	1	14808	1	-5.7002
DTYMK	28	2.47E-06		1.41E-05	0.001118	217	6	-5.0611	0.99995	0.99995	1	16929	0	-5.0611
TIMM44	29	2.75E-06		1.58E-05	0.00121	224	6	-5.3867	0.99999	0.99999	1	17035	0	-5.3867
TARS2	30	2.81E-06		1.58E-05	0.00121	225	6	-3.1328	0.99999	0.99999	1	17043	0	-3.1328
ALAS1	31	2.84E-06		1.64E-05	0.001249	226	6	-5.7778	0.99635	0.99629	1	16453	0	-5.7778
PMPCA	32	2.96E-06		1.69E-05	0.00127	229	6	-4.6676	1	1	1	17073	0	-4.6676
TKT	33	3.57E-06		1.87E-05	0.001313	244	6	-5.4102	1	1	1	17064	0	-5.4102
MRPS35	34	4.08E-06		2.04E-05	0.001373	256	5	-2.5376	0.98345	0.98339	1	15977	0	-2.5376
YARS2	35	4.16E-06		2.10E-05	0.00139	259	6	-3.1646	1	1	1	17053	0	-3.1646
NDUFA13	36	6.01E-06		2.84E-05	0.001726	284	6	-1.1202	0.99999	0.99999	1	17039	0	-1.1202
DNAJA3	37	7.33E-06		3.13E-05	0.001811	296	6	-2.4141	0.99999	0.99999	1	17034	0	-2.4141
MTHFD1L	38	7.37E-06		3.13E-05	0.001811	297	6	-2.3416	0.99981	0.99982	1	16821	0	-2.3416
MRPS14	39	7.53E-06		3.19E-05	0.001826	300	5	-3.1042	0.97072	0.97064	1	15658	0	-3.1042
MTHFD1	40	8.76E-06		3.82E-05	0.002077	315	4	-6.2509	0.043316	0.12884	0.781407	2842	1	-6.2509
NFS1	41	9.18E-06		3.99E-05	0.00215	320	5	-2.8468	0.32808	0.52269	1	8699	1	-2.8468
GRPEL1	42	1.05E-05		4.57E-05	0.002407	327	5	-3.2156	0.55878	0.70826	1	11332	1	-3.2156
MRPL20	43	1.07E-05		4.80E-05	0.002513	329	4	-4.4924	0.99999	0.99999	1	17021	0	-4.4924
COQ5	44	1.08E-05		4.85E-05	0.002528	331	6	-1.5982	0.99999	0.99999	1	17020	0	-1.5982
MRPL4	45	1.14E-05		5.14E-05	0.002637	335	6	-4.0385	0.99999	0.99999	1	17016	0	-4.0385
ACLY	46	1.18E-05		5.20E-05	0.002659	337	5	-3.2726	0.75698	0.83767	1	13305	1	-3.2726
TIMM22	47	1.34E-05		5.95E-05	0.00289	354	6	-2.091	0.99999	0.99999	1	17005	0	-2.091
CARS2	48	1.34E-05		6.00E-05	0.00289	355	6	-1.3416	0.99994	0.99994	1	16916	0	-1.3416
COX4I1	49	1.40E-05		6.17E-05	0.002924	364	5	-2.6003	0.81364	0.86646	1	13774	1	-2.6003
LARS2	50	1.44E-05		6.52E-05	0.00307	366	5	-1.0127	0.30555	0.49969	1	8361	1	-1.0127
MRPL53	51	1.52E-05		6.92E-05	0.003216	370	4	-2.658	0.99478	0.99474	1	16351	0	-2.658
MIPEP	52	1.63E-05		7.73E-05	0.003514	378	6	-2.2211	0.99997	0.99998	1	16975	0	-2.2211
ROMO1	53	1.63E-05		7.73E-05	0.003514	379	5	-6.4318	0.99998	0.99999	1	16996	0	-6.4318
EARS2	54	1.65E-05		7.84E-05	0.003547	381	5	-2.9038	0.35889	0.55259	1	9094	1	-2.9038
PGS1	55	1.75E-05		8.24E-05	0.00365	386	6	-4.2261	0.99998	0.99998	1	16993	0	-4.2261
PMPCB	56	2.06E-05		9.45E-05	0.004052	401	5	-3.9289	0.66366	0.7757	1	12365	1	-3.9289
HSPA9	57	2.06E-05		9.45E-05	0.004052	402	3	-4.5475	0.99998	0.99998	1	16986	0	-4.5475
TUFM	58	2.16E-05		0.00010138	0.004294	407	6	-1.4492	0.99982	0.99982	1	16826	0	-1.4492
RPIA	59	2.50E-05		0.00012149	0.004859	430	5	-5.5236	0.97903	0.97897	1	15852	0	-5.5236
DAP3	60	2.53E-05		0.00012206	0.004859	432	6	-2.237	0.99968	0.99969	1	16778	0	-2.237
ATP5D	61	2.56E-05		0.00012321	0.004893	434	6	-1.8483	0.99997	0.99997	1	16974	0	-1.8483
MRPL11	62	2.59E-05		0.00012666	0.004996	436	5	-1.6116	0.99318	0.99314	1	16280	0	-1.6116
HSCB	63	2.86E-05		0.00014676	0.00571	443	6	-4.2358	0.99997	0.99996	1	16957	0	-4.2358
DNAJC11	64	2.96E-05		0.00015021	0.005754	450	5	-1.8593	0.46516	0.65044	1	10489	1	-1.8593
GPX4	65	3.19E-05		0.00015997	0.00606	455	6	-5.4936	0.99997	0.99997	1	16961	0	-5.4936
GARS	66	3.28E-05		0.00016514	0.006175	460	4	-2.9147	0.066818	0.17563	0.8377	3613	1	-2.9147
FLAD1	67	3.39E-05		0.00016859	0.006236	466	4	-1.9649	0.4709	0.65396	1	10549	2	-1.9649
MRPL37	68	3.73E-05		0.00018869	0.00679	479	5	-2.122	0.63701	0.75797	1	12078	1	-2.122
POLG	69	4.05E-05		0.00020477	0.007145	493	6	-2.4047	0.99996	0.99996	1	16946	0	-2.4047
MRPL9	70	4.19E-05		0.00021224	0.007302	499	4	-1.3334	0.99996	0.99995	1	16943	0	-1.3334
SDHB	71	4.19E-05		0.00021224	0.007302	500	5	-3.4991	0.73677	0.82354	1	13084	1	-3.4991
LONP1	72	4.20E-05		0.00021224	0.007302	501	5	-4.8876	0.99258	0.99254	1	16257	0	-4.8876
DARS2	73	4.54E-05		0.00023062	0.007749	511	5	-1.7661	0.15236	0.32219	0.93544	5936	1	-1.7661
GUK1	74	4.91E-05		0.00024211	0.007972	523	6	-5.4498	0.99964	0.99964	1	16769	0	-5.4498
WBSCR16	75	4.92E-05		0.00024269	0.007972	524	5	-3.4601	0.9997	0.9997	1	16782	0	-3.4601
MRPS23	76	4.93E-05		0.00024326	0.007972	525	5	-1.296	0.92756	0.93138	1	14915	1	-1.296
COQ6	77	4.98E-05		0.00024441	0.007979	528	6	-1.4347	0.99995	0.99995	1	16927	0	-1.4347
FAM210A	78	5.22E-05		0.00025877	0.008353	534	4	-3.4296	0.99995	0.99995	1	16922	0	-3.4296
C10orf2	79	5.29E-05		0.00026222	0.00836	539	5	-4.7219	0.95678	0.95674	1	15374	0	-4.7219
MRPL28	80	5.33E-05		0.00026336	0.00836	542	6	-4.5775	0.99779	0.99775	1	16555	0	-4.5775
RPUSD4	81	5.96E-05		0.00028691	0.008959	552	5	-2.5683	0.13247	0.29002	0.920128	5433	1	-2.5683
BCS1L	82	6.05E-05		0.00028864	0.008981	554	5	-2.9621	0.949	0.94931	1	15235	1	-2.9621
PDS2	83	6.46E-05		0.00030587	0.009348	564	6	-1.4934	0.99993	0.99993	1	16903	0	-1.4934
DDX28	84	6.59E-05		0.00031104	0.009472	566	5	-1.3723	0.99993	0.99994	1	16908	0	-1.3723
IARS2	85	6.95E-05		0.00032827	0.009875	572	6	-6.3297	0.99991	0.99991	1	16887	0	-6.3297
GFM2	86													

ABC7	88	8.16E-05	0.00037882	0.010901	598	5	-1.0961	0.69631	0.79666	1	12653	1	-1.0961
COQ2	89	8.17E-05	0.00037882	0.010901	599	6	-2.5945	0.99983	0.99984	1	16835	0	-2.5945
MRPL18	90	8.35E-05	0.00038542	0.010981	605	5	-1.8447	0.96583	0.96585	1	15556	0	-1.8447
MRPL44	91	8.50E-05	0.00039203	0.011096	609	6	-1.8202	0.99991	0.99992	1	16891	0	-1.8202
DNLZ	92	9.17E-05	0.00042822	0.01196	617	5	-3.3991	0.94383	0.94462	1	15130	1	-3.3991
ACO2	93	9.21E-05	0.00042879	0.01196	618	5	-4.8127	0.57978	0.72128	1	11514	1	-4.8127
TSFM	94	9.38E-05	0.00043741	0.012118	622	4	-1.399	0.88666	0.90373	1	14434	1	-1.399
MRPS27	95	9.73E-05	0.00045234	0.012337	631	5	-1.9901	0.85869	0.88805	1	14134	1	-1.9901
RARS	96	9.83E-05	0.00045636	0.012427	633	4	-4.8958	0.97888	0.97882	1	15846	0	-4.8958
RARS2	97	0.000105	0.00049198	0.013209	642	4	-5.8528	0.99982	0.99982	1	16827	0	-5.8528
COX5B	98	0.000106	0.00049829	0.013347	643	6	-1.9356	0.9953	0.99522	1	16381	0	-1.9356
MDH2	99	0.00011	0.00051553	0.013713	648	6	-1.066	0.99989	0.99989	1	16876	0	-1.066
SCO2	100	0.000111	0.00052357	0.013863	651	5	-2.3123	0.99989	0.99989	1	16874	0	-2.3123
SAMM50	101	0.000113	0.00053218	0.014069	652	5	-1.408	0.81961	0.86908	1	13815	1	-1.408
GFER	102	0.000117	0.00054654	0.014317	658	6	-2.1499	0.99988	0.99988	1	16869	0	-2.1499
TRIAP1	103	0.000127	0.00060111	0.015396	673	4	-4.6118	0.99987	0.99987	1	16860	0	-4.6118
LIPT1	104	0.000135	0.00064534	0.016211	685	3	-2.491	0.99986	0.99986	1	16855	0	-2.491
THG1L	105	0.000138	0.00065913	0.016442	690	5	-3.0498	0.18064	0.36585	0.957975	6582	1	-3.0498
PHB2	106	0.000139	0.00066085	0.016442	691	5	-3.3246	0.95359	0.95363	1	15312	1	-3.3246
COASY	107	0.000144	0.00069244	0.017041	700	5	-2.3247	0.96482	0.96486	1	15530	0	-2.3247
SOD1	108	0.000149	0.00071829	0.017512	707	3	-6.1346	0.99985	0.99985	1	16846	0	-6.1346
MRPS26	109	0.000152	0.0007338	0.017765	712	6	-1.09	0.99985	0.99985	1	16844	0	-1.09
ARL2	110	0.000157	0.0007539	0.017938	723	5	-3.9751	0.96945	0.96944	1	15627	0	-3.9751
DNM1L	111	0.000158	0.00075678	0.017943	727	5	-1.5929	0.89777	0.91058	1	14541	1	-1.5929
PTCD3	112	0.00016	0.00076482	0.018084	729	6	-1.9272	0.99881	0.99882	1	16643	0	-1.9272
OGDH	113	0.000163	0.00078033	0.0184	731	5	-3.223	0.88544	0.903	1	14424	1	-3.223
OXLD1	114	0.000168	0.00081134	0.019002	736	6	-1.0062	0.99983	0.99984	1	16833	0	-1.0062
GTPBP3	115	0.000184	0.00088602	0.020445	747	6	-0.61101	0.99982	0.99982	1	16825	0	-0.61101
PARS2	116	0.000189	0.00091187	0.020929	751	5	-1.3173	0.51541	0.68161	1	10935	1	-1.3173
GTPBP10	117	0.000202	0.0009739	0.021973	764	5	-1.3745	0.9439	0.94468	1	15132	1	-1.3745
TRUB2	118	0.000257	0.0012444	0.026572	806	4	-1.6546	0.60997	0.74045	1	11803	2	-1.6546
NARS2	119	0.000268	0.0012996	0.027452	816	3	-2.2884	0.58444	0.72423	1	11558	1	-2.2884
KIAA0100	120	0.000269	0.0013048	0.027528	817	5	-1.5862	0.8705	0.8944	1	14265	1	-1.5862
MFN2	121	0.000292	0.0014024	0.028812	839	6	-2.75	0.99971	0.99972	1	16784	0	-2.75
MRPS11	122	0.000309	0.0014794	0.03	850	4	-2.0394	0.11918	0.26822	0.907257	5096	2	-2.0394
OXA1L	123	0.000317	0.0015069	0.030376	855	5	-1.0669	0.87352	0.89606	1	14295	1	-1.0669
TIMM50	124	0.000319	0.001515	0.030376	858	5	-1.7916	0.971	0.9709	1	15669	0	-1.7916
SOD2	125	0.000326	0.0015477	0.030813	865	5	-2.581	0.91096	0.91932	1	14691	1	-2.581
VARS2	126	0.000334	0.0015799	0.031194	873	5	-1.3702	0.91327	0.92093	1	14719	1	-1.3702
DUT	127	0.000358	0.0016994	0.032987	888	5	-1.418	0.093657	0.22493	0.878124	4415	1	-1.418
PNPT1	128	0.000367	0.0017436	0.033693	892	3	-5.1975	0.99808	0.99806	1	16573	0	-5.1975
HSD17B10	129	0.000376	0.0017919	0.03451	895	5	-2.0964	0.967	0.96702	1	15580	0	-2.0964
COQ4	130	0.000378	0.0017982	0.034565	896	5	-1.7693	0.70837	0.80455	1	12782	1	-1.7693
MRPL43	131	0.000379	0.0018068	0.034566	901	6	-2.2796	0.99962	0.99962	1	16767	0	-2.2796
SPTLC2	132	0.000395	0.0018711	0.03556	907	4	-1.663	0.45092	0.63754	1	10320	2	-1.663
MTFMT	133	0.000397	0.0018849	0.035743	909	6	-0.92919	0.9996	0.9996	1	16763	0	-0.92919
C19orf52	134	0.000413	0.0019647	0.036972	916	4	-1.6301	0.9907	0.99063	1	16182	0	-1.6301
SUPV3L1	135	0.000419	0.0019935	0.037309	921	4	-3.2806	0.001084	0.00482	0.411308	202	2	-3.2806
MRPL16	136	0.000423	0.0020141	0.037492	926	5	-1.5592	0.43425	0.62211	1	10098	1	-1.5592
MRPS2	137	0.000436	0.0020779	0.038103	940	6	-1.7045	0.99956	0.99956	1	16748	0	-1.7045
SLMO2	138	0.000444	0.0021112	0.038591	943	1	-6.5118	0.99956	0.99956	1	16746	0	-6.5118
C19orf70	139	0.000453	0.0021474	0.039035	948	6	-0.85959	0.99643	0.99636	1	16461	0	-0.85959
SLC25A26	140	0.000453	0.0021491	0.039035	949	4	-3.2402	0.96143	0.96144	1	15459	0	-3.2402
CYB5B	141	0.000461	0.0021842	0.039547	952	5	-1.1507	0.99188	0.9918	1	16223	0	-1.1507
MRPL34	142	0.000486	0.0023025	0.041095	965	6	-1.4557	0.99557	0.9955	1	16404	0	-1.4557
EEFSEC	143	0.000498	0.0023628	0.041919	971	4	-2.4999	0.95345	0.9535	1	15310	1	-2.4999
CYC1	144	0.000518	0.0024386	0.042856	980	6	-0.52585	0.99948	0.99948	1	16732	0	-0.52585
AHCYL1	145	0.000589	0.0027672	0.047746	999	6	-1.1855	0.99763	0.99759	1	16540	0	-1.1855
HMBS	146	0.000604	0.0028373	0.048663	1005	5	-3.5667	0.23026	0.42104	0.992347	7313	1	-3.5667
SECISBP2	147	0.000624	0.002916	0.049666	1012	6	-0.63979	0.99938	0.99938	1	16716	0	-0.63979
LRPPRC	148	0.000635	0.0029631	0.050419	1013	6	-1.9241	0.99849	0.9985	1	16606	0	-1.9241
MRPS18B	149	0.000635	0.0029677	0.050447	1014	5	-1.4471	0.95193	0.95205	1	15288	1	-1.4471
MRPL22	150	0.00064	0.0029826	0.050651	1015	6	-1.6089	0.99674	0.99668	1	16477	0	-1.6089
TOP3A	151	0.000657	0.0030636	0.051589	1023	5	-4.071	0.75038	0.83294	1	13228	1	-4.071
MRPL21	152	0.000661	0.0030802	0.051758	1025	5	-1.6185	0.64559	0.76365	1	12174	1	-1.6185
UQCRC1	153	0.000683	0.0031779	0.052995	1033	5	-1.8551	0.53341	0.69296	1	11098	1	-1.8551
PET112	154	0.000701	0.0032566	0.053923	1041	4	-2.0145	0.5515	0.70378	1	11258	2	-2.0145
TEFM	155	0.000706	0.003279	0.05419	1042	5	-1.8953	0.63924	0.75941	1	12109	1	-1.8953
C1QBP	156	0.00074	0.0034369	0.056261	1053	4	-1.2646	0.99926	0.99928	1	16696	0	-1.2646
LIPT2	157	0.000787	0.0036265	0.058585	1067	4	-1.839	0.61484	0.74352	1	11852	2	-1.839
MRPS18A	158	0.000809	0.0037167	0.059762	1072	5	-1.444	0.99919	0.99921	1	16685	0	-1.444
FH	159	0.000839	0.0038373	0.060962	1085	5	-3.1789	0.60355	0.73638	1	11736	1	-3.1789
NSUN4	160	0.000848	0.0038798	0.06158	1086	4	-1.4308	0.23726	0.42849	0.994792	7418	1	-1.4308
SDHD	161	0.000865	0.0039596	0.062502	1092	1	-2.3645	0.23573	0.42693	0.994407	7400	1	-2.3645
MRPL54	162	0.000915	0.0041756	0.064668	1113	5	-1.0078	0.67166	0.78101	1	12442	1	-1.0078
TRMT11	163	0.000928	0.0042382	0.06552	1115	4	-0.71677	0.96895	0.96897	1	15620	0	-0.71677
MRPL47	164	0.000932	0.0042572	0.065672	1117	5	-2.0409	0.9584	0.95838	1	15403	0	-2.0409
AFG3L2	165	0.000944	0.0043095	0.066323	1120	5	-2.3418	0.74136	0.82669	1	13123	1	-2.3418
MRPL39	166	0.000963	0.0043847	0.067182	1125	4	-1.4584	0.63475	0.7565	1	12059	1	-1.4584
WARS2	167	0.000975	0.0044364	0.067709	1129	5	-1.9746	0.9257	0.92998	1	14890	1	-1.9746
PI4KA	168	0.000976	0.0044427	0.067709	1130	5	-1.5656	0.63127	0.75422	1	12020	1	-1.5656
PTCD1	169	0.000999	0.0045404	0.068471	1143	4	-1.2545	0.83206	0.87482	1	13912	1	-1.2545
TIMM17A	170	0.001027	0.0046535	0.069569	1153	4	-1.1885	0.92325	0.92814	1	14863	1	-1.1885
RPUSD3	171	0.001066	0.0048218	0.071588	1161	5	-0.94352	0.98661	0.98658	1	16063	0	-0.94352
OXSM	172	0.001087	0.0049097	0.072643	1165	4	-1.006	0.95813	0.95811	1	15396	0	-1.006
SCO1	173	0.001109	0.0050079	0.073842	1169	4	-2.5399	0.99287	0.99284	1	16269	0	-2.5399

SUCLG1	178	0.001315	0.005908	0.084024	1212	5	-2.982	0.99441	0.99436	1	16335	0	-2.982
MRPL46	179	0.001319	0.0059241	0.084114	1214	5	-2.1216	0.86453	0.89115	1	14217	1	-2.1216
ATPSB	180	0.001391	0.0062429	0.087416	1231	6	-2.0407	0.99854	0.99855	1	16611	0	-2.0407
ADHFE1	181	0.001395	0.006259	0.08757	1232	6	-0.37863	0.9986	0.99862	1	16615	0	-0.37863
SLC25A19	182	0.001521	0.006811	0.093606	1253	5	-3.4688	0.84345	0.88037	1	13992	1	-3.4688
PSTK	183	0.001644	0.0073521	0.099966	1267	5	-1.5333	0.83158	0.87457	1	13911	1	-1.5333
MRPL38	184	0.001678	0.0074922	0.101289	1275	5	-1.0274	0.91568	0.92264	1	14753	1	-1.0274
MTPAP	185	0.001707	0.0076163	0.102644	1279	5	-1.216	0.92786	0.9316	1	14922	1	-1.216
KIAA0391	186	0.001832	0.0081631	0.108571	1296	4	-2.6325	0.48691	0.66382	1	10686	1	-2.6325
COQ3	187	0.001876	0.0083722	0.111009	1300	5	-1.3104	0.5158	0.68186	1	10942	1	-1.3104
MRPL45	188	0.002115	0.009401	0.1212	1337	3	-1.954	0.99789	0.99785	1	16560	0	-1.954
SLC25A32	189	0.002214	0.0098134	0.125485	1348	4	-1.5794	0.99158	0.9915	1	16217	0	-1.5794
MRPS30	190	0.002278	0.010053	0.127536	1358	4	-1.0628	0.97762	0.97758	1	15819	0	-1.0628
MRPL24	191	0.00229	0.010101	0.127895	1361	3	-0.85326	0.080413	0.20101	0.862279	4017	2	-0.85326
NDUFB7	192	0.002308	0.010167	0.128542	1363	4	-1.657	0.97197	0.97188	1	15690	0	-1.657
MRPS9	193	0.00231	0.010172	0.128542	1364	5	-1.5381	0.24722	0.4391	0.999734	7569	1	-1.5381
ATIC	194	0.002471	0.010831	0.134988	1383	4	-1.0172	0.92523	0.92962	1	14886	1	-1.0172
MRPS5	195	0.002497	0.010925	0.135595	1388	5	-1.1419	0.86025	0.88884	1	14156	1	-1.1419
PDHA1	196	0.002721	0.011836	0.143977	1417	6	-0.7564	0.99728	0.99725	1	16513	0	-0.7564
TIMM10	197	0.002873	0.012448	0.149623	1434	5	-4.4083	0.99234	0.99227	1	16248	0	-4.4083
MRPL27	198	0.002987	0.012959	0.154375	1447	5	-1.0707	0.50145	0.67285	1	10814	1	-1.0707
MRPL15	199	0.002992	0.012986	0.154583	1448	4	-1.9118	0.52873	0.68994	1	11057	2	-1.9118
FDX1L	200	0.003013	0.013071	0.155495	1449	5	-1.4563	0.93721	0.93901	1	15041	1	-1.4563
MRPL49	201	0.003138	0.013577	0.159853	1464	5	-1.4596	0.87008	0.89419	1	14261	1	-1.4596
UQCRCQ	202	0.003331	0.01437	0.166912	1484	2	-1.8027	0.99667	0.9966	1	16469	0	-1.8027
GFM1	203	0.003553	0.015287	0.175206	1503	5	-2.3217	0.7191	0.81174	1	12902	1	-2.3217
FDXR	204	0.003595	0.015456	0.176438	1510	6	-0.35369	0.9964	0.99634	1	16458	0	-0.35369
MTHFD2	205	0.004	0.017096	0.190765	1544	3	-2.7141	0.99188	0.99181	1	16224	0	-2.7141
TIMM13	206	0.004053	0.017318	0.192324	1552	3	-5.3149	0.93833	0.93993	1	15058	0	-5.3149
DLD	207	0.004059	0.017344	0.192324	1554	3	-5.0226	0.9946	0.99456	1	16344	0	-5.0226
GADD45GIP1	208	0.00407	0.017388	0.192621	1556	5	-1.1764	0.97575	0.9757	1	15775	0	-1.1764
MRPS22	209	0.004145	0.017701	0.19538	1561	4	-1.3709	0.14834	0.31567	0.933302	5830	1	-1.3709
HARS2	210	0.004146	0.017705	0.19538	1562	5	-2.444	0.98041	0.98036	1	15891	0	-2.444
TFB1M	211	0.004212	0.017971	0.19743	1569	5	-1.4802	0.99132	0.99125	1	16205	0	-1.4802
MRPS28	212	0.004229	0.01804	0.197564	1573	5	-0.62187	0.98238	0.98231	1	15943	0	-0.62187
PXMP4	213	0.004275	0.018232	0.198774	1581	5	-0.70304	0.97892	0.97886	1	15847	0	-0.70304
NDUFAB1	214	0.004454	0.018924	0.204638	1594	2	-3.766	0.24457	0.43629	0.999194	7525	1	-3.766
NDUFB10	215	0.004519	0.019162	0.206175	1602	4	-0.8916	0.99548	0.99541	1	16395	0	-0.8916
COX6B1	216	0.004528	0.019197	0.206423	1603	1	-2.7991	0.99547	0.9954	1	16394	0	-2.7991
MALSU1	217	0.004553	0.01929	0.20692	1606	3	-1.3549	0.99545	0.99537	1	16392	0	-1.3549
TIMM23	218	0.004567	0.019338	0.207296	1608	3	-6.0627	0.99543	0.99536	1	16389	0	-6.0627
MTERFD1	219	0.004577	0.019375	0.207383	1610	5	-1.2819	0.99095	0.99087	1	16190	0	-1.2819
MRPL14	220	0.00473	0.019973	0.212514	1620	5	-1.1519	0.99527	0.99519	1	16380	0	-1.1519
COA5	221	0.004871	0.020528	0.216776	1632	2	-5.1027	0.99513	0.99507	1	16373	0	-5.1027
NGRN	222	0.004899	0.020621	0.217534	1634	5	-0.71719	0.9951	0.99504	1	16372	0	-0.71719
MRPL41	223	0.004937	0.020777	0.218507	1639	2	-1.5696	0.3198	0.51437	1	8577	1	-1.5696
TOMM40	224	0.005145	0.021615	0.225123	1655	2	-4.5581	0.99485	0.99482	1	16356	0	-4.5581
RHOT1	225	0.005635	0.023478	0.239319	1691	4	-0.55138	0.98839	0.98836	1	16112	0	-0.55138
GLS	226	0.005644	0.023509	0.239493	1692	3	-0.53405	0.36084	0.55436	1	9118	2	-0.53405
GCSH	227	0.005978	0.024635	0.248909	1705	2	-2.0552	0.99402	0.99397	1	16321	0	-2.0552
UQCRCFS1	228	0.006157	0.025219	0.253031	1718	2	-1.6225	0.99384	0.99379	1	16310	0	-1.6225
NDUFS8	229	0.006224	0.025433	0.254239	1724	4	-0.81835	0.65779	0.77175	1	12307	2	-0.81835
PISD	230	0.00635	0.02586	0.257807	1729	5	-0.9839	0.9779	0.97785	1	15824	0	-0.9839
MRPL10	231	0.006848	0.027508	0.269657	1758	4	-1.3564	0.97277	0.97269	1	15706	0	-1.3564
QRSL1	232	0.006952	0.027851	0.27191	1765	3	-3.348	0.99305	0.993	1	16274	0	-3.348
NDUFA6	233	0.00704	0.028133	0.27382	1771	4	-0.62585	0.98231	0.98224	1	15941	0	-0.62585
PRDX5	234	0.007271	0.028878	0.278711	1786	4	-0.84254	0.99273	0.9927	1	16263	0	-0.84254
MRPL23	235	0.007372	0.029203	0.280663	1792	5	-0.78197	0.66835	0.77882	1	12414	1	-0.78197
MRPS12	236	0.007395	0.029279	0.281007	1796	4	-1.7162	0.9926	0.99256	1	16258	0	-1.7162
MRPL40	237	0.007592	0.029888	0.28542	1805	2	-3.724	0.76343	0.84222	1	13390	1	-3.724
ATPAF2	238	0.007672	0.030125	0.286885	1810	4	-0.72351	0.94123	0.94241	1	15099	1	-0.72351
ATPSF1	239	0.007952	0.031007	0.292879	1824	3	-0.84924	0.99205	0.99198	1	16231	0	-0.84924
TTC19	240	0.007992	0.031146	0.29353	1828	5	-0.89834	0.97331	0.97323	1	15722	0	-0.89834
COMT	241	0.008031	0.031251	0.294354	1830	5	-0.94847	0.98501	0.98496	1	16020	0	-0.94847
PTGES2	242	0.008663	0.033201	0.310348	1844	5	-0.55272	0.9795	0.97945	1	15863	0	-0.55272
CISD3	243	0.008733	0.033408	0.311605	1848	5	-0.46729	0.99127	0.99119	1	16200	0	-0.46729
MRPS18C	244	0.008982	0.034185	0.317309	1857	2	-1.5285	0.99102	0.99094	1	16192	0	-1.5285
MRPL33	245	0.009445	0.035647	0.328433	1870	4	-0.7763	0.8922	0.90713	1	14481	1	-0.7763
PAM16	246	0.0096	0.036138	0.331515	1879	4	-0.77777	0.39021	0.58163	1	9509	1	-0.77777
MRPS31	247	0.009643	0.03627	0.332196	1882	2	-1.2578	0.99036	0.99028	1	16164	0	-1.2578
MRPL51	248	0.009719	0.036501	0.333779	1885	3	-3.5145	0.22508	0.41552	0.989129	7239	1	-3.5145
ISCA2	249	0.009802	0.036742	0.335091	1890	2	-1.3784	0.23263	0.42358	0.99305	7351	1	-1.3784
YBEY	250	0.010094	0.037678	0.342001	1899	5	-0.51929	0.9883	0.98826	1	16108	0	-0.51929
SLC25A24	251	0.010199	0.037982	0.34421	1902	4	-0.57997	0.97968	0.97961	1	15867	0	-0.57997
HCCS	252	0.0109	0.040202	0.359614	1926	5	-0.50665	0.9891	0.98904	1	16134	0	-0.50665
RBFA	253	0.010942	0.040314	0.359978	1929	5	-0.55888	0.75538	0.83651	1	13285	1	-0.55888
NDUFS7	254	0.010972	0.04042	0.360247	1934	5	-0.51122	0.66316	0.77535	1	12361	1	-0.51122
PDP2	255	0.011212	0.041176	0.365478	1942	4	-0.53815	0.96681	0.96684	1	15572	0	-0.53815
MRPL12	256	0.011426	0.041824	0.369448	1951	2	-1.8585	0.98857	0.98852	1	16120	0	-1.8585
MTIF2	257	0.011473	0.041974	0.370077	1955	2	-1.3178	0.98853	0.98847	1	16115	0	-1.3178
ALDH1B1	258	0.011643	0.042505	0.37349	1961	5	-0.614	0.98836	0.98832	1	16111	0	-0.614
PEX11B	259	0.012108	0.043938	0.383627	1974	5	-0.68226	0.52418	0.68707	1	11014	1	-0.68226
MECR	260	0.012256	0.044371	0.385886	1982	5	-0.35392	0.98268	0.9826	1	15955	0	-0.35392
PHB	261	0.0125	0.045136	0.391553	1987	1	-6.3755	0.9875	0.98746	1	16082	0	-6.3755
FXN	262	0.012661	0.045618	0.395003	1990	3	-1.2056	0.64206	0.76127	1	12134	2	-1.2056
DHRS7B	263	0.013005	0.04665	0.401856	2001	4	-0.67708	0.90195	0.91331	1	14591	1	

MRPS7	268	0.014469	0.051083	0.428268	2056	5	-0.58284	0.97555	0.97549	1	15769	0	-0.58284
RHOT2	269	0.01449	0.051148	0.428604	2057	5	-0.65055	0.99332	0.99327	1	16288	0	-0.65055
COX6A2	270	0.014694	0.051757	0.432655	2062	3	-0.92658	0.98304	0.98297	1	15965	0	-0.92658
PPA2	271	0.014811	0.052109	0.434755	2066	5	-0.68433	0.97698	0.97692	1	15799	0	-0.68433
NDUFA11	272	0.015019	0.052691	0.438977	2069	5	-0.43714	0.99273	0.9927	1	16262	0	-0.43714
ALDH18A1	273	0.016582	0.057232	0.467093	2112	5	-0.60755	0.1822	0.36823	0.958418	6621	1	-0.60755
BCKDHB	274	0.016596	0.057295	0.467269	2113	4	-0.82048	0.71838	0.81124	1	12895	2	-0.82048
TFAM	275	0.016934	0.058257	0.471443	2130	1	-1.479	0.78129	0.85257	1	13540	0	-1.479
RPS18	276	0.017099	0.058697	0.473231	2137	1	-4.4109	0.9829	0.98284	1	15959	0	-4.4109
MRPL19	277	0.017852	0.060884	0.48721	2154	3	-0.54914	0.63963	0.75966	1	12112	1	-0.54914
TPRH1	278	0.018002	0.061301	0.489189	2160	5	-0.57348	0.36526	0.55843	1	9178	1	-0.57348
TOP1MT	279	0.018933	0.063971	0.504885	2184	5	-0.61887	0.060661	0.16362	0.824194	3422	1	-0.61887
IMMT	280	0.019218	0.06474	0.50909	2192	5	-0.76121	0.82953	0.87359	1	13892	1	-0.76121
COA3	281	0.019271	0.064892	0.509822	2194	4	-0.70317	0.98105	0.981	1	15910	0	-0.70317
MTG1	282	0.019826	0.066489	0.517968	2211	4	-0.95641	0.55865	0.70817	1	11331	1	-0.95641
TXN2	283	0.019984	0.066963	0.519379	2222	3	-1.7807	0.98002	0.97996	1	15881	0	-1.7807
SLC25A10	284	0.02006	0.067203	0.520621	2225	5	-0.57273	0.9452	0.94589	1	15149	1	-0.57273
MRPS6	285	0.021019	0.069918	0.535637	2250	1	-5.4829	0.97898	0.97892	1	15850	0	-5.4829
PNPO	286	0.021721	0.071893	0.547118	2265	5	-0.49133	0.97984	0.97977	1	15871	0	-0.49133
C12orf10	287	0.022539	0.074214	0.558425	2290	5	-0.31129	0.74229	0.82735	1	13138	1	-0.31129
SLC25A41	288	0.022743	0.074769	0.561808	2294	5	-0.645	0.76611	0.8441	1	13428	1	-0.645
PDHB	289	0.022802	0.074946	0.562892	2295	4	-0.4522	0.077039	0.19479	0.857403	3916	2	-0.4522
TXNRD2	290	0.022914	0.075284	0.564695	2298	4	-0.60565	0.65018	0.76666	1	12224	2	-0.60565
NDUFA10	291	0.022952	0.075397	0.565297	2299	5	-0.3289	0.49776	0.67058	1	10781	1	-0.3289
COQ7	292	0.023092	0.075785	0.567195	2303	4	-0.6412	0.089776	0.2181	0.872889	4305	2	-0.6412
POLG2	293	0.023512	0.076936	0.573344	2313	5	-0.63747	0.7112	0.80643	1	12814	1	-0.63747
SLC30A9	294	0.023889	0.078	0.57852	2324	5	-0.32028	0.88665	0.90373	1	14433	1	-0.32028
FASTKD5	295	0.02456	0.079828	0.588787	2337	3	-0.54293	0.78876	0.85566	1	13588	1	-0.54293
RCN2	296	0.024654	0.080109	0.589669	2341	3	-0.283	0.97535	0.9753	1	15763	0	-0.283
HADHA	297	0.024892	0.080757	0.592347	2349	3	-0.47161	0.46118	0.64693	1	10441	1	-0.47161
AURKAIP1	298	0.025599	0.082679	0.601806	2368	4	-1.2087	0.98783	0.98776	1	16093	0	-1.2087
TMEM205	299	0.027787	0.088696	0.632805	2416	5	-0.23003	0.026606	0.08542	0.734235	2003	1	-0.23003
NDUFB9	300	0.027907	0.089017	0.634042	2420	4	-0.27636	0.97209	0.972	1	15692	0	-0.27636
TFB2M	301	0.028747	0.091342	0.64544	2438	2	-0.36985	0.89184	0.90689	1	14480	0	-0.36985
COX19	302	0.029517	0.093479	0.653435	2465	2	-5.2677	0.32148	0.51611	1	8606	1	-5.2677
ANGEL2	303	0.030152	0.095164	0.660583	2483	4	-0.58296	0.98263	0.98256	1	15954	0	-0.58296
ADCK5	304	0.030329	0.09562	0.661398	2492	5	-0.30504	0.86585	0.89187	1	14228	1	-0.30504
TIMM8B	305	0.030701	0.0966	0.665771	2501	3	-0.88505	0.9693	0.9693	1	15623	0	-0.88505
MRPL2	306	0.030891	0.097095	0.668115	2505	3	-0.05854	0.30613	0.50027	1	8371	2	-0.05854
SLC25A42	307	0.03149	0.098711	0.673587	2526	5	-0.50268	0.90649	0.91629	1	14644	1	-0.50268
COMTD1	308	0.031524	0.098797	0.673908	2527	5	-0.56958	0.49271	0.66736	1	10733	1	-0.56958
NDUFS2	309	0.032861	0.10233	0.690089	2556	5	-0.4992	0.91248	0.92039	1	14712	1	-0.4992
LACTB2	310	0.033047	0.10282	0.692298	2560	3	-0.37951	0.80521	0.86274	1	13709	1	-0.37951
LYPLAL1	311	0.033197	0.10321	0.693341	2566	3	-0.30896	0.9668	0.96684	1	15571	0	-0.30896
SUCLA2	312	0.035549	0.10933	0.720409	2616	2	-1.553	0.14764	0.31457	0.933302	5809	1	-1.553
CLPB	313	0.036982	0.113	0.736415	2645	2	-0.06109	0.69567	0.79624	1	12643	2	-0.06109
YME1L1	314	0.037135	0.1134	0.737379	2650	4	-0.31351	0.96719	0.96722	1	15586	0	-0.31351
LYRM4	315	0.037286	0.11379	0.738743	2655	3	-1.1502	0.90182	0.91322	1	14587	0	-1.1502
EC1	316	0.037836	0.11523	0.745307	2665	5	-0.58049	0.76065	0.84027	1	13357	1	-0.58049
SLC25A3	317	0.037858	0.11529	0.74538	2666	4	-0.6754	0.96458	0.96461	1	15524	0	-0.6754
ACACA	318	0.038508	0.11695	0.752496	2679	4	-0.60335	0.4867	0.66369	1	10684	1	-0.60335
FKBP10	319	0.038796	0.11771	0.756256	2683	5	-0.257	0.97601	0.97597	1	15783	0	-0.257
PANK2	320	0.03974	0.12012	0.767136	2699	5	-0.19338	0.39156	0.58289	1	9530	1	-0.19338
TRAP1	321	0.040702	0.12258	0.777669	2715	4	-0.4345	0.60977	0.74033	1	11799	1	-0.4345
NDUFB8	322	0.041038	0.12347	0.780499	2726	4	-0.48002	0.97274	0.97266	1	15703	0	-0.48002
NT5M	323	0.044548	0.13211	0.81488	2794	4	-0.47902	0.90176	0.91318	1	14585	1	-0.47902
PTPMT1	324	0.045056	0.13336	0.819372	2804	4	-0.57386	0.11866	0.26739	0.907103	5079	2	-0.57386
C12orf65	325	0.045912	0.13549	0.826127	2827	3	-0.40449	0.95409	0.95409	1	15323	0	-0.40449
GRHPR	326	0.045935	0.13555	0.826167	2828	5	-0.4541	0.87809	0.89873	1	14349	1	-0.4541
FAM162A	327	0.046003	0.1357	0.826341	2830	2	-0.88449	0.954	0.954	1	15320	0	-0.88449
SLC25A25	328	0.046144	0.13605	0.827806	2833	5	-0.32073	0.96938	0.96938	1	15626	0	-0.32073
NIPSNAP1	329	0.046859	0.13781	0.83408	2848	5	-0.5379	0.091658	0.22144	0.873751	4368	1	-0.5379
NME4	330	0.047054	0.1383	0.836427	2850	5	-0.42996	0.98441	0.98434	1	15999	0	-0.42996
MUL1	331	0.047261	0.1388	0.838127	2854	5	-0.20099	0.98381	0.98374	1	15987	0	-0.20099
TRNT1	332	0.047933	0.14042	0.843031	2871	3	-0.52914	0.44351	0.6307	1	10228	1	-0.52914
SMDT1	333	0.048548	0.14193	0.848592	2883	3	-0.38366	0.55384	0.70525	1	11284	1	-0.38366
ACACB	334	0.048632	0.14215	0.849568	2884	4	-0.41818	0.07719	0.19504	0.857688	3919	2	-0.41818
NNT	335	0.049156	0.1434	0.855018	2891	5	-0.14073	0.28796	0.48157	1	8126	1	-0.14073
RNASEH1	336	0.050156	0.14588	0.865573	2905	3	-0.53517	0.94984	0.95009	1	15246	0	-0.53517
ICT1	337	0.050321	0.14629	0.865694	2912	5	-0.36894	0.70406	0.8017	1	12725	1	-0.36894
MICU1	338	0.050402	0.14651	0.865694	2916	4	-0.72052	0.23977	0.43119	0.996709	7457	1	-0.72052
RPS15A	339	0.050564	0.1469	0.866101	2923	1	-5.4429	0.94944	0.9497	1	15242	0	-5.4429
ECH1	340	0.050573	0.14692	0.866101	2924	4	-0.47455	0.91162	0.91979	1	14698	1	-0.47455
SLC25A22	341	0.050845	0.1476	0.868295	2930	3	0.005903	0.31926	0.5138	1	8568	3	0.005903
ACSM3	342	0.051261	0.14861	0.871939	2937	5	-0.17081	0.59372	0.73007	1	11649	1	-0.17081
EMC2	343	0.052382	0.151	0.879594	2959	1	-1.2984	0.94762	0.94809	1	15203	0	-1.2984
SIRT4	344	0.058439	0.16267	0.927035	3024	4	-0.65671	0.98832	0.98828	1	16110	0	-0.65671
NME3	345	0.058603	0.163	0.928426	3026	4	-0.43033	0.90901	0.91799	1	14675	1	-0.43033
BAD	346	0.058925	0.16362	0.929276	3035	4	-0.41163	0.66039	0.77346	1	12334	1	-0.41163
NDUFS3	347	0.059598	0.16492	0.93325	3046	4	-0.45686	0.69271	0.79423	1	12606	2	-0.45686
PDSS1	348	0.061148	0.16797	0.944605	3065	2	-0.7964	0.10629	0.24662	0.894734	4750	1	-0.7964
MRPS16	349	0.063141	0.17182	0.960346	3084	2	-0.49386	0.46883	0.65265	1	10527	2	-0.49386
UQCR10	350	0.0663	0.17791	0.980944	3126	1	-1.562	0.9337	0.93614	1	14994	0	-1.562
CRAT	351	0.066405	0.17813	0.981215	3128	4	-0.46806	0.69657	0.79684	1	12655	2	-0.46806
AKAP1	352	0.068647	0.18232	0.997112	3151	4	-0.32921	0.46492	0.65029	1	10488	2	-0.32921
ATP5C1	353	0.068655	0.18233	0.997112	3152	2							

PYCR2	358	0.07432	0.1931	1	3235	4	-0.35568	0.45052	0.63717	1	10315	2	-0.35568
ACSL4	359	0.074608	0.1936	1	3240	4	-0.30284	0.87602	0.89755	1	14320	1	-0.30284
L2HGDH	360	0.074888	0.19412	1	3244	4	-0.32283	0.98844	0.9884	1	16113	0	-0.32283
CS	361	0.076232	0.19653	1	3263	2	-1.2632	0.92377	0.92854	1	14868	0	-1.2632
MRPS25	362	0.076275	0.19662	1	3264	4	-0.30878	0.007125	0.027635	0.613779	776	1	-0.30878
LACTB	363	0.077159	0.1982	1	3275	4	-0.47098	0.68574	0.78985	1	12547	2	-0.47098
SDR39U1	364	0.078133	0.19998	1	3291	4	-0.35838	0.56167	0.71006	1	11355	2	-0.35838
COX18	365	0.079234	0.20196	1	3303	4	-0.34079	0.61243	0.742	1	11829	1	-0.34079
TOMM22	366	0.079703	0.20282	1	3310	1	-0.88353	0.9203	0.92599	1	14823	0	-0.88353
GOT2	367	0.081115	0.20538	1	3329	2	-0.68703	0.91889	0.92495	1	14802	0	-0.68703
BCKDK	368	0.082268	0.2075	1	3349	4	-0.3526	0.49192	0.66687	1	10729	2	-0.3526
PDPR	369	0.085389	0.21304	1	3395	4	-0.32424	0.97081	0.97073	1	15662	0	-0.32424
SLC25A15	370	0.085747	0.21369	1	3401	3	-0.47204	0.38576	0.57745	1	9448	1	-0.47204
C10orf10	371	0.086414	0.21491	1	3408	3	-0.75532	0.39022	0.58164	1	9510	2	-0.75532
ALKBH7	372	0.086868	0.21574	1	3418	4	-0.41498	0.9367	0.9386	1	15034	1	-0.41498
HEBP1	373	0.087432	0.21677	1	3427	4	-0.34749	0.2349	0.42604	0.993442	7391	1	-0.34749
SLC25A45	374	0.087524	0.21693	1	3428	4	-0.54037	0.81178	0.86565	1	13756	1	-0.54037
GSTZ1	375	0.088495	0.21865	1	3440	3	-0.41145	0.41257	0.60219	1	9803	2	-0.41145
TRMT10C	376	0.089649	0.22074	1	3455	2	-2.5765	0.91035	0.91889	1	14688	0	-2.5765
MRM1	377	0.092683	0.22616	1	3492	4	-0.27851	0.66609	0.77734	1	12392	2	-0.27851
MTERFD2	378	0.093617	0.22783	1	3505	3	-0.12779	0.20739	0.39679	0.979021	6986	3	-0.12779
CRLS1	379	0.094773	0.22987	1	3525	2	-0.00231	0.60781	0.73907	1	11771	2	-0.00231
CYP27B1	380	0.094991	0.23025	1	3528	4	-0.38945	0.58017	0.72152	1	11521	2	-0.38945
MPV17L2	381	0.096232	0.23242	1	3545	4	-0.41013	0.76535	0.84356	1	13420	1	-0.41013
NOA1	382	0.097332	0.23444	1	3560	3	-0.29404	0.37251	0.56511	1	9270	2	-0.29404
NDUFS1	383	0.097599	0.2349	1	3563	4	-0.27493	0.93599	0.93801	1	15022	1	-0.27493
SLC25A48	384	0.09861	0.23665	1	3580	2	0.33255	0.049123	0.14073	0.79719	3041	4	0.33255
MTO1	385	0.099808	0.23871	1	3596	3	-0.09243	0.41325	0.60284	1	9813	1	-0.09243
NDUFC2	386	0.0999	0.23886	1	3598	3	-0.36785	0.72544	0.81594	1	12961	1	-0.36785
SDHA	387	0.10162	0.2418	1	3629	2	-0.38688	0.909	0.91799	1	14674	0	-0.38688
NDUFA7	388	0.10175	0.24201	1	3633	4	-0.41763	0.97038	0.9703	1	15650	0	-0.41763
PET100	389	0.10272	0.24376	1	3646	1	0.03221	0.25401	0.44619	1	7665	1	0.03221
TRMT1	390	0.1038	0.24567	1	3666	4	-0.49494	0.18874	0.37654	0.963634	6734	2	-0.49494
DCAKD	391	0.10403	0.24606	1	3669	4	-0.30538	0.40775	0.5978	1	9731	1	-0.30538
CLPP	392	0.105	0.2477	1	3690	4	-0.46513	0.91506	0.92219	1	14738	1	-0.46513
CPT1C	393	0.10676	0.25067	1	3711	4	-0.28746	0.94896	0.94927	1	15233	1	-0.28746
TDRKH	394	0.10809	0.25294	1	3729	3	-0.25485	0.53304	0.69274	1	11095	2	-0.25485
FDPS	395	0.10834	0.25331	1	3732	2	0.024918	0.50535	0.67533	1	10857	2	0.024918
DMPK	396	0.11026	0.25656	1	3750	3	-0.34533	0.24367	0.4353	0.999194	7509	2	-0.34533
MTX2	397	0.11049	0.25697	1	3754	2	-0.48735	0.88951	0.90548	1	14460	0	-0.48735
MPST	398	0.11247	0.26017	1	3777	3	-0.6573	0.60931	0.74003	1	11794	2	-0.6573
C21orf33	399	0.11452	0.26358	1	3810	4	-0.23993	0.38531	0.57702	1	9438	2	-0.23993
OXCT1	400	0.11548	0.26514	1	3828	4	-0.2121	0.96707	0.96709	1	15581	0	-0.2121
ACYP2	401	0.11605	0.26604	1	3834	2	-0.42966	0.52592	0.68815	1	11032	1	-0.42966
ABCF2	402	0.11629	0.26646	1	3840	4	-0.42912	0.95503	0.95504	1	15343	1	-0.42912
RSAD1	403	0.11667	0.26709	1	3850	4	-0.61535	0.96626	0.96628	1	15563	0	-0.61535
C7orf55	404	0.11684	0.26737	1	3853	1	-0.67518	0.88316	0.9017	1	14402	0	-0.67518
C8orf82	405	0.11863	0.27033	1	3882	3	-0.17474	0.63145	0.75434	1	12024	2	-0.17474
BLOC1S1	406	0.12043	0.27319	1	3904	3	-0.04969	0.39016	0.58158	1	9508	2	-0.04969
ATP5I	407	0.1206	0.27347	1	3907	2	-0.72115	0.59692	0.73204	1	11676	1	-0.72115
DIABLO	408	0.12074	0.27369	1	3908	3	-0.19377	0.16595	0.34349	0.94671	6252	2	-0.19377
BOLA1	409	0.12107	0.27424	1	3914	2	-0.11484	0.0753	0.1916	0.855433	3858	2	-0.11484
NME6	410	0.12146	0.27487	1	3918	3	-0.22749	0.06253	0.16723	0.829508	3475	2	-0.22749
RPL10A	411	0.12245	0.27645	1	3933	1	-2.2352	0.35755	0.55129	1	9075	1	-2.2352
MRPL32	412	0.12425	0.27932	1	3963	2	-0.61404	0.87049	0.89439	1	14264	0	-0.61404
SARDH	413	0.12676	0.28332	1	3992	4	-0.22445	0.56732	0.71354	1	11402	2	-0.22445
LYPLA1	414	0.12784	0.28509	1	4012	1	-0.63937	0.87216	0.89531	1	14283	0	-0.63937
SPATA19	415	0.12853	0.28619	1	4020	4	-0.25826	0.66131	0.77409	1	12341	0	-0.25826
ACOX3	416	0.12953	0.2878	1	4036	4	-0.25178	0.72095	0.81296	1	12921	2	-0.25178
PKLR	417	0.13065	0.2896	1	4048	4	-0.30125	0.94856	0.9489	1	15225	1	-0.30125
SLC25A31	418	0.13301	0.29335	1	4077	4	-0.22515	0.093476	0.2246	0.877688	4411	1	-0.22515
PNPLA8	419	0.13496	0.29643	1	4118	4	-0.21596	0.090566	0.2195	0.873751	4325	1	-0.21596
PUS1	420	0.13591	0.29798	1	4131	4	-0.31694	0.62706	0.75147	1	11972	2	-0.31694
MRPS10	421	0.13632	0.29863	1	4141	1	-0.79203	0.86368	0.8907	1	14200	0	-0.79203
TIMM10B	422	0.1368	0.29936	1	4149	3	-0.18371	0.30044	0.49442	1	8286	0	-0.18371
EFHD1	423	0.13752	0.30052	1	4161	4	-0.32685	0.59882	0.73327	1	11689	2	-0.32685
STARD7	424	0.13794	0.30118	1	4175	2	0.083213	0.037349	0.11381	0.764384	2565	3	0.083213
PIF1	425	0.13824	0.30165	1	4177	4	-0.36962	0.96543	0.96544	1	15548	0	-0.36962
MRPL42	426	0.13878	0.3025	1	4188	1	-2.2569	0.17024	0.35	0.950435	6344	1	-2.2569
NDUFB6	427	0.13971	0.304	1	4207	1	-0.98175	0.86029	0.88886	1	14158	0	-0.98175
LYRM2	428	0.14021	0.30476	1	4218	2	-0.14065	0.70105	0.79973	1	12693	1	-0.14065
SCP2	429	0.14042	0.30509	1	4222	3	-0.19844	0.73245	0.82064	1	13039	2	-0.19844
ARG2	430	0.14291	0.30905	1	4257	4	-0.16473	0.92327	0.92816	1	14864	1	-0.16473
NDUFA3	431	0.14344	0.30987	1	4267	3	-0.39019	0.95177	0.9519	1	15282	0	-0.39019
C17orf89	432	0.1452	0.31266	1	4293	1	0.12661	0.18173	0.36753	0.958418	6609	1	0.12661
BCL2L13	433	0.14728	0.31597	1	4332	4	-0.30129	0.12258	0.27381	0.91013	5181	2	-0.30129
MTERF	434	0.1475	0.31631	1	4337	1	-0.64464	0.8525	0.88489	1	14068	0	-0.64464
ACP6	435	0.14856	0.31797	1	4356	4	-0.24785	0.16454	0.34136	0.945506	6223	2	-0.24785
TIMM17B	436	0.14865	0.31813	1	4359	2	-0.209	0.85135	0.88432	1	14056	0	-0.209
MAVS	437	0.14896	0.31862	1	4363	4	-0.302	0.69745	0.79744	1	12664	1	-0.302
GLRX5	438	0.14961	0.31966	1	4374	2	-0.83349	0.85039	0.88381	1	14048	0	-0.83349
NUDT2	439	0.152	0.32347	1	4407	2	-0.39272	0.24577	0.43755	0.999194	7546	1	-0.39272
LYRM9	440	0.15218	0.32377	1	4408	2	-0.31722	0.86616	0.89203	1	14229	1	-0.31722
MICU2	441	0.15228	0.32392	1	4409	2	-0.35171	0.60601	0.73794	1	11757	1	-0.35171
PRDX6	442	0.15309	0.32518	1	4419	2	-0.24153	0.84691	0.88207	1	14021	0	-0.24153
RNMTL1	443	0.15316	0.32529	1	4421	4	-0.23313	0.92503	0.92947	1	14882	1	-0.23313
OMA1	444	0.15343	0.32571	1	4424	3	0.052215	0.01466	0.051241	0.674231	1310	3	0.052215
COX6B2	445	0.15432	0.32706	1	4439	3	-0.28567	0.96258	0.96261	1	15482	0	-0.28567
ATP5SL	446	0.15435	0.32712	1	4441	4	-0.2135	0.81714	0.86796	1	13799	1	-0.2135
RAB35	447	0.15547	0.32892	1	4458	4	-0.22152	0.09668	0.23018	0.882239	4496	2	-0.22152

AIFM3	448	0.15711	0.33141	1	4486	4	-0.28248	0.77078	0.84741	1	13482	2	-0.28248
PRELID1	449	0.15793	0.33263	1	4495	1	-1.38	0.84207	0.87969	1	13977	0	-1.38
MACROD1	450	0.15871	0.33384	1	4505	4	-0.35678	0.8267	0.87231	1	13870	1	-0.35678
PRDX2	451	0.15934	0.33483	1	4517	2	-0.44846	0.84066	0.87899	1	13965	0	-0.44846
MRPL52	452	0.16059	0.33676	1	4536	3	-0.16512	0.4392	0.62674	1	10172	1	-0.16512
DCXR	453	0.1653	0.34394	1	4612	4	-0.31969	0.45255	0.63902	1	10346	1	-0.31969
COX5A	454	0.16588	0.34484	1	4624	1	-1.4448	0.83412	0.87584	1	13925	0	-1.4448
PRODH	455	0.16615	0.34521	1	4629	4	-0.29162	0.88639	0.90357	1	14430	1	-0.29162
SDHAF2	456	0.16865	0.34894	1	4674	2	0.14686	0.20464	0.39385	0.978135	6939	3	0.14686
NDUFAF6	457	0.17295	0.35551	1	4740	3	-0.22013	0.48421	0.66218	1	10665	1	-0.22013
VDAC1	458	0.17411	0.35726	1	4756	1	-0.49175	0.82589	0.87192	1	13863	0	-0.49175
OBSN	459	0.17582	0.35988	1	4781	2	0.064124	0.30788	0.50206	1	8396	2	0.064124
ERAL1	460	0.17597	0.3601	1	4784	3	-0.08266	0.71768	0.81076	1	12890	2	-0.08266
XPNPEP3	461	0.17675	0.36135	1	4795	4	-0.21041	0.95332	0.95336	1	15306	1	-0.21041
MINOS1	462	0.17786	0.363	1	4810	1	-1.0754	0.57272	0.71687	1	11452	1	-1.0754
UQCRH	463	0.18056	0.36695	1	4845	1	-0.49017	0.81944	0.86902	1	13814	0	-0.49017
CHCHD5	464	0.18089	0.36744	1	4851	3	-0.07152	0.33317	0.52757	1	8758	3	-0.07152
LETM2	465	0.18242	0.36974	1	4866	4	-0.22664	0.76519	0.84346	1	13418	1	-0.22664
VDAC3	466	0.18472	0.37313	1	4909	2	-0.3376	0.87691	0.89806	1	14336	0	-0.3376
RMDN3	467	0.18556	0.37438	1	4919	4	-0.26505	0.74247	0.82747	1	13141	2	-0.26505
TUBB3	468	0.18629	0.37543	1	4932	4	-0.21051	0.7835	0.85353	1	13556	1	-0.21051
PGAM5	469	0.18661	0.3759	1	4934	2	0.27799	0.059038	0.16032	0.820731	3367	4	0.27799
LETM1	470	0.18812	0.37813	1	4955	2	0.067058	0.22369	0.41404	0.988571	7218	2	0.067058
TRIT1	471	0.19108	0.38236	1	4999	4	-0.23171	0.49835	0.67094	1	10786	2	-0.23171
ID1	472	0.19327	0.38561	1	5034	1	-0.02684	0.82237	0.87029	1	13836	1	-0.02684
NDUFV1	473	0.19343	0.38585	1	5036	3	-0.28796	0.77692	0.8508	1	13519	1	-0.28796
ALDH4A1	474	0.1977	0.39204	1	5116	3	-0.17033	0.69054	0.79291	1	12589	2	-0.17033
STOML2	475	0.19811	0.39263	1	5127	4	-0.15236	0.005147	0.021113	0.567085	640	2	-0.15236
C15orf40	476	0.19874	0.39353	1	5140	1	-1.0926	0.62472	0.75001	1	11944	1	-1.0926
PINK1	477	0.19953	0.39468	1	5154	4	-0.21502	0.84822	0.88272	1	14032	1	-0.21502
GOLPH3	478	0.20049	0.39602	1	5169	4	-0.23598	0.1704	0.35026	0.950435	6350	2	-0.23598
TPI1	479	0.20135	0.39725	1	5180	1	-0.34456	0.79865	0.85989	1	13655	0	-0.34456
NDUFB5	480	0.20286	0.39943	1	5203	3	-0.15977	0.43817	0.62578	1	10157	2	-0.15977
NDUFB11	481	0.20335	0.40012	1	5216	4	-0.14722	0.95943	0.95942	1	15429	0	-0.14722
COX14	482	0.20344	0.40023	1	5219	1	-1.4544	0.70705	0.80369	1	12763	0	-1.4544
COX17	483	0.20383	0.40081	1	5230	1	-0.13489	0.33312	0.52752	1	8757	1	-0.13489
EHHADH	484	0.20451	0.40184	1	5245	4	-0.23831	0.14931	0.31721	0.933376	5854	2	-0.23831
NDUFA1	485	0.20525	0.40284	1	5257	1	-0.78126	0.79475	0.8582	1	13625	0	-0.78126
TMEM143	486	0.20599	0.40385	1	5271	4	-0.16206	0.68353	0.78843	1	12541	2	-0.16206
NDUFAF3	487	0.20639	0.40441	1	5279	4	-0.24804	0.90421	0.91478	1	14616	1	-0.24804
GCDH	488	0.20722	0.40555	1	5285	4	-0.17633	0.82998	0.87379	1	13895	1	-0.17633
NRD1	489	0.20861	0.40746	1	5304	3	-0.05566	0.32918	0.52374	1	8711	3	-0.05566
OPA1	490	0.20916	0.40822	1	5312	3	-0.30879	0.061097	0.1645	0.824873	3435	1	-0.30879
FAM136A	491	0.21006	0.4094	1	5331	3	-0.22924	0.88428	0.90231	1	14410	1	-0.22924
AMT	492	0.21033	0.40966	1	5333	3	-0.20443	0.20281	0.39181	0.977377	6910	2	-0.20443
PRODH2	493	0.21147	0.41079	1	5343	3	-0.12982	0.24085	0.43236	0.997728	7469	3	-0.12982
MRPL50	494	0.21263	0.41198	1	5359	1	0.27338	0.17914	0.3636	0.956968	6544	2	0.27338
COX6C	495	0.21288	0.41224	1	5368	1	-0.69468	0.78712	0.85498	1	13578	0	-0.69468
TBRG4	496	0.21303	0.4124	1	5370	3	-0.10371	0.64705	0.76461	1	12187	2	-0.10371
C6orf57	497	0.21384	0.4132	1	5387	1	-0.32238	0.78616	0.85458	1	13570	0	-0.32238
KIAA0141	498	0.21502	0.4144	1	5397	3	-0.02761	0.25077	0.44278	1	7609	3	-0.02761
NDUFA8	499	0.21583	0.4152	1	5400	3	-0.20279	0.22337	0.41372	0.988571	7210	2	-0.20279
ECHS1	500	0.21638	0.41575	1	5407	3	-0.29467	0.9739	0.97383	1	15732	0	-0.29467
ME3	501	0.2181	0.4175	1	5419	3	-0.24527	0.71655	0.81003	1	12872	1	-0.24527
PKD2	502	0.22072	0.42021	1	5438	3	-0.13824	0.67625	0.78387	1	12477	2	-0.13824
CDC25C	503	0.22106	0.42056	1	5441	3	-0.07174	0.20921	0.39879	0.980048	7011	3	-0.07174
ISCA1	504	0.22987	0.42962	1	5519	2	-0.28302	0.39323	0.58447	1	9551	1	-0.28302
HIGD1A	505	0.23148	0.43128	1	5534	1	-0.23957	0.76852	0.84581	1	13455	0	-0.23957
KMO	506	0.23153	0.43134	1	5535	3	-0.17688	0.36905	0.5619	1	9229	2	-0.17688
TSTD1	507	0.2351	0.43499	1	5571	3	-0.09631	0.96713	0.96715	1	15584	0	-0.09631
SLC25A29	508	0.23642	0.43634	1	5584	3	-0.16234	0.82522	0.87161	1	13857	1	-0.16234
SLC25A34	509	0.23666	0.43659	1	5586	3	-0.08663	0.692	0.7938	1	12601	2	-0.08663
QTRT1	510	0.23676	0.43669	1	5589	3	-0.18025	0.42327	0.61203	1	9941	3	-0.18025
PRSS35	511	0.23754	0.43751	1	5596	3	-0.43581	0.36213	0.55554	1	9130	2	-0.43581
RAB11FIP5	512	0.23773	0.4377	1	5599	3	-0.1241	0.49845	0.671	1	10787	2	-0.1241
TYSND1	513	0.2405	0.4405	1	5630	3	-0.28705	0.84607	0.88166	1	14014	1	-0.28705
ECSIT	514	0.2408	0.4408	1	5638	3	0.002866	0.28996	0.48367	1	8153	3	0.002866
CYB5R3	515	0.24277	0.4428	1	5665	3	-0.15536	0.02126	0.070387	0.714768	1692	2	-0.15536
FABP1	516	0.24318	0.44321	1	5671	2	-0.24529	0.92047	0.92611	1	14825	0	-0.24529
NDUFA2	517	0.2435	0.44354	1	5677	2	-0.22508	0.87678	0.89798	1	14335	0	-0.22508
SURF1	518	0.24527	0.44536	1	5699	3	-0.34842	0.7262	0.81645	1	12969	1	-0.34842
SUOX	519	0.24747	0.44761	1	5722	3	-0.01644	0.1557	0.32746	0.938328	6013	3	-0.01644
FTSJ2	520	0.24761	0.44776	1	5724	3	-0.1542	0.60249	0.73568	1	11722	2	-0.1542
ATAD3B	521	0.24871	0.44884	1	5739	1	-0.70194	0.75129	0.8336	1	13238	0	-0.70194
PXMP2	522	0.24935	0.44948	1	5744	3	-0.22517	0.89162	0.90677	1	14479	1	-0.22517
AK3	523	0.25052	0.45065	1	5752	1	-0.33389	0.74948	0.83233	1	13213	0	-0.33389
COX11	524	0.25054	0.45067	1	5753	1	-0.63991	0.74946	0.83231	1	13211	0	-0.63991
C6orf136	525	0.25715	0.45742	1	5828	3	-0.13116	0.83477	0.87614	1	13931	1	-0.13116
SLC16A11	526	0.25757	0.45785	1	5832	3	-0.25536	0.66583	0.77718	1	12388	1	-0.25536
NCOA4	527	0.26037	0.46069	1	5862	1	0.006235	0.38534	0.57706	1	9439	1	0.006235
WDR81	528	0.26055	0.46087	1	5869	2	0.011698	0.33596	0.53029	1	8795	1	0.011698
PARL	529	0.26109	0.46142	1	5876	2	-0.2864	0.74938	0.83226	1	13210	1	-0.2864
ACCS	530	0.27035	0.47069	1	5968	3	-0.19404	0.65324	0.7687	1	12259	2	-0.19404
OCIAD1	531	0.27067	0.47101	1	5972	2	-0.13096	0.44033	0.62777	1	10185	2	-0.13096
NIF3L1	532	0.27113	0.47146	1	5978	3	-0.18218	0.37302	0.56559	1	9275	1	-0.18218
HOGA1	533	0.27166	0.472	1	5986	3	-0.10619	0.69186	0.79372	1	12600	2	-0.10619
NT5DC2	534	0.27255	0.47289	1	6001	3	-0.20657	0.42792	0.61628	1	10007	3	-0.20657
METTL17	535	0.27273	0.47307	1	6003	3	0.029427	0.32116	0.51578	1	8602	3	0.029427
CHCHD7	536	0.27626	0.47661	1	6040	2	0.00706	0.085353	0.21002	0.870016	4155	2	0.00706
TXNDC12	537	0.27645	0.47681	1	6042	3	-0.10705	0.87607	0.89757	1	14324	1	-0.10705

ATP5H	538	0.27711	0.47745	1	6054	1	-0.36228	0.72289	0.81425	1	12939	0	-0.36228
BCL2L2	539	0.27754	0.4779	1	6057	1	-0.32983	0.72246	0.81397	1	12936	0	-0.32983
ETHE1	540	0.27846	0.47881	1	6068	3	-0.16123	0.11991	0.26942	0.908567	5110	3	-0.16123
MTRFR1L	541	0.27905	0.4794	1	6075	3	-0.07927	0.34691	0.54091	1	8922	2	-0.07927
BCL2L1	542	0.28201	0.48241	1	6110	3	-0.09857	0.14394	0.30859	0.929246	5724	2	-0.09857
COX4I2	543	0.28205	0.48245	1	6111	2	0.095487	0.23607	0.42729	0.994626	7405	3	0.095487
CEP89	544	0.28212	0.48253	1	6113	3	-0.14959	0.98446	0.98441	1	16002	0	-0.14959
FASTKD2	545	0.28969	0.49005	1	6198	2	-0.17817	0.67248	0.78149	1	12447	1	-0.17817
PUSL1	546	0.28982	0.49016	1	6199	3	-0.14319	0.27845	0.47171	1	8011	2	-0.14319
QDPR	547	0.29179	0.49208	1	6223	3	-0.03251	0.14645	0.31266	0.93095	5789	3	-0.03251
NAGS	548	0.29514	0.49536	1	6249	2	0.21433	0.01811	0.061343	0.708096	1493	3	0.21433
GDAP1	549	0.29693	0.49711	1	6272	2	0.004879	0.10216	0.23957	0.890101	4639	2	0.004879
FHIT	550	0.29885	0.49899	1	6303	1	-0.39592	0.58322	0.72345	1	11549	1	-0.39592
LYRM7	551	0.29901	0.49916	1	6306	1	-0.48923	0.70099	0.79969	1	12692	0	-0.48923
ATP5S	552	0.29934	0.4995	1	6312	3	-0.16061	0.81134	0.86547	1	13754	1	-0.16061
ARF5	553	0.30338	0.50345	1	6351	1	0.319	0.18538	0.37287	0.960579	6691	2	0.319
LONP2	554	0.30355	0.50362	1	6353	3	0.04455	0.12616	0.27966	0.914366	5272	3	0.04455
UCP1	555	0.3037	0.50376	1	6354	2	0.35855	0.078287	0.19706	0.858331	3957	4	0.35855
HMGCL	556	0.30395	0.50402	1	6358	3	-0.08556	0.13916	0.30092	0.924788	5607	1	-0.08556
ABC89	557	0.30485	0.5049	1	6369	2	-0.04148	0.27232	0.46537	1	7927	3	-0.04148
VWA8	558	0.30676	0.5068	1	6387	2	0.062031	0.72026	0.81251	1	12915	1	0.062031
NIT1	559	0.30824	0.50825	1	6400	3	0.027928	0.10949	0.25198	0.900572	4823	3	0.027928
NDUFAF1	560	0.31079	0.51076	1	6425	1	-0.40958	0.68921	0.79206	1	12569	0	-0.40958
TIMMDC1	561	0.31134	0.51127	1	6435	3	-0.20568	0.6455	0.76359	1	12173	2	-0.20568
ACAD10	562	0.31153	0.51146	1	6437	2	0.09238	0.32206	0.51669	1	8615	2	0.09238
CRY1	563	0.31271	0.51262	1	6448	3	-0.05025	0.28737	0.48093	1	8116	3	-0.05025
XRCC6BP1	564	0.31775	0.51771	1	6507	2	-0.07931	0.43681	0.62454	1	10141	2	-0.07931
ATP5L	565	0.31951	0.51942	1	6528	1	0.11763	0.36773	0.56071	1	9217	1	0.11763
HAGH	566	0.31972	0.51962	1	6530	2	0.065403	0.057925	0.15811	0.81881	3328	3	0.065403
HADH	567	0.31989	0.51978	1	6534	3	-0.01072	0.21828	0.40836	0.98654	7134	3	-0.01072
C15orf61	568	0.32031	0.52023	1	6542	3	-0.24111	0.20305	0.39208	0.977591	6913	1	-0.24111
LETMD1	569	0.32045	0.52037	1	6544	1	0.055659	0.38991	0.58135	1	9503	3	0.055659
DNAJC30	570	0.32117	0.52106	1	6551	2	-0.11243	0.86388	0.8908	1	14203	1	-0.11243
ALDH2	571	0.32212	0.52198	1	6557	3	0.02609	0.044936	0.1322	0.785853	2898	3	0.02609
AGMAT	572	0.32937	0.52927	1	6656	3	-0.02216	0.34922	0.5432	1	8954	3	-0.02216
TMEM186	573	0.33141	0.53125	1	6682	3	-0.10955	0.55296	0.70471	1	11273	2	-0.10955
CLPX	574	0.33176	0.53162	1	6685	3	0.013172	0.29075	0.48448	1	8167	3	0.013172
MGST1	575	0.33414	0.53404	1	6718	1	-0.20705	0.73416	0.8218	1	13056	0	-0.20705
ACSM2A	576	0.33473	0.53462	1	6728	1	-0.10248	0.41811	0.60732	1	9870	1	-0.10248
AGR2	577	0.33489	0.53478	1	6732	2	-0.29134	0.36796	0.56091	1	9219	1	-0.29134
MPC2	578	0.33521	0.53508	1	6736	1	0.37928	0.000575	0.002631	0.33096	137	2	0.37928
MUTYH	579	0.33572	0.53559	1	6743	3	-0.47237	0.88	0.89981	1	14370	1	-0.47237
C6orf203	580	0.33724	0.53712	1	6758	1	-0.21797	0.66276	0.7751	1	12354	0	-0.21797
SIRT3	581	0.33806	0.53791	1	6767	2	0.097069	0.7106	0.80601	1	12805	2	0.097069
ALDH1L1	582	0.33871	0.53857	1	6777	2	-0.02134	0.94755	0.94802	1	15201	1	-0.02134
ADCK4	583	0.33906	0.5389	1	6784	2	0.27289	0.16979	0.3493	0.950272	6336	4	0.27289
TCAIM	584	0.34233	0.54206	1	6835	3	0.11354	0.13794	0.29891	0.923062	5581	3	0.11354
GATC	585	0.34481	0.54443	1	6874	2	-0.10365	0.0254	0.082039	0.729301	1939	1	-0.10365
ECHDC1	586	0.34651	0.54607	1	6900	3	-0.09556	0.065429	0.1729	0.835669	3561	2	-0.09556
GPD2	587	0.3496	0.54906	1	6943	2	-0.15576	0.34489	0.53894	1	8900	2	-0.15576
NDUF56	588	0.34985	0.5493	1	6946	3	-0.20942	0.81095	0.8653	1	13750	1	-0.20942
COX16	589	0.35135	0.55076	1	6965	1	-0.11227	0.64865	0.76564	1	12203	0	-0.11227
OSBPL1A	590	0.35264	0.55205	1	6985	3	-0.22287	0.83246	0.87501	1	13915	1	-0.22287
ENDOG	591	0.35308	0.55248	1	6996	2	0.042506	0.22155	0.41183	0.987807	7185	2	0.042506
TMEM65	592	0.35468	0.55403	1	7026	1	-0.03593	0.17027	0.35004	0.950435	6346	1	-0.03593
NUDT9	593	0.35478	0.55413	1	7027	3	-0.15265	0.44185	0.62915	1	10209	2	-0.15265
NDUFA9	594	0.35512	0.55446	1	7032	2	0.00084	0.61502	0.74364	1	11854	2	0.00084
COA1	595	0.35819	0.5573	1	7079	3	-0.13084	0.65763	0.77164	1	12304	2	-0.13084
PROSC	596	0.3588	0.55786	1	7083	2	0.22881	0.17839	0.36245	0.956968	6523	4	0.22881
PTRH2	597	0.35933	0.55835	1	7089	1	0.012549	0.74568	0.82967	1	13171	1	0.012549
MCUR1	598	0.36125	0.56014	1	7117	1	0.051565	0.009287	0.034617	0.635451	939	2	0.051565
DNAJC4	599	0.36263	0.56143	1	7140	2	0.1506	0.096879	0.23053	0.882239	4500	3	0.1506
NUBPL	600	0.36472	0.56338	1	7170	2	-0.08318	0.9581	0.95808	1	15395	0	-0.08318
HSPB7	601	0.36539	0.56399	1	7184	3	-0.03788	0.4482	0.63502	1	10287	3	-0.03788
MSRB3	602	0.36639	0.56491	1	7196	3	-0.0287	0.35638	0.5501	1	9055	3	-0.0287
ADCK3	603	0.3697	0.56798	1	7251	2	0.3203	0.095505	0.22812	0.880088	4465	4	0.3203
LDHD	604	0.37078	0.56898	1	7261	3	-0.11203	0.71401	0.80829	1	12849	2	-0.11203
C15orf48	605	0.37161	0.56972	1	7272	1	-0.04878	0.31064	0.50495	1	8442	1	-0.04878
ACADL	606	0.37407	0.57205	1	7312	2	-0.002	0.63	0.75339	1	12008	2	-0.002
GLS2	607	0.37413	0.57209	1	7314	3	-0.14217	0.96696	0.96698	1	15577	0	-0.14217
COA6	608	0.3773	0.57498	1	7360	2	-0.13743	0.30765	0.50183	1	8392	1	-0.13743
MFF	609	0.38298	0.58022	1	7433	1	-0.24818	0.70572	0.80283	1	12747	0	-0.24818
SQRDL	610	0.38372	0.5809	1	7445	3	-0.03705	0.14817	0.31541	0.933302	5822	2	-0.03705
ABC810	611	0.38385	0.58101	1	7447	2	-0.17422	0.26238	0.45491	1	7786	1	-0.17422
SHMT1	612	0.38489	0.58194	1	7463	3	-0.08948	0.2815	0.47488	1	8047	2	-0.08948
C14orf2	613	0.3866	0.58347	1	7489	1	-0.57076	0.62061	0.74728	1	11911	1	-0.57076
C16orf91	614	0.38987	0.58636	1	7540	3	-0.2238	0.29054	0.48428	1	8161	2	-0.2238
ACOX1	615	0.38991	0.58639	1	7541	1	0.20377	0.37705	0.56933	1	9333	3	0.20377
STAR	616	0.39169	0.58798	1	7567	3	-0.01952	0.063581	0.16932	0.832953	3503	3	-0.01952
MLH1	617	0.39217	0.5884	1	7575	2	0.23417	0.15193	0.32145	0.934868	5926	3	0.23417
NDUFAF5	618	0.39228	0.58851	1	7577	3	-0.1309	0.7332	0.82115	1	13049	1	-0.1309
DHCR24	619	0.39468	0.59064	1	7606	2	0.074372	0.26321	0.45574	1	7794	3	0.074372
CKMT2	620	0.39531	0.59121	1	7613	3	0.089685	0.079258	0.19888	0.860188	3984	3	0.089685
RMDN1	621	0.39543	0.5913	1	7615	3	-0.10766	0.97498	0.97493	1	15755	0	-0.10766
VDAC2	622	0.3959	0.59172	1	7618	1	-0.14215	0.6041	0.73674	1	11742	0	-0.14215
CCDC51	623	0.39644	0.59218	1	7626	3	-0.19848	0.70616	0.80311	1	12750	2	-0.19848
PCBD2	624	0.39647	0.5922	1	7627	1	-0.22409	0.60353	0.73637	1	11735	0	-0.22409
C20orf24	625	0.40028	0.59561	1	7675	3	0.000184	0.1651	0.34221	0.946219	6234	3	0.000184
NFU1	626	0.40302	0.59807	1	7703	1	-0.22672	0.59698	0.73209	1	11677	0	-0.22672
FAHD1	627	0.40385	0.59879	1	7713	2	0.10134	0.1209					

HK2	628	0.40457	0.59941	1	7722	2	-0.16458	0.84412	0.88072	1	14000	1	-0.16458
SLC25A30	629	0.41024	0.6045	1	7795	3	-0.08855	0.33522	0.52956	1	8783	2	-0.08855
COQ10A	630	0.41076	0.60496	1	7804	3	-0.06991	0.52831	0.68969	1	11053	2	-0.06991
PRDX3	631	0.41462	0.60833	1	7855	1	-0.11425	0.58538	0.7248	1	11566	0	-0.11425
MTHFS	632	0.41692	0.61037	1	7888	2	0.12588	0.43109	0.61916	1	10052	3	0.12588
MOCS1	633	0.41772	0.61106	1	7900	2	0.007111	0.45442	0.64067	1	10370	2	0.007111
SLC25A27	634	0.41886	0.61202	1	7912	3	0.018869	0.3527	0.54658	1	9000	3	0.018869
MLYCD	635	0.42261	0.61533	1	7962	3	-0.09488	0.89288	0.90752	1	14487	1	-0.09488
MCCC2	636	0.42528	0.61769	1	7993	3	-0.00339	0.31719	0.51172	1	8535	2	-0.00339
FIS1	637	0.42572	0.6181	1	8002	3	-0.11604	0.30157	0.49559	1	8299	3	-0.11604
FTMT	638	0.4258	0.61817	1	8003	1	0.39452	0.049485	0.14146	0.797621	3057	3	0.39452
MTHFD2L	639	0.43696	0.62808	1	8156	3	0.003681	0.31744	0.51197	1	8539	2	0.003681
DDAH1	640	0.43828	0.62925	1	8175	3	0.008316	0.64595	0.76389	1	12179	2	0.008316
PDK4	641	0.43876	0.62965	1	8183	3	-0.14213	0.70539	0.80259	1	12742	1	-0.14213
SLC25A11	642	0.43996	0.6307	1	8196	3	-0.0509	0.38111	0.57307	1	9381	2	-0.0509
MTFP1	643	0.44109	0.6317	1	8210	3	-0.10575	0.31983	0.51441	1	8578	1	-0.10575
PITRM1	644	0.44148	0.63206	1	8219	3	-0.0428	0.42391	0.61261	1	9952	3	-0.0428
ECHDC2	645	0.44625	0.63628	1	8284	2	0.50198	0.011754	0.04238	0.643708	1131	4	0.50198
PDP1	646	0.44824	0.63802	1	8306	2	0.11807	0.29695	0.49085	1	8232	3	0.11807
FUNDC2	647	0.44916	0.63885	1	8315	0	-0.09531	0.55084	0.70336	1	11253	0	-0.09531
SLC25A47	648	0.45061	0.64013	1	8334	3	-0.0929	0.89663	0.90983	1	14526	1	-0.0929
FAM213A	649	0.45081	0.64032	1	8339	1	0.3342	0.13732	0.2979	0.923027	5561	2	0.3342
SFXN5	650	0.45157	0.64098	1	8346	2	0.16675	0.022938	0.075214	0.716709	1808	3	0.16675
TOMM70A	651	0.45192	0.64127	1	8353	3	-0.18569	0.92797	0.93168	1	14923	1	-0.18569
PDF	652	0.45201	0.64135	1	8355	3	-0.0689	0.93306	0.93564	1	14986	1	-0.0689
APOPT1	653	0.45298	0.64222	1	8374	1	0.1326	0.51365	0.68047	1	10918	2	0.1326
RMND1	654	0.45492	0.64396	1	8409	2	-0.05846	0.30526	0.49939	1	8357	2	-0.05846
FASTK	655	0.45558	0.64455	1	8416	2	0.096232	0.21124	0.40088	0.980423	7048	3	0.096232
UNG	656	0.4592	0.64772	1	8472	2	-0.05283	0.79074	0.85649	1	13602	1	-0.05283
PDK1	657	0.46477	0.65251	1	8563	3	-0.05399	0.91897	0.925	1	14803	1	-0.05399
DUSP26	658	0.46527	0.65294	1	8570	3	-0.1154	0.064894	0.17185	0.834454	3549	2	-0.1154
ABCA13	659	0.46609	0.65369	1	8580	1	0.21712	0.13481	0.29384	0.922067	5492	4	0.21712
MTCH1	660	0.46636	0.65394	1	8583	1	0.15609	0.037921	0.11534	0.765652	2593	3	0.15609
KRT5	661	0.46716	0.65465	1	8594	3	-0.05403	0.55614	0.70665	1	11309	2	-0.05403
MPV17	662	0.46719	0.65468	1	8597	2	-0.0709	0.94568	0.94631	1	15159	1	-0.0709
UQCRR	663	0.46719	0.65467	1	8596	0	-0.06417	0.53281	0.69259	1	11093	0	-0.06417
NLN	664	0.46788	0.65532	1	8613	1	0.030362	0.37522	0.56765	1	9303	1	0.030362
FOXRED1	665	0.47011	0.65722	1	8645	3	-0.00035	0.5927	0.72942	1	11635	2	-0.00035
RTN4IP1	666	0.47151	0.65842	1	8660	1	-0.24258	0.78193	0.85285	1	13544	0	-0.24258
AGXT2	667	0.47164	0.65855	1	8664	1	0.16312	0.16262	0.33841	0.943942	6171	3	0.16312
COA4	668	0.47491	0.66139	1	8719	2	-0.05245	0.42398	0.61268	1	9956	2	-0.05245
GSTO1	669	0.47538	0.6618	1	8731	1	0.12456	0.24671	0.43854	0.999481	7563	1	0.12456
PICK1	670	0.47873	0.66462	1	8784	3	0.018732	0.38594	0.57763	1	9449	3	0.018732
OXR1	671	0.48137	0.66688	1	8829	1	0.1309	0.14755	0.31442	0.933292	5807	4	0.1309
TK2	672	0.48145	0.66695	1	8830	3	0.003548	0.014959	0.052122	0.676911	1326	3	0.003548
UCP3	673	0.4826	0.66797	1	8851	2	0.043807	0.17653	0.35963	0.956173	6483	2	0.043807
SFXN4	674	0.48364	0.66893	1	8862	2	0.005671	0.19005	0.37799	0.964379	6755	2	0.005671
AIFM2	675	0.4853	0.67034	1	8885	2	0.14007	0.13181	0.28892	0.919633	5415	3	0.14007
MPV17L	676	0.48635	0.67123	1	8907	1	0.063445	0.21925	0.40939	0.986631	7148	1	0.063445
HTATIP2	677	0.48967	0.67414	1	8960	3	-0.10557	0.046299	0.13505	0.787259	2957	2	-0.10557
CCEP3	678	0.49323	0.67717	1	9005	1	0.23698	0.11708	0.26475	0.906263	5034	3	0.23698
CPT1B	679	0.4936	0.6775	1	9011	2	0.13015	0.25489	0.44714	1	7680	3	0.13015
SLC25A36	680	0.4943	0.67811	1	9028	1	-0.06176	0.35414	0.5479	1	9017	1	-0.06176
SSBP1	681	0.49544	0.67914	1	9048	0	-0.01548	0.50456	0.67484	1	10850	0	-0.01548
SLC16A1	682	0.49636	0.67991	1	9060	2	0.25875	0.099334	0.23485	0.885234	4573	3	0.25875
BCKDHA	683	0.49667	0.6802	1	9064	3	-0.14072	0.97554	0.97548	1	15768	0	-0.14072
AGK	684	0.50597	0.68646	1	9159	1	-0.11464	0.66562	0.77703	1	12385	0	-0.11464
GRSF1	685	0.50637	0.6867	1	9165	2	-0.08787	0.13713	0.29759	0.923027	5555	2	-0.08787
PPM1K	686	0.50831	0.68786	1	9191	2	0.25692	0.15861	0.33201	0.94098	6078	4	0.25692
NTHL1	687	0.51195	0.69006	1	9222	2	0.080006	0.30676	0.50092	1	8379	3	0.080006
GUF1	688	0.51285	0.6906	1	9236	1	-0.03103	0.31559	0.51011	1	8514	1	-0.03103
CCBL2	689	0.51913	0.69428	1	9292	2	0.23693	0.002079	0.009175	0.475976	332	2	0.23693
SCCPDH	690	0.52077	0.69526	1	9302	2	0.049585	0.10318	0.24135	0.89119	4668	2	0.049585
DHX30	691	0.52254	0.69635	1	9318	2	0.2834	0.084374	0.2082	0.869346	4128	4	0.2834
OGG1	692	0.52418	0.69735	1	9331	2	0.15077	0.093188	0.2241	0.87712	4404	3	0.15077
DLAT	693	0.52431	0.69743	1	9333	2	0.11613	0.3216	0.51623	1	8608	3	0.11613
CHCHD4	694	0.52559	0.69816	1	9352	0	0.022723	0.47441	0.65615	1	10583	0	0.022723
DHRS4	695	0.5274	0.69925	1	9373	1	-0.12275	0.77804	0.85125	1	13522	0	-0.12275
MCCC1	696	0.5289	0.70011	1	9392	1	0.28866	0.011247	0.040868	0.642414	1090	5	0.28866
CHCHD10	697	0.52904	0.70019	1	9395	1	-0.02148	0.71287	0.80752	1	12838	1	-0.02148
PCK2	698	0.53359	0.70303	1	9449	2	0.025926	0.46221	0.6479	1	10455	3	0.025926
ALDH7A1	699	0.53626	0.70463	1	9478	2	-0.05138	0.73377	0.82154	1	13053	1	-0.05138
IMMP2L	700	0.53685	0.70497	1	9483	2	-0.02326	0.22703	0.41759	0.989547	7274	2	-0.02326
FKBP8	701	0.53888	0.70621	1	9496	2	0.010869	0.38689	0.57848	1	9462	3	0.010869
PRDX4	702	0.53954	0.70658	1	9502	2	0.020566	0.06421	0.17051	0.834094	3521	3	0.020566
NUDT19	703	0.53998	0.70684	1	9505	2	-0.07997	0.60784	0.73909	1	11773	1	-0.07997
TOMM34	704	0.54183	0.708	1	9526	2	0.21746	0.09952	0.23517	0.886052	4575	4	0.21746
CHCHD2	705	0.54201	0.70811	1	9528	2	-0.06828	0.75893	0.83902	1	13332	1	-0.06828
SLC25A44	706	0.5435	0.70896	1	9541	2	-0.08414	0.31419	0.50869	1	8495	2	-0.08414
PC	707	0.54558	0.71023	1	9558	2	0.1108	0.11683	0.26433	0.906263	5026	3	0.1108
TXNRD1	708	0.54566	0.71027	1	9559	2	0.059158	0.34871	0.54269	1	8947	3	0.059158
SLIRP	709	0.54587	0.71039	1	9561	2	0.15	0.44769	0.63456	1	10278	2	0.15
ALDH1L2	710	0.54679	0.71094	1	9573	1	0.28991	0.056049	0.15447	0.814962	3265	4	0.28991
MRPL3	711	0.54882	0.71211	1	9590	1	-0.1272	0.60273	0.73583	1	11726	1	-0.1272
FUNDC1	712	0.54956	0.71255	1	9595	0	0.049232	0.45044	0.6371	1	10314	0	0.049232
CHDH	713	0.55216	0.71415	1	9617	2	0.45225	0.019949	0.0667	0.714768	1605	4	0.45225
SLC25A18	714	0.55298	0.71463	1	9628	2	0.16349	0.19951	0.38826	0.974147	6870	3	0.16349
TMEM11	715	0.55388	0.71521	1	9642	1	0.04968	0.49112	0.6664	1	10722	1	0.04968
ABCA9	716	0.55546	0.71616	1	9663	2	0.31999	0.01889	0.063628	0.708618	1547	4	0.31999
AKR7A2	717	0.55665	0.										

ATPIF1	718	0.55756	0.71741	1	9691	1	0.20508	0.13434	0.29308	0.921362	5482	2	0.20508
TCIRG1	719	0.55799	0.71767	1	9694	1	0.22081	0.059663	0.1616	0.821505	3390	4	0.22081
HIBCH	720	0.55899	0.71827	1	9705	2	0.25709	0.28336	0.47683	1	8073	3	0.25709
CPT1A	721	0.55961	0.71862	1	9710	1	0.29561	0.08028	0.20075	0.862279	4010	4	0.29561
CASP8	722	0.5603	0.71901	1	9715	2	0.057669	0.37232	0.56492	1	9266	3	0.057669
GLUD1	723	0.56153	0.71974	1	9729	2	0.04639	0.47454	0.65623	1	10587	2	0.04639
MFN1	724	0.56176	0.71986	1	9733	0	0.074362	0.43824	0.62584	1	10160	0	0.074362
CHCHD1	725	0.56718	0.72301	1	9788	1	0.19874	0.28468	0.47816	1	8087	3	0.19874
PCCB	726	0.571	0.7252	1	9841	2	0.12048	0.36106	0.55455	1	9120	3	0.12048
COQ9	727	0.5723	0.72595	1	9853	2	0.41911	0.075897	0.19273	0.855433	3882	4	0.41911
IVD	728	0.57385	0.72689	1	9873	2	-0.06325	0.74419	0.82866	1	13153	2	-0.06325
MUT	729	0.57393	0.72693	1	9875	2	0.046822	0.58147	0.72235	1	11535	1	0.046822
TMBIM4	730	0.57478	0.72744	1	9884	2	0.22317	0.071848	0.1852	0.848847	3759	4	0.22317
TACO1	731	0.57568	0.72794	1	9891	1	0.11554	0.27356	0.46663	1	7945	3	0.11554
ALKBH1	732	0.57604	0.72815	1	9899	2	0.086805	0.37971	0.57178	1	9364	3	0.086805
DHTKD1	733	0.57898	0.72982	1	9938	2	0.28882	0.048141	0.13879	0.79349	3015	4	0.28882
ECI2	734	0.57913	0.72991	1	9943	2	0.062164	0.4474	0.63429	1	10274	2	0.062164
CYP24A1	735	0.58214	0.73163	1	9967	2	0.13611	0.1269	0.28092	0.914681	5290	3	0.13611
NDUFB1	736	0.58229	0.73171	1	9968	1	-0.07614	0.67694	0.78429	1	12483	0	-0.07614
HAO2	737	0.58319	0.73222	1	9977	2	0.028875	0.4819	0.66074	1	10642	2	0.028875
NUCB2	738	0.59458	0.73887	1	10103	2	0.22726	0.016481	0.056588	0.69129	1411	3	0.22726
CYP11A1	739	0.59826	0.74102	1	10142	1	-0.02103	0.65423	0.76937	1	12270	2	-0.02103
PDE12	740	0.59968	0.74184	1	10161	1	-0.04023	0.70758	0.80403	1	12774	1	-0.04023
NT5DC3	741	0.6	0.74203	1	10164	2	0.093865	0.041352	0.12416	0.776811	2755	3	0.093865
MSRA	742	0.60004	0.74205	1	10165	2	0.039391	0.25861	0.451	1	7730	2	0.039391
NDUFAF4	743	0.60014	0.74211	1	10167	0	0.13543	0.39986	0.59055	1	9632	1	0.13543
SLC25A28	744	0.6012	0.74277	1	10181	1	0.42892	0.027137	0.086868	0.735632	2034	4	0.42892
ACAT1	745	0.60123	0.74279	1	10183	1	0.24336	0.019243	0.064629	0.711171	1565	5	0.24336
COX7A1	746	0.60298	0.74385	1	10202	1	0.14755	0.35653	0.55025	1	9057	2	0.14755
ABCD1	747	0.60473	0.7449	1	10226	2	0.026847	0.46244	0.64812	1	10459	3	0.026847
DBI	748	0.60569	0.74546	1	10243	2	0.12919	0.39354	0.58472	1	9555	3	0.12919
SLC25A35	749	0.60582	0.74555	1	10245	2	0.20495	0.036211	0.11084	0.761601	2505	4	0.20495
SNAP29	750	0.60624	0.74581	1	10254	2	0.21519	0.017124	0.058494	0.700175	1440	4	0.21519
SLMO1	751	0.60695	0.74625	1	10263	2	-0.12278	0.73451	0.82205	1	13059	1	-0.12278
PPTC7	752	0.6086	0.74723	1	10286	2	0.123	0.063511	0.16918	0.832953	3499	3	0.123
GPT2	753	0.61134	0.74884	1	10324	2	0.067405	0.60261	0.73576	1	11725	2	0.067405
PARK7	754	0.61149	0.74893	1	10328	1	0.043801	0.67387	0.78238	1	12461	1	0.043801
LAP3	755	0.61335	0.75005	1	10345	1	0.056719	0.70336	0.80123	1	12715	1	0.056719
TOMM7	756	0.61373	0.75028	1	10349	0	0.093034	0.38627	0.57791	1	9455	1	0.093034
TMEM177	757	0.61488	0.75098	1	10368	1	0.12621	0.13917	0.30092	0.924788	5608	2	0.12621
NUDT8	758	0.61491	0.751	1	10369	2	-0.06291	0.38682	0.57842	1	9460	2	-0.06291
DBT	759	0.61732	0.75243	1	10397	1	0.35278	0.014076	0.049458	0.668719	1273	2	0.35278
ALKBH3	760	0.62313	0.75604	1	10455	1	0.46923	0.008479	0.032048	0.628294	878	5	0.46923
ABCD3	761	0.62552	0.75748	1	10487	2	0.018592	0.10317	0.24132	0.89119	4667	3	0.018592
NT5C	762	0.62566	0.75755	1	10491	2	0.25823	0.10498	0.24435	0.894033	4711	4	0.25823
NSUN3	763	0.62584	0.75765	1	10492	2	0.15347	0.1327	0.29039	0.920505	5437	4	0.15347
GATM	764	0.62662	0.7581	1	10512	2	0.11832	0.26147	0.45395	1	7775	3	0.11832
SLC30A6	765	0.62757	0.7587	1	10528	1	0.17126	0.060922	0.16414	0.824873	3427	4	0.17126
TRMT61B	766	0.62811	0.75904	1	10533	2	-0.01983	0.97198	0.9719	1	15691	0	-0.01983
C14orf159	767	0.63038	0.76039	1	10563	2	0.22085	0.049946	0.14238	0.798702	3072	4	0.22085
ALDH3A2	768	0.63061	0.76054	1	10567	1	0.19702	0.17726	0.36071	0.956837	6498	4	0.19702
CCDC90B	769	0.63371	0.76246	1	10610	2	0.16909	0.17418	0.35601	0.954211	6431	4	0.16909
THEM4	770	0.63463	0.76303	1	10617	0	0.21482	0.36537	0.55853	1	9180	1	0.21482
GPAM	771	0.63856	0.76539	1	10669	1	0.38289	0.031119	0.097512	0.752092	2232	4	0.38289
DHRS1	772	0.64053	0.7666	1	10700	1	0.2843	0.023175	0.075888	0.717146	1824	5	0.2843
CYB5A	773	0.64268	0.76797	1	10731	1	0.11629	0.1862	0.37373	0.961072	6703	1	0.11629
NMNAT3	774	0.64457	0.76917	1	10753	1	0.37184	0.039566	0.11955	0.771815	2668	4	0.37184
IDH2	775	0.64459	0.76919	1	10754	2	0.085544	0.025658	0.082724	0.730116	1953	2	0.085544
PTCD2	776	0.64645	0.77035	1	10776	2	-0.01383	0.37037	0.56311	1	9243	2	-0.01383
NDUFB2	777	0.64682	0.77057	1	10778	2	-0.13675	0.56081	0.70951	1	11347	1	-0.13675
ATP5G2	778	0.64947	0.77217	1	10817	1	0.010798	0.62131	0.74775	1	11919	1	0.010798
ETFB	779	0.65126	0.77331	1	10831	1	0.152	0.13777	0.29865	0.923027	5574	3	0.152
UQCRC1	780	0.65407	0.77507	1	10867	1	0.054719	0.36437	0.55761	1	9168	2	0.054719
MTRF1L	781	0.65416	0.77513	1	10869	0	0.20101	0.34584	0.53987	1	8916	1	0.20101
CPT2	782	0.65496	0.77564	1	10877	2	0.079698	0.62537	0.75041	1	11953	2	0.079698
ETFDH	783	0.65504	0.77569	1	10878	2	0.3601	0.031231	0.097807	0.752092	2235	4	0.3601
ACSL1	784	0.65541	0.77593	1	10886	2	-0.07188	0.71759	0.8107	1	12886	2	-0.07188
ALAS2	785	0.65569	0.7761	1	10887	2	0.33543	0.011866	0.042728	0.644034	1141	4	0.33543
STOM	786	0.65714	0.77703	1	10915	1	0.029794	0.60254	0.73571	1	11723	1	0.029794
COQ10B	787	0.65736	0.77719	1	10918	1	0.026207	0.79624	0.85886	1	13637	0	0.026207
AKAP10	788	0.65854	0.77789	1	10934	1	0.27234	0.011622	0.041982	0.643708	1120	3	0.27234
CROT	789	0.65874	0.77801	1	10937	2	0.1641	0.14299	0.30705	0.928544	5700	3	0.1641
HTRA2	790	0.66081	0.77931	1	10962	2	0.046582	0.45583	0.64194	1	10389	3	0.046582
RDH13	791	0.6631	0.78074	1	10993	2	-0.01284	0.34511	0.53915	1	8904	2	-0.01284
CYP11B2	792	0.66313	0.78076	1	10994	2	0.16055	0.23191	0.42282	0.99305	7336	3	0.16055
TST	793	0.66474	0.78182	1	11014	2	-0.15399	0.98269	0.98263	1	15956	0	-0.15399
REXO2	794	0.66493	0.78194	1	11018	1	0.050095	0.82426	0.87116	1	13852	0	0.050095
CLYBL	795	0.66514	0.78208	1	11023	1	0.14173	0.20599	0.39533	0.978272	6964	3	0.14173
NDUFA12	796	0.66522	0.78213	1	11024	1	0.21514	0.082979	0.20567	0.867485	4086	2	0.21514
NDUFA5	797	0.66719	0.78335	1	11047	0	0.009073	0.6221	0.74827	1	11925	1	0.009073
SLC25A16	798	0.66853	0.7842	1	11062	2	0.047737	0.42207	0.61092	1	9926	2	0.047737
BID	799	0.66987	0.78508	1	11078	2	-0.04812	0.92909	0.93252	1	14938	1	-0.04812
LYRM1	800	0.67202	0.78639	1	11110	2	-0.11604	0.16399	0.34051	0.944622	6213	2	-0.11604
SLC16A7	801	0.67723	0.78973	1	11183	1	0.13431	0.36686	0.5599	1	9205	3	0.13431
FTH1	802	0.67888	0.79081	1	11205	1	0.068152	0.69968	0.79886	1	12685	1	0.068152
MRS2	803	0.67957	0.79125	1	11215	2	0.33355	0.03617	0.11073	0.761601	2502	4	0.33355
METTL8	804	0.67961	0.79127	1	11216	0	0.20005	0.41037	0.60019	1	9769	1	0.20005
BNIP3	805	0.68032	0.79172	1	11227	0	0.3349	0.31968	0.51424	1	8573	1	0.3349
HSD17B8	806	0.68095											

MTX1	808	0.68254	0.79309	1	11255	1	0.22423	0.30785	0.50204	1	8395	2	0.22423
HSD17B4	809	0.68333	0.79361	1	11270	2	0.092743	0.1843	0.3714	0.959931	6668	4	0.092743
STOML1	810	0.68453	0.79437	1	11293	2	0.19808	0.10869	0.25065	0.899351	4804	4	0.19808
NDUFV3	811	0.68486	0.79457	1	11300	2	-0.05876	0.64543	0.76354	1	12172	2	-0.05876
ACOT2	812	0.6849	0.7946	1	11302	0	-0.12025	0.79268	0.85734	1	13613	0	-0.12025
APOOL	813	0.68544	0.79494	1	11311	0	0.030403	0.55265	0.70451	1	11270	1	0.030403
HDHD3	814	0.68659	0.79566	1	11327	2	0.10651	0.002724	0.011756	0.489886	411	3	0.10651
ALDH9A1	815	0.68752	0.79625	1	11339	2	-0.05515	0.31063	0.50493	1	8441	1	-0.05515
MTERFD3	816	0.68895	0.79721	1	11365	0	0.22326	0.31105	0.50537	1	8449	1	0.22326
CHCHD6	817	0.69047	0.79817	1	11386	2	0.35487	0.026584	0.085345	0.734235	2001	4	0.35487
ALDH5A1	818	0.69049	0.79818	1	11387	1	0.042493	0.43339	0.62131	1	10082	2	0.042493
NBR1	819	0.692	0.79915	1	11415	1	0.26203	0.002658	0.01149	0.489886	401	4	0.26203
DNAJC28	820	0.69299	0.79981	1	11429	0	0.21756	0.30701	0.50116	1	8381	1	0.21756
PYCR1	821	0.69701	0.80247	1	11484	2	-0.03847	0.85094	0.8841	1	14053	1	-0.03847
NUDT13	822	0.69946	0.80403	1	11525	2	0.25959	0.048954	0.14041	0.796893	3037	4	0.25959
GSR	823	0.70187	0.80547	1	11564	2	0.11235	0.70254	0.8007	1	12708	2	0.11235
MCU	824	0.70232	0.80575	1	11573	1	0.34175	0.009518	0.03536	0.635573	953	5	0.34175
CMPK2	825	0.70239	0.80579	1	11574	2	0.066639	0.14581	0.31164	0.93075	5770	3	0.066639
SLC25A14	826	0.7051	0.80748	1	11613	2	0.25448	0.13684	0.29713	0.922803	5550	4	0.25448
HINT3	827	0.70522	0.80756	1	11616	2	-0.15399	0.11914	0.26817	0.907257	5094	1	-0.15399
MDH1	828	0.70703	0.80866	1	11635	1	0.13842	0.34413	0.53821	1	8888	2	0.13842
ACOT7	829	0.70747	0.80892	1	11641	1	0.006673	0.48407	0.66209	1	10664	2	0.006673
TOMM5	830	0.70816	0.80934	1	11647	1	-0.0786	0.5184	0.68347	1	10966	1	-0.0786
ISOC2	831	0.70979	0.81036	1	11673	2	0.13794	0.25969	0.45213	1	7753	3	0.13794
ATP5J2	832	0.71039	0.81074	1	11685	0	0.2344	0.28961	0.48332	1	8145	1	0.2344
TMEM126A	833	0.71203	0.81175	1	11707	1	0.042955	0.51589	0.68191	1	10945	1	0.042955
FASN	834	0.71406	0.81301	1	11728	1	0.50605	0.01189	0.042782	0.644034	1142	4	0.50605
OPA3	835	0.71598	0.81419	1	11756	2	0.035159	0.33766	0.53198	1	8815	2	0.035159
SLC25A5	836	0.71766	0.81519	1	11780	0	0.38812	0.28234	0.47575	1	8061	1	0.38812
CMC1	837	0.71921	0.8162	1	11807	0	0.2074	0.42908	0.61736	1	10025	1	0.2074
SLC25A20	838	0.7193	0.81625	1	11810	2	0.044567	0.57382	0.71755	1	11458	1	0.044567
ATAD1	839	0.72152	0.81768	1	11840	0	0.16757	0.27848	0.47175	1	8014	1	0.16757
DECR1	840	0.723	0.81855	1	11857	2	0.17908	0.35536	0.54911	1	9039	3	0.17908
BAX	841	0.72457	0.81955	1	11880	2	-0.00515	0.38965	0.5811	1	9500	2	-0.00515
PTS	842	0.72485	0.81974	1	11883	2	0.11359	0.29157	0.48532	1	8178	3	0.11359
C2orf47	843	0.72599	0.82047	1	11901	1	-0.00881	0.55153	0.7038	1	11259	2	-0.00881
FDX1	844	0.73049	0.82323	1	11968	0	0.46206	0.26951	0.4624	1	7883	1	0.46206
SPR	845	0.73117	0.82365	1	11976	1	0.15001	0.10722	0.24819	0.895752	4776	4	0.15001
ZADH2	846	0.73581	0.82658	1	12040	2	0.14137	0.08846	0.21573	0.872889	4255	3	0.14137
SLC25A17	847	0.73596	0.82667	1	12044	2	0.24729	0.10973	0.2524	0.901321	4826	3	0.24729
EPHX2	848	0.73776	0.82779	1	12080	1	0.27302	0.083636	0.20687	0.867519	4109	4	0.27302
TMEM126B	849	0.73813	0.82802	1	12087	1	0.080836	0.20589	0.39521	0.978272	6960	1	0.080836
NUDT5	850	0.73969	0.82903	1	12104	1	0.33339	0.098812	0.23395	0.884924	4553	3	0.33339
GCAT	851	0.74318	0.83129	1	12158	2	0.019502	0.12527	0.27821	0.91289	5252	3	0.019502
SFXN3	852	0.74523	0.83264	1	12192	2	-0.02814	0.56488	0.71204	1	11385	2	-0.02814
COX7A2L	853	0.74527	0.83267	1	12194	0	0.14547	0.49962	0.67172	1	10796	1	0.14547
SLC25A39	854	0.74713	0.83387	1	12227	2	0.096832	0.54067	0.69728	1	11164	2	0.096832
D2HGDH	855	0.7473	0.83398	1	12230	1	0.071887	0.62896	0.75273	1	11997	2	0.071887
CRYZ	856	0.7518	0.83694	1	12306	2	0.12475	0.17427	0.35618	0.954217	6433	3	0.12475
ACAD8	857	0.75196	0.83705	1	12310	1	0.21275	0.16698	0.34506	0.94671	6279	4	0.21275
ASAH2	858	0.75363	0.83816	1	12331	1	0.15169	0.3563	0.55002	1	9053	2	0.15169
ACADVL	859	0.75485	0.83896	1	12353	1	-0.05922	0.59021	0.72785	1	11609	2	-0.05922
GRPEL2	860	0.75554	0.83941	1	12366	1	0.15778	0.22159	0.41187	0.987807	7187	2	0.15778
OGDHL	861	0.75823	0.84116	1	12403	1	0.33448	0.036336	0.11115	0.762122	2514	5	0.33448
MCAT	862	0.75869	0.84148	1	12410	2	0.008937	0.29578	0.48958	1	8223	2	0.008937
GLYCK	863	0.76081	0.84286	1	12443	2	0.32138	0.051236	0.14496	0.801347	3118	4	0.32138
BCAT2	864	0.76281	0.84423	1	12483	2	0.40858	0.004685	0.019546	0.560398	601	3	0.40858
P4HB	865	0.76617	0.84643	1	12528	1	0.11782	0.46021	0.64601	1	10434	3	0.11782
ABHD10	866	0.7669	0.84691	1	12539	1	-0.02464	0.2769	0.47011	1	7990	2	-0.02464
CYB5R2	867	0.7676	0.84736	1	12557	2	0.42443	0.003049	0.013152	0.50631	446	4	0.42443
ACSM5	868	0.76881	0.84818	1	12581	1	0.31297	0.094891	0.22706	0.880088	4443	3	0.31297
PACSIN2	869	0.76926	0.84848	1	12586	2	-0.00893	0.15163	0.32097	0.934557	5919	2	-0.00893
CISD2	870	0.76931	0.84852	1	12587	1	0.42032	0.015696	0.054283	0.681686	1370	3	0.42032
MMACHC	871	0.77388	0.85154	1	12662	2	0.29993	0.055959	0.15428	0.814962	3262	4	0.29993
MRPL1	872	0.77453	0.85199	1	12676	1	0.15977	0.072679	0.18675	0.851013	3782	2	0.15977
PTPN4	873	0.77495	0.85226	1	12686	2	0.17121	0.10683	0.24753	0.895094	4765	3	0.17121
HRSP12	874	0.77566	0.85274	1	12696	1	-0.07185	0.52076	0.68489	1	10983	1	-0.07185
ABCB8	875	0.77579	0.85283	1	12697	2	0.29812	0.0536	0.14965	0.808052	3189	4	0.29812
PMALP1	876	0.77706	0.85373	1	12723	0	0.44403	0.10993	0.25278	0.901903	4831	1	0.44403
SPATA20	877	0.77876	0.85488	1	12747	2	0.032588	0.10701	0.24784	0.895094	4771	3	0.032588
COX8A	878	0.77885	0.85494	1	12750	1	0.066592	0.41691	0.60619	1	9848	1	0.066592
GLOD4	879	0.77904	0.85506	1	12753	2	0.01384	0.057851	0.15796	0.818501	3325	2	0.01384
TRMU	880	0.78074	0.8562	1	12781	2	-0.04063	0.96075	0.96075	1	15444	0	-0.04063
MGME1	881	0.781	0.85638	1	12785	1	0.21103	0.34879	0.54277	1	8949	2	0.21103
NCEH1	882	0.78207	0.85713	1	12798	2	0.008454	0.022745	0.074657	0.716709	1790	2	0.008454
HINT2	883	0.78324	0.85794	1	12813	2	0.65677	0.014502	0.050767	0.6721	1302	4	0.65677
GHITM	884	0.78526	0.85936	1	12857	1	0.092196	0.36853	0.56145	1	9226	3	0.092196
AMACR	885	0.78667	0.86032	1	12886	1	-0.04943	0.28913	0.48281	1	8136	2	-0.04943
ATP5G3	886	0.78876	0.86176	1	12923	2	0.04085	0.55551	0.70627	1	11304	2	0.04085
DGUOK	887	0.78925	0.86209	1	12931	2	0.36128	0.012631	0.045069	0.650625	1194	4	0.36128
ABAT	888	0.79206	0.86399	1	12988	2	0.19743	0.052396	0.14728	0.806036	3149	3	0.19743
TOMM40L	889	0.79218	0.86409	1	12989	1	0.35958	0.015219	0.05289	0.67888	1342	5	0.35958
GLRX2	890	0.79768	0.86782	1	13075	0	0.24348	0.48087	0.66013	1	10634	1	0.24348
CCDC127	891	0.80589	0.87125	1	13163	1	-0.15399	0.8765	0.89782	1	14330	1	-0.15399
SLC25A46	892	0.81279	0.87407	1	13228	1	-0.05354	0.17742	0.36094	0.956968	6500	2	-0.05354
ABCD2	893	0.82442	0.87888	1	13352	1	0.334	0.014107	0.049553	0.668719	1276	4	0.334
AUH	894	0.826	0.87956	1	13369	1	0.34725	0.055757	0.15388	0.814421	3256	4	0.34725
PLGRKT	895	0.82657	0.87983	1	13372	0	0.49013	0.17343	0.35487	0.953662	6413	1	0.49013

MGARP	898	0.83137	0.88189	1	13415	1	0.22603	0.23353	0.4246	0.99314	7369	3	0.22603
HSDL2	899	0.83141	0.8819	1	13416	1	0.2318	0.063938	0.17	0.833861	3514	4	0.2318
SETD9	900	0.83231	0.88228	1	13425	0	0.10891	0.068213	0.17828	0.83959	3659	2	0.10891
NDUFAF7	901	0.83411	0.88306	1	13445	1	0.25238	0.060237	0.16275	0.82214	3412	4	0.25238
UCP2	902	0.83444	0.88319	1	13447	1	0.004141	0.43581	0.62363	1	10129	3	0.004141
APOO	903	0.83515	0.88352	1	13455	0	0.26137	0.34811	0.54212	1	8938	1	0.26137
SDHAF1	904	0.83598	0.88388	1	13463	1	0.009506	0.34373	0.53784	1	8879	2	0.009506
ATP10D	905	0.84059	0.88598	1	13516	1	0.16996	0.045852	0.13412	0.787259	2935	3	0.16996
CARKD	906	0.84076	0.88606	1	13518	1	0.42024	0.016556	0.0568	0.692198	1414	5	0.42024
TRMT2B	907	0.84174	0.8865	1	13531	1	0.41481	0.011009	0.04014	0.642414	1073	5	0.41481
AIFM1	908	0.84683	0.88881	1	13589	1	0.078605	0.41849	0.60766	1	9875	3	0.078605
LAMC1	909	0.8507	0.89059	1	13628	1	0.36542	0.007834	0.029951	0.620026	827	5	0.36542
ACN9	910	0.85123	0.89083	1	13635	0	0.11374	0.54506	0.69995	1	11201	1	0.11374
MCEE	911	0.85601	0.89309	1	13678	0	0.2027	0.08299	0.20569	0.867485	4087	2	0.2027
SLC25A33	912	0.86633	0.89807	1	13810	0	0.51147	0.13367	0.292	0.921163	5464	1	0.51147
CHPT1	913	0.86653	0.89816	1	13815	1	0.41871	0.012841	0.045719	0.654974	1202	4	0.41871
NDUFB4	914	0.86703	0.8984	1	13819	0	0.30213	0.13297	0.29082	0.920568	5444	2	0.30213
ACADS	915	0.86714	0.89846	1	13822	1	-0.01351	0.24281	0.43442	0.998415	7500	2	-0.01351
THNSL1	916	0.86904	0.89938	1	13841	0	0.12885	0.33602	0.53034	1	8798	2	0.12885
PDK3	917	0.86924	0.89948	1	13843	1	0.38225	0.026477	0.085052	0.734235	1994	4	0.38225
RDH14	918	0.87288	0.90136	1	13893	1	0.16904	0.12861	0.28374	0.91573	5340	3	0.16904
ACAD9	919	0.87314	0.90149	1	13896	1	0.016482	0.11914	0.26816	0.907257	5093	2	0.016482
ME2	920	0.87389	0.90185	1	13904	0	0.10652	0.38294	0.57474	1	9411	1	0.10652
SUCLG2	921	0.87515	0.90252	1	13916	0	0.28832	0.21646	0.40642	0.984188	7118	2	0.28832
PAK7	922	0.87616	0.90306	1	13929	1	0.27897	0.018845	0.063508	0.708618	1542	5	0.27897
NDUFS4	923	0.8786	0.90432	1	13963	1	0.35463	0.013108	0.046546	0.659465	1214	5	0.35463
GPX1	924	0.87889	0.90448	1	13967	0	0.20411	0.12111	0.27141	0.908567	5149	2	0.20411
MMAB	925	0.88015	0.90515	1	13985	1	0.45387	0.00493	0.020393	0.566313	617	5	0.45387
AGPAT5	926	0.88043	0.9053	1	13989	1	0.046662	0.21055	0.40016	0.980213	7035	2	0.046662
IDH3G	927	0.88494	0.9077	1	14062	1	0.55728	5.80E-05	0.00027	0.125717	36	5	0.55728
ACOT13	928	0.88513	0.9078	1	14068	1	0.39837	0.02423	0.078772	0.724702	1873	4	0.39837
RAB24	929	0.88543	0.90798	1	14074	1	0.24964	0.14313	0.30727	0.928693	5703	3	0.24964
RAB32	930	0.88969	0.91038	1	14130	1	0.3201	0.043581	0.12938	0.782006	2850	4	0.3201
TMLHE	931	0.89018	0.91064	1	14135	0	0.12243	0.047662	0.13781	0.790779	3004	2	0.12243
ACAA2	932	0.89124	0.91125	1	14150	0	0.09069	0.41533	0.60473	1	9834	1	0.09069
COX8C	933	0.89543	0.91357	1	14196	0	0.23957	0.12685	0.28083	0.914681	5289	3	0.23957
MTCP1	934	0.89758	0.91478	1	14229	0	0.32117	0.046728	0.13593	0.788075	2973	3	0.32117
GBAS	935	0.89806	0.91505	1	14237	1	0.094648	0.39599	0.58695	1	9591	3	0.094648
PPIF	936	0.89847	0.91529	1	14243	1	0.18004	0.033016	0.1025	0.753406	2341	5	0.18004
ALDH6A1	937	0.89856	0.91534	1	14247	1	0.25564	0.058416	0.15912	0.81945	3347	4	0.25564
FAM195A	938	0.89946	0.91583	1	14259	0	0.27384	0.071105	0.18379	0.846834	3741	2	0.27384
APEX2	939	0.90065	0.9165	1	14280	1	0.004842	0.33461	0.52898	1	8772	2	0.004842
FASTKD1	940	0.9009	0.91664	1	14286	0	0.29415	0.070646	0.1829	0.845864	3725	2	0.29415
ABCB6	941	0.90258	0.91761	1	14336	1	0.32979	0.007702	0.029515	0.620026	816	5	0.32979
DNAJC15	942	0.90269	0.91769	1	14339	0	0.39936	0.05567	0.15372	0.814314	3253	3	0.39936
LACE1	943	0.9052	0.91917	1	14387	1	0.069026	0.069763	0.18118	0.843277	3702	3	0.069026
MGST3	944	0.90538	0.91928	1	14392	0	0.11795	0.038439	0.11666	0.765775	2626	2	0.11795
TMEM70	945	0.91212	0.92342	1	14517	0	0.27855	0.30892	0.50319	1	8413	2	0.27855
C3orf33	946	0.9147	0.92508	1	14570	0	0.43573	0.11734	0.2652	0.90633	5041	2	0.43573
PHYH	947	0.9157	0.92572	1	14588	1	0.12928	0.32565	0.52033	1	8663	3	0.12928
CBR3	948	0.91614	0.92602	1	14596	1	0.11712	0.063557	0.16927	0.832953	3502	2	0.11712
OSGEPL1	949	0.91716	0.92669	1	14619	0	0.60669	0.008442	0.031922	0.628294	875	3	0.60669
NUDT6	950	0.91733	0.9268	1	14624	1	0.12053	0.29778	0.4917	1	8247	3	0.12053
HK1	951	0.91799	0.92725	1	14633	1	0.48752	0.003838	0.016331	0.535171	526	5	0.48752
APOA1BP	952	0.92099	0.9292	1	14685	1	0.21167	0.12494	0.27766	0.912304	5246	3	0.21167
IDH3B	953	0.92353	0.93091	1	14723	1	0.25217	0.13402	0.2926	0.921362	5474	4	0.25217
GK	954	0.92573	0.93244	1	14754	0	0.33708	0.038394	0.11656	0.765775	2623	3	0.33708
ATP5G1	955	0.9317	0.93667	1	14883	0	0.55895	0.068304	0.17847	0.83959	3662	1	0.55895
ACAA1	956	0.93323	0.93781	1	14915	1	0.24888	0.21977	0.40995	0.986631	7162	3	0.24888
NDUFV2	957	0.93339	0.93793	1	14918	0	0.7257	0.017949	0.060869	0.706955	1480	2	0.7257
ME1	958	0.93433	0.93863	1	14941	1	0.21899	0.09095	0.22016	0.873751	4343	4	0.21899
PDHA2	959	0.93445	0.93872	1	14946	1	-0.01976	0.65659	0.77094	1	12295	2	-0.01976
SPG7	960	0.93541	0.93943	1	14964	1	-0.01216	0.36332	0.55665	1	9148	2	-0.01216
PREPL	961	0.93681	0.94048	1	14999	1	0.27542	0.063111	0.16837	0.832532	3485	4	0.27542
KIF1B	962	0.93718	0.94077	1	15007	1	0.082349	0.3854	0.5771	1	9440	3	0.082349
FASTKD3	963	0.93724	0.9408	1	15008	0	0.28048	0.17694	0.36022	0.956837	6488	2	0.28048
SIRT5	964	0.93764	0.94109	1	15018	1	0.22378	0.12513	0.27798	0.912837	5249	4	0.22378
TIMM21	965	0.93771	0.94115	1	15021	0	0.44984	0.011362	0.041188	0.642414	1104	3	0.44984
CBR4	966	0.94023	0.94305	1	15070	0	0.58802	0.011805	0.042535	0.643708	1139	3	0.58802
HMGCS2	967	0.94129	0.94391	1	15098	1	0.051766	0.43926	0.62678	1	10173	2	0.051766
NIPSNAP3B	968	0.94335	0.94551	1	15143	0	0.34352	0.056646	0.15563	0.814962	3291	2	0.34352
BNIP3L	969	0.94436	0.94632	1	15171	1	0.25314	0.060565	0.16342	0.824151	3417	3	0.25314
SLC25A40	970	0.94462	0.94653	1	15175	0	0.59694	0.04215	0.12616	0.778722	2792	3	0.59694
SERHL2	971	0.94467	0.94657	1	15176	0	0.371	0.13136	0.28815	0.919078	5404	3	0.371
OAT	972	0.94642	0.94802	1	15223	0	0.18599	0.053582	0.14962	0.808052	3188	3	0.18599
SPRYD4	973	0.94813	0.94943	1	15261	0	0.030875	0.24729	0.43917	0.999734	7572	2	0.030875
PPOX	974	0.95215	0.9528	1	15359	1	0.25186	0.096411	0.22968	0.882012	4488	4	0.25186
ARMS2	975	0.95241	0.95302	1	15364	0	0.31952	0.047592	0.13768	0.79056	3002	3	0.31952
PRELID2	976	0.95291	0.95345	1	15374	1	0.41024	0.014875	0.051863	0.675806	1322	5	0.41024
SLC22A4	977	0.95363	0.95406	1	15398	1	0.31353	0.010778	0.039406	0.642414	1055	5	0.31353
PABPC5	978	0.95434	0.9547	1	15418	0	0.25173	0.11453	0.26047	0.905578	4954	3	0.25173
CPS1	979	0.95586	0.95606	1	15459	1	0.46418	0.005661	0.02284	0.571197	689	5	0.46418
HADHB	980	0.9573	0.95739	1	15514	0	0.54609	0.009437	0.035104	0.635573	946	4	0.54609
ACAD11	981	0.95781	0.95788	1	15525	1	0.1948	0.12415	0.27634	0.91013	5232	3	0.1948
SERAC1	982	0.95872	0.95871	1	15549	0	0.33627	0.010278	0.037778	0.641944	1014	3	0.33627
ACOT9	983	0.96115	0.96104	1	15627	1	0.43873	0.016851	0.057685	0.697083	1426	5	0.43873
NEU4	984	0.96165	0.96156	1	15645	1	0.24274	0.041398	0.12427	0.776933	2757	5	

ADCK2	988	0.96286	0.96281	1	15693	0	0.32847	0.044943	0.13221	0.785853	2899	4	0.32847
GSTK1	989	0.96319	0.96315	1	15701	0	0.26316	0.024183	0.078649	0.724702	1869	5	0.26316
SLC25A21	990	0.96395	0.96393	1	15731	0	0.54415	0.013805	0.048635	0.668719	1252	4	0.54415
DMGDH	991	0.9655	0.96549	1	15787	0	0.032969	0.45861	0.6445	1	10420	2	0.032969
IFI27	992	0.96588	0.96588	1	15805	0	0.33023	0.20602	0.39536	0.978272	6965	3	0.33023
CHCHD3	993	0.96662	0.9666	1	15831	0	0.46928	0.033383	0.10347	0.753773	2363	1	0.46928
HSDL1	994	0.96685	0.96682	1	15839	0	0.21297	0.061751	0.16573	0.826763	3454	4	0.21297
SLC25A37	995	0.96692	0.96688	1	15845	0	0.60672	0.001831	0.008077	0.45797	304	5	0.60672
ACSS3	996	0.96696	0.96693	1	15848	0	0.17953	0.092806	0.22344	0.876052	4395	4	0.17953
SLC25A4	997	0.96808	0.96803	1	15898	0	0.32811	0.032823	0.102	0.753406	2331	5	0.32811
TSPO	998	0.96816	0.96811	1	15900	0	-0.00787	0.23369	0.42476	0.99314	7370	2	-0.00787
GLYAT	999	0.96829	0.96822	1	15901	0	0.11263	0.31596	0.51045	1	8524	3	0.11263
CAT	1000	0.96881	0.96874	1	15914	0	0.26552	0.065081	0.1722	0.835178	3554	3	0.26552
BPHL	1001	0.96911	0.96902	1	15919	0	0.18151	0.46007	0.64587	1	10432	3	0.18151
CYP27A1	1002	0.97087	0.97072	1	15970	0	0.25532	0.085488	0.21027	0.870016	4164	4	0.25532
SLC25A43	1003	0.97098	0.97083	1	15974	0	0.27421	0.1161	0.26313	0.905678	5004	4	0.27421
BDH1	1004	0.97113	0.97097	1	15983	0	0.21436	0.027517	0.087874	0.738867	2050	3	0.21436
OXNAD1	1005	0.97294	0.97282	1	16054	0	0.37708	0.028291	0.089997	0.741184	2091	4	0.37708
ACSM1	1006	0.97337	0.97325	1	16064	0	0.056332	0.52327	0.68647	1	11005	2	0.056332
ACADM	1007	0.97385	0.97373	1	16076	0	0.19564	0.11956	0.26885	0.908297	5102	4	0.19564
SLC25A12	1008	0.97488	0.97477	1	16125	0	0.24597	0.036493	0.11155	0.762653	2519	5	0.24597
RDH11	1009	0.9761	0.97602	1	16174	0	0.14085	0.24175	0.4333	0.998054	7482	3	0.14085
SLC25A23	1010	0.97615	0.97607	1	16177	0	0.10491	0.003182	0.013708	0.513678	460	2	0.10491
ACSF3	1011	0.97744	0.97736	1	16220	0	0.17157	0.13421	0.2929	0.921362	5476	4	0.17157
GLDC	1012	0.97745	0.97737	1	16221	0	0.24165	0.11806	0.26641	0.9067	5063	4	0.24165
ACADSB	1013	0.97849	0.97843	1	16265	0	0.35827	0.01826	0.06177	0.708618	1500	5	0.35827
AASS	1014	0.9789	0.97885	1	16278	0	0.1218	0.021975	0.072463	0.714768	1741	3	0.1218
SYNJ2BP	1015	0.9794	0.97937	1	16292	0	0.37577	0.0206	0.068524	0.714768	1645	3	0.37577
ACSF2	1016	0.97953	0.9795	1	16297	0	0.041154	0.15041	0.31901	0.93354	5889	1	0.041154
EXOG	1017	0.97966	0.97961	1	16303	0	0.10377	0.12492	0.27763	0.912304	5245	3	0.10377
MMADHC	1018	0.98012	0.98009	1	16316	0	0.54759	0.019881	0.06651	0.714768	1602	1	0.54759
ADCK1	1019	0.98122	0.98121	1	16357	0	0.17692	0.037179	0.11335	0.763527	2559	4	0.17692
CCDC109B	1020	0.98173	0.98174	1	16383	0	0.31243	0.072094	0.18566	0.848847	3770	4	0.31243
LDHAL6B	1021	0.98228	0.98228	1	16404	0	1.195	0.017723	0.060242	0.706955	1468	1	1.195
FBXL4	1022	0.98288	0.98286	1	16428	0	0.2036	0.14437	0.30927	0.929347	5733	4	0.2036
SFXN2	1023	0.98368	0.98366	1	16460	0	0.32123	0.071733	0.18499	0.848847	3754	4	0.32123
CA5B	1024	0.98394	0.9839	1	16464	0	0.52374	0.007859	0.030041	0.620026	830	4	0.52374
NLRX1	1025	0.98512	0.98506	1	16498	0	0.16064	0.077661	0.19594	0.857881	3930	4	0.16064
METAP1D	1026	0.98525	0.98518	1	16505	0	0.18291	0.031704	0.09903	0.752092	2259	4	0.18291
ATXN2	1027	0.98617	0.98611	1	16538	0	0.28939	0.024251	0.078831	0.724702	1875	5	0.28939
HEMK1	1028	0.98694	0.98688	1	16564	0	0.22022	0.037085	0.1131	0.763413	2552	5	0.22022
PDHX	1029	0.98697	0.98691	1	16565	0	0.47989	0.001344	0.005969	0.435958	236	5	0.47989
STX17	1030	0.98766	0.98763	1	16589	0	0.42574	0.012336	0.044141	0.647231	1175	3	0.42574
OTC	1031	0.98883	0.98882	1	16647	0	0.52008	0.011215	0.040783	0.642414	1085	4	0.52008
NIT2	1032	0.98896	0.98895	1	16653	0	0.35865	0.003652	0.01559	0.525265	510	5	0.35865
TCHP	1033	0.9908	0.99076	1	16729	0	0.26029	0.091457	0.22108	0.873751	4359	4	0.26029
ATPAF1	1034	0.99095	0.99091	1	16738	0	0.21606	0.11702	0.26465	0.906263	5032	4	0.21606
AADAT	1035	0.99165	0.9916	1	16765	0	0.39837	0.004296	0.018211	0.548329	570	5	0.39837
C2orf69	1036	0.99285	0.99282	1	16825	0	0.68029	0.007153	0.027727	0.613779	778	4	0.68029
SFXN1	1037	0.99439	0.99436	1	16895	0	0.34398	0.005613	0.022679	0.570695	685	5	0.34398
ACSL6	1038	0.99454	0.99452	1	16909	0	0.40114	0.02976	0.093911	0.74841	2159	5	0.40114
IDH1	1039	0.9951	0.99508	1	16939	0	1.0554	0.0049	0.020294	0.566313	616	1	1.0554
IDE	1040	0.99511	0.9951	1	16941	0	0.17561	0.03828	0.11627	0.765652	2615	5	0.17561
SLC25A13	1041	0.9967	0.99664	1	17014	0	0.48698	0.003296	0.014166	0.518415	471	6	0.48698
HIBADH	1042	0.99814	0.99811	1	17093	0	0.38885	0.00186	0.008211	0.459275	308	6	0.38885
MAOB	1043	0.9986	0.9986	1	17121	0	0.61324	0.001403	0.006206	0.442046	242	6	0.61324
IDH3A	1044	0.99879	0.9988	1	17133	0	0.55354	0.001214	0.005387	0.424412	215	6	0.55354
PCCA	1045	0.99905	0.99906	1	17149	0	0.38168	0.000947	0.004239	0.381059	191	6	0.38168
ETFA	1046	0.99922	0.99921	1	17156	0	0.51837	0.000784	0.003533	0.362535	168	6	0.51837
ACO1	1047	0.99923	0.99922	1	17158	0	0.48779	0.000774	0.003496	0.362535	166	6	0.48779
MSRB2	1048	0.99929	0.99928	1	17161	0	0.26552	0.000715	0.003249	0.350031	160	6	0.26552
SND1	1049	0.99956	0.99957	1	17180	0	0.46369	0.000437	0.002018	0.28981	120	6	0.46369

Supplemental Table S3 LSC- gene list with increased level of acetylation after MTCH2 knockdown

Gene	peak_chr	TSS_location	distance_from_peaks
S100A9	chr1	upstream	4590
SEMA4A	chr1	downstream	20834
SH2D2A	chr1	overlapEnd	7178
TMEM200A	chr1	upstream	2674
ARHGAP19	chr10	inside	11336
NFKB2	chr10	upstream	19922
PFKFB3	chr10	inside	43595
BIRC3	chr11	upstream	5093
CST3	chr11	downstream	31123
C3AR1	chr12	downstream	22065
OASL	chr12	downstream	4262
SEMA7A	chr15	inside	6932
COTL1	chr16	upstream	40646
IL21R	chr16	inside	21212
SNTB2	chr16	upstream	15859
CD300C	chr17	upstream	46362
KIF1C	chr17	upstream	10177
RGS9	chr17	upstream	42858
F2RL3	chr19	downstream	25904
GADD45B	chr19	downstream	49052
ICAM1	chr19	upstream	4258
IFI30	chr19	upstream	35232
SEMA6B	chr19	upstream	32305
SIGLEC14	chr19	upstream	19363
VASP	chr19	downstream	41351
BCL2L11	chr2	inside	14168
CASS4	chr20	upstream	19814
SRXN1	chr20	upstream	22465
CSF2RB	chr22	inside	16782
TPST2	chr22	overlapEnd	578
IRAK2	chr3	downstream	2715
STAB1	chr3	upstream	23824

Supplemental Table S4. Primer sequences for ChIP-seq validation

Gene	Sequences
<i>S100A9</i>	Forward 5'-GGGAGAGTAGGGCCTTAGGA-3' Reverse 5'-CGGAAGATTGATTCACAGGT-3'
<i>CSF2RB</i>	Forward 5'- TCCCTCAACAGTCCTTCCAG-3' Reverse 5'-TAGCTGGTTTGAGCCCAGAG-3'
<i>NFκB</i>	Forward 5'-TTAAGACCGCACCAAAAACC-3' Reverse 5'-TGATAGAGTCATGCGGTCCA-3'
<i>LRPAP1</i>	Forward 5'-AGGGTTCCCCTAGAAAATCG-3' Reverse 5'-GTGCTCCAGAGAGCAGAAGG-3'

Supplemental Table S5. Primer sequences

Gene	Sequences
<i>18srRNA</i> (housekeeping)	Forward 5'- AGGAATTGACGGAAGGGCAC-3' Reverse 5'- GGACATCTAAGGGCATCACA-3'
<i>LYZ</i>	Forward 5'- GCCAAATGGGAGAGTGGTTA-3' Reverse 5'- ATCACGGACAACCCTCTTTG -3'
<i>S100A9</i>	Forward 5'-CCTGGACACAAATGCAGACAA-3' Reverse 5'-CGTCACCCTCGTGCATCTT-3'
<i>CSF2RB</i>	Forward 5'- AGCCCAGATGCAGGGGA-3' Reverse 5'-CCCAGGATGTCAGGTAGGGA-3'
<i>NFκB</i>	Forward 5'-TTCGTCCTCCTCCTCACACTCC-3' Reverse 5'-CCAGCCTGCTTCTCCAACAACA-3'
<i>LRPAP1</i>	Forward 5'-CTGAGGCTGAGTTCCGAGGAG-3' Reverse 5'-GCTGCTTCTGGTAGTGTTG-3'