

Supplemental Data

Gene Expression Analysis Reveals Inhibition of Radiation-Induced TGF β -Signaling by Hyperbaric Oxygen Therapy in Mouse Salivary Glands

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Supplementary Table S1. Primers used for qPCR.

Gene	Forward (5'-3')	Reverse (5'-3')
<i>α-Sma</i>	CCAGCTATGTGTGAAGAGGAAG	TCCAACCATTACTCCCTGATGTC
<i>Btg2</i>	AAGAGAACCGACATGCTCCC	GTAATGATCGGTACAGTGCCTC
<i>Cd83</i>	GGCCAAGGTCTCCGAGAGTG	CCTCGAAGGAGCTGTTTTGC
<i>Ctgf</i>	CCCTAGCTGCCTACCGACTG	TTAGAACAGGCGCTCCACTC
<i>Cyr61</i>	AAGAGGCTTCCTGTCTTTGGC	AGACGTGGTCTGAACGATGC
<i>Egr1</i>	TGAGCACCTGACCACAGAGTC	TAACTCGTCTCCACCATCGC
<i>Egr2</i>	TACCCGGTGGAAGACCTCG	ATGTTGATCATGCCATCTCC
<i>Gapdh</i>	AAGGGCTCATGACCACAGTC	TGCAGGGATGATGTTCTGGG
<i>Serpine1</i>	ACAACCCGACAGAGACAATCC	ATGAAGGCGTCTCTTCCCAC
<i>Sox2</i>	GCTGCCTCTTTAAGACTAGGGC	CGCCGCGATTGTTGTGATTAG
<i>Tfr</i>	GAGGCGCTTCCTAGTACTCC	CTTGCCGAGCAAGGCTAAAC
<i>Tgfβ1</i>	CCCGAAGCGGACTACTATGC	CATAGATGGCGTTGTTGCGG
<i>Thbs1</i>	CGATGAGTGCAAAGAAGTGCC	TGAGCCAGTGAATCGTGGTG

Forward and reverse primers used for qPCR.

Supplementary Table S2. RT vs. Control.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
DBP	D site of albumin promoter (albumin D-box) binding protein	93.6	ARNTL	aryl hydrocarbon receptor nuclear translocator-like	9.640
ATF3	activating transcription factor 3	12.3	NPAS2	neuronal PAS domain protein 2	6.203
EGR3	early growth response 3	10.4	CXCL13	chemokine (C-X-C motif) ligand 13	4.059
USP2	ubiquitin specific peptidase 2	7.9	IGJ	immunoglobulin J polypeptide, linker protein for immunoglobulin alpha and mu polypeptides	4.047
FOS	FBJ murine osteosarcoma viral oncogene homolog	7.1	FoH1	folate hydratase 1	3.180
Ptn1/Ptp2	proline rich protein Haellii subfamily 1	6.8	IGHA1	immunoglobulin heavy constant alpha 1	3.147
EGR1	early growth response 1	6.5	IgIV1	immunoglobulin lambda variable 1	2.811
PER1	period circadian clock 1	6.2	Zc3h12D	zinc finger CCHC-type containing 12D	2.757
DUSP4	dual specificity phosphatase 4	5.6	ARL4A	ADP-ribosylation factor-like 4A	2.547
CA3	carbonic anhydrase III, muscle specific	4.9	IGHM	immunoglobulin heavy constant mu	2.437
PER2	period circadian clock 2	4.8	Tgfp1/Tgfp2	T cell specific GTPase 1	2.410
GDF15	growth differentiation factor 15	4.6	RHOJ	ras homolog family member J	2.395
PAG1	phosphoprotein associated with glycosphingolipid microdomains 1	4.5	CLDN1	claudin 1	2.392
CFD	complement factor D (adpsin)	4.4	Mup1 (includes others)	—	2.375
CYR61	cysteine-rich, angiogenic inducer, 61	4.3	MZB1	marginal zone B and B1 cell-specific protein	2.341
THBS1	—	4.3	BMF	Bcl2 modifying factor	2.233
EGR2	early growth response 2	4.2	Gbp6 (includes others)	guanylate binding protein 6	2.227
CHAC1	ChaC, cation transport regulator homolog 1 (E. coli)	4.0	RAB17	RAB17, member RAS oncogene family	2.224
JUN	Jun proto-oncogene	3.9	OSGIN2	oxidative stress induced growth inhibitor family member 2	2.088
EDA2R	ectodysplasin A2 receptor	3.8	GPR31	G protein-coupled receptor 31	2.020
COG10B	coenzyme Q10 homolog B (S. cerevisiae)	3.8	RAB27B	RAB27B, member RAS oncogene family	2.006
NRA3	nuclear receptor subfamily 4, group A, member 3	3.7	ASGR1	asialoglycoprotein receptor 1	1.960
TEF	thymotrophic embryonic factor	3.7	PIGR	polymeric immunoglobulin receptor	1.953
CDKN1A	cyclin-dependent kinase inhibitor 1A (p21, Cip1)	3.7	LRG1	leucine-rich alpha-2-glycoprotein 1	1.941
IRS2	insulin receptor substrate 2	3.7	Igfp1	interferon inducible GTPase 1	1.936
GPR155	G protein-coupled receptor 155	3.5	C730049O14Rk	RIKEN cDNA C730049O14 gene	1.932
CTGF	connective tissue growth factor	3.4	PSMB9	proteasome (prosome, macropain) subunit, beta type, 9	1.916
EPHX1	epoxide hydratase 1, microsomal (xenobiotic)	3.4	TMEM140	transmembrane protein 140	1.908
CGRM4L	CCRG4 carbon catabolite repression 4-like (S. cerevisiae)	3.3	PPP1R3C	protein phosphatase 1, regulatory subunit 3C	1.907
DUSP1	dual specificity phosphatase 1	3.3	SERPINA3	serpin peptidase inhibitor, clade A (alpha-1 antitrypsin, antitrypsin), member 3	1.892
NR1D2	—	3.3	TAC63	tachykinin receptor 3	1.874
REV1	REV1, polymerase (DNA directed)	3.1	FAM69A	family with sequence similarity 69, member A	1.871
ADIPOQ	adiponectin, C11a and collagen domain containing	3.1	ARHGAP29	Rho GTPase activating protein 29	1.866
PER3	period circadian clock 3	3.1	C4orf32	chromosome 4 open reading frame 32	1.862
PIM3	pim-3 oncogene	3.1	LTB	lymphotoxin beta (TNF superfamily, member 3)	1.862
ERF11	ERBB receptor feedback inhibitor 1	3.1	Ces1d	carboxylesterase 1D	1.860
block 2	palliovirus receptor	3.0	PSMB8	proteasome (prosome, macropain) subunit, beta type, 8	1.853
PIP	BIG family, member 2	2.9	TMEM176A	transmembrane protein 176A	1.839
CCNG1	prolactin-induced protein	2.8	PIK3CG	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit gamma	1.825
DVRK3	cyclin G1	2.8	MA11	N-acetyltransferase 1 (arylamine N-acetyltransferase)	1.815
PHLDA3	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 3	2.8	CIRBP	cold inducible RNA binding protein	1.815
JUNB	pleckstrin homology-like domain, family A, member 3	2.7	Aco11	acyl-CoA thioesterase 1	1.809
IER2	Jun B proto-oncogene	2.7	SCD	stearoyl-CoA desaturase (delta-9-desaturase)	1.804
AEN	immediate early response 2	2.7	SERPINB9	serpin peptidase inhibitor, clade B (ovalbumin), member 9	1.796
RNASE3	apoptosis enhancing nuclease	2.6	Gbp2	guanylate binding protein 2	1.794
SLC19A2	solute carrier family 19 (thiamine transporter), member 2	2.6	SLC13A2	solute carrier family 13 (sodium-dependent dicarboxylate transporter), member 2	1.788
IER3	immediate early response 3	2.5	503343015Rk	RIKEN cDNA 503343015 gene	1.778
DUSP8	dual specificity phosphatase 8	2.5	TNFSF13B	tumor necrosis factor (ligand) superfamily, member 13b	1.775
UBE2C	ubiquitin-conjugating enzyme E2C	2.5	FAM38	family with sequence similarity 3, member B	1.772
KDM6B	lysine (K)-specific demethylase 6B	2.5	ARHGEF37	Rho guanine nucleotide exchange factor (GEF) 37	1.770
ZAK	sterile alpha motif and leucine zipper containing kinase AZK	2.4	HLA-C	major histocompatibility complex, class I, C	1.765
KLF4	Kruppel-like factor 4 (gut)	2.4	Serpindb	serine (or cysteine) peptidase inhibitor, clade B, member db	1.753
NR1D1	nuclear receptor subfamily 1, group D, member 1	2.4	MALP1	nucleic acid binding protein 1	1.751
DUSP5	dual specificity phosphatase 5	2.4	SERTA4	SERTA domain containing 4	1.747
THRSP	thyroid hormone responsive	2.4	YPEL2	yippeee-like 2 (Drosophila)	1.747
BHLHE40	basic helix-loop-helix family, member e40	2.4	LDB3	—	1.747
DDIT3	DNA-damage-inducible transcript 3	2.4	ACTR8	APR6 actin-related protein 6 homolog (yeast)	1.742
MK167	antigen identified by monoclonal antibody Kl-67	2.4	TRDM11	RNA aspartic acid methyltransferase 1	1.740
ZFP36	ZFP36 ring finger protein	2.3	TJF3	—	1.734
EXOC4	exocyst complex component 4	2.3	Csprs (includes others)	—	1.725
GPCPD1	glycerophosphocholine phosphodiesterase GDE1 homolog (S. cerevisiae)	2.3	LY6G6D	solute carrier family 16, member 6	1.722
RET	ret proto-oncogene	2.3	HIST1HC	lymphocyte antigen 6 complex, locus GdD	1.721
CD83	CD83 molecule	2.3	BID	Bcl3 interacting domain death agonist	1.718
PPRC1	peroxisome proliferator-activated receptor gamma, coactivator-related 1	2.3	HLA-B	—	1.717
C6orf4	chromosome 6 open reading frame 4	2.2	PDP1	pyruvate dehydrogenase phosphatase catalytic subunit 1	1.712
PTRA1	protein tyrosine phosphatase type IVA, member 1	2.2	CLN8	ceroid-lipofuscinosis, neuronal 8 (epilepsy, progressive with mental retardation)	1.709
TMEM44	transmembrane protein 44	2.2	TCTA	T-cell leukemia translocation altered	1.703

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Supplementary Table S2. Continued.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
ZMAT3	zinc finger, matrix-type 3	2.2	UCMA	upper zone of growth plate and cartilage matrix associated	1.702
Lyz1/Lyz2	lysozyme 2	2.2	4930M14L22%K	RIKEN cDNA_4930M14L22 gene	1.702
C1orf82	chromosome 11 open reading frame 82	2.2	Kcrl1/2b	potassium channel tetramerisation domain containing 12b	1.701
CEN62	cyclin B2	2.1	LEO1	Leo 1, Polr1/RNA polymerase II complex component, homolog (S. cerevisiae)	1.701
PRAKGC1A	peroxisome proliferator-activated receptor gamma, coactivator 1 alpha nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	2.1	MPLKIP	M-phase specific PLK1 interacting protein	1.695
NKB1A	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha	2.1	NKG7	natural killer cell group 7 sequence	1.691
NRAA1	nuclear receptor subfamily 4, group A, member 1	2.1	DLEU7	deleted in lymphocytic leukemia, 7	1.686
PPP1R10	protein phosphatase 1, regulatory subunit 10	2.1	TMEM176B	transmembrane protein 176B	1.678
HSPA1A/HSPA1B	heat shock 70kDa protein 1A	2.1	SYTL3	synaptotagmin-like 3	1.676
FAM46B	family with sequence similarity 46, member B	2.1	ADAMTS15	ADAM metallopeptidase with thrombospondin type 1 motif, 15	1.662
TP53NP1	tumor protein p53 inducible nuclear protein 1	2.1	Zfp229/Zfp740	zinc finger protein 740	1.661
C14orf159	chromosome 14 open reading frame 159	2.0	AWT12010	expressed sequence AW112010	1.654
SESN2	sesfin 2	2.0	CHMP2B	charged multivesicular body protein 2B	1.652
LOXRF1	LOX peptidease N-terminal domain and ring finger 1	2.0	CIU	—	1.651
SERPINE2	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 2	2.0	SNX16	sorting nexin 16	1.646
MOB3B	MOB kinase activator 3B	2.0	GULP1	GULP engulfment adaptor PTB domain containing 1	1.644
ABCC9	ATP-binding cassette, sub-family C (CFR/MRP), member 9	2.0	Gstf3	glutathione S-transferase, theta 3	1.639
TSAPM4	tetraspanin 4	2.0	RORC	—	1.636
DNAJB4	DnaJ (Hsp40) homolog, subfamily B, member 4	2.0	INHBB	inhibin, beta B	1.630
KLF9	Kruppel-like factor 9	2.0	ESRRG	estrogen-related receptor gamma	1.627
TOP2A	topoisomerase (DNA) II alpha 170kDa	2.0	PDGFRB	platelet-derived growth factor receptor, beta polypeptide	1.627
TOB2	transducer of ERBB2, 2	2.0	TMEM54	transmembrane protein 54	1.623
KPNA2	karyopherin alpha 2 (RAG cohort 1, importin alpha 1)	2.0	RAB7L1	—	1.622
SERPINE1	serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1	1.9	VEGFC	vascular endothelial growth factor C	1.621
TSC22D3	TSC22 domain family, member 3	1.9	RRH	retinal pigment epithelium-derived rhodopsin homolog	1.614
LMCD1	LIM and cysteine-rich domains 1	1.9	Zfp932 (includes others)	zinc finger protein 932	1.611
DCXR	—	1.9	TIPA	tocopherol (alpha) transfer protein	1.604
SLC7A1	solute carrier family 7 (cationic amino acid transporter, y+ system), member 1	1.9	LYRM2	LYR motif containing 2	1.603
RAPH1	Ras association (RalGDS/AF-6) and pleckstrin homology domains 1	1.9	DNAJC12	DnaJ (Hsp40) homolog, subfamily C, member 12	1.597
LPIN1	lipin 1	1.9	Igk	immunoglobulin kappa chain complex	1.592
RMF39	ring finger protein 39	1.9	FMO2	flavin containing monooxygenase 2 (non-functional)	1.590
KLF10	Kruppel-like factor 10	1.9	GAUNT12	UDP-N-acetyl-alpha-D-galactosamine:poly(epsilon)-N-acetylgalactosaminyltransferase 12 (GalNAc-T12)	1.590
HERPUD1	homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain member 1	1.9	C2orf72	chromosome 2 open reading frame 72	1.589
TSC22D2	TSC22 domain family, member 2	1.9	METTL20	methyltransferase like 20	1.589
CAMKK1	calcium/calmodulin-dependent protein kinase kinase 1, alpha	1.9	ABHD17C	abhydrolase domain containing 17C	1.586
C1orf51	chromosome 1 open reading frame 51	1.9	RNF144B	ring finger protein 144B	1.584
KAA1737	KAA1737	1.9	PPH1	peptidylprolyl isomerase H (cyclophilin H)	1.583
BAX	BCL2-associated X protein	1.8	GSTZ3C (includes others)	—	1.579
CRY2	cryptochrome 2 (photolyase-like)	1.8	GSTT13	histone cluster 2, H3c	1.577
JDP2	Jun dimerization protein 2	1.8	VAV2	carbohydrate (chondroitin 4) sulfotransferase 13 vav 2, guanine nucleotide exchange factor	1.575
AUTS2	—	1.8	RHBDL2	rhomboid, vein-like 2 (Drosophila)	1.574
MMP12	matrix metalloproteinase 12 (macrophage elastase)	1.8	PM1M1	phosphomannomutase 1	1.574
CXCL2	chemokine (C-X-C motif) ligand 2	1.8	RAMP1	receptor (G protein-coupled) activity modifying protein 1	1.570
CHKA	choline kinase alpha	1.8	RNF25	—	1.569
VWA8	von Willebrand factor A domain containing 8	1.8	ETAA1	Ewing tumor-associated antigen 1	1.568
JUND	Jun D proto-oncogene	1.8	UBD	ubiquitin D	1.568
CSRP1	cysteine-serine-rich nuclear protein 1	1.8	NCN1	nicotin 1	1.566
FAP	fibroblast activation protein, alpha	1.8	SLC15A2	solute carrier family 15 (oligopeptide transporter), member 2	1.565
NDN	necln, melanoma antigen (MAGEB) family member	1.8	LBFI1	ligand dependent nuclear receptor interacting factor 1	1.563
SLC7A5	solute carrier family 7 (amino acid transporter light chain, L system), member 5	1.8	TIAB1	TGF-beta activated kinase 1/NAP3K7 binding protein 2	1.563
PPP1R15A	protein phosphatase 1, regulatory subunit 15A	1.8	CRVM	—	1.563
LAMA3	laminin, alpha 3	1.8	XXNL2	nucleoredoxin-like 2	1.562
C15orf39	chromosome 15 open reading frame 39	1.8	MTERF	mitochondrial transcription termination factor	1.562
TNFAIP6	peptidase M20 domain containing 1	1.8	TSAN8	tetraspanin 8	1.558
PM2D1	Kruppel-like factor 13	1.8	MAP3K1	mitogen-activated protein kinase kinase kinase 1, E3 ubiquitin protein ligase	1.558
KLF13	Kruppel-like factor 13	1.8	NMI	N-myc (and STAT) interactor	1.556
TSAN6	tetraspanin 6	1.8	RPA3	replication protein A3, 14kDa	1.556
FN1	fibronectin 1	1.7	RARB	retinoic acid receptor, beta	1.555
SULF2	sulfatase 2	1.7	ITIC3DA	tetranitropeptide repeat domain, 30A	1.555
SLC20A1	solute carrier family 20 (phosphate transporter), member 1	1.7	GIPBP3	GIP binding protein 3 (mitochondrial)	1.548
CIFED4	Cbp/p300-interacting transcription factor, with Glu/Asp-rich carboxy-terminal domain, 4	1.7	KRT79	keratin 79	1.548
TREB3	tribbles homolog 3 (Drosophila)	1.7	MYCL	zinc finger protein 329	1.543
PTRT	—	1.7	RASSF6	Ras association (RalGDS/AF-6) domain family member 6	1.541
PLK2	polo-like kinase 2	1.7	RANF3	PCAN family member 3	1.541
NOTCH1	notch 1	1.7	RCAN3	PCAN family member 3	1.541
BAZ1A	bromodomain adjacent to zinc finger domain, 1A	1.7	ZNF157	zinc finger protein 157	1.540

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Supplementary Table S2. Continued.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
PRRC4	proline rich Gln (G-carboxyglutamic acid) 4 (transmembrane)	1.7	ZDHHC2	zinc finger, DHH-type containing 2	1.540
IFO2	intermediates filament family orphan 2	1.7	ID1	isopentenyl-alpha-phosphate delta isomerase 1	1.539
PBK	PDZ binding kinase	1.7	PK3R1	phosphoinositide-3-kinase, regulatory subunit 1 (alpha)	1.538
WN14	wingless-type MMTV integration site family, member 4	1.7	CXCL14	chemokine (C-X-C motif) ligand 14	1.538
TRIB1	tribbles homolog 1 (Drosophila)	1.7	SUMO3	small ubiquitin-like modifier 3	1.537
ATF4	activating transcription factor 4	1.7	GN34	—	1.534
AK4	adenylate kinase 4	1.7	STR24	serine/threonine kinase 24	1.534
PDE4DIP	phosphodiesterase 4D interacting protein	1.7	FFA12	free fatty acid receptor 2	1.533
SLC23A2	solute carrier family 23 (ascorbic acid transporter), member 2	1.7	MAN1C1	mannoosidase, alpha, class 1C, member 1	1.532
DDIT4	DNA-damage-inducible transcript 4	1.7	GPHN	gephyrin	1.527
CDR2	cerebellar degeneration-related protein 2, 62kDa	1.7	Ces1e	carboxylesterase 1E	1.527
RNF169	ring finger protein 169	1.7	CYB5R1	cytochrome b5 reductase 1	1.526
AB1B2	ankyrin repeat and BTB (POZ) domain containing 2	1.7	CACFD1	calcium channel flower domain containing 1	1.526
WEE1	WEE1 homolog (S. pombe)	1.7	POLB	polymerase (DNA directed), beta	1.525
GD10	growth differentiation factor 10	1.7	MRPL27	mitochondrial ribosomal protein L27	1.525
CDC8C86	colled-coil domain containing 86	1.7	TMEM128	transmembrane protein 128	1.525
ZNF597	zinc finger protein 597	1.7	CA8	carbonic anhydrase VIII	1.523
AZIN1	antizyme inhibitor 1	1.7	C9orf52	chromosome 9 open reading frame 152	1.522
MCL1	myeloid cell leukemia sequence 1 (BCL2-related)	1.7	ABO	ABO blood group, (transferase A, alpha 1, 3-N-acetylglucosaminyltransferase, transferase B, alpha 1, 3-galactosyltransferase)	1.522
MDM2	MDM2 oncogene, E3 ubiquitin protein ligase	1.7	PML	promyelocytic leukemia	1.521
TXNP1	thioredoxin interacting protein	1.7	ALKBH7	alkB, alkylation repair homolog 7 (E. coli)	1.520
PDE7A	phosphodiesterase 7A	1.7	MFS99	major facilitator superfamily domain containing 9	1.520
IGFBP5	insulin-like growth factor binding protein 5	1.7	TUBA4A	tubulin, alpha 4a	1.518
Ccnb1/Gmt593	cyclin B1	1.7	METL10	methyltransferase like 10	1.518
NOLC1	nucleolar and coiled-body phosphoprotein 1	1.6	NX2	nuclear transport factor 2-like export factor 2	1.513
ZNF319	zinc finger protein 319	1.6	C3orf33	chromosome 3 open reading frame 33	1.513
KIF21A	kinesin family member 21A	1.6	MTERF3	MTERF domain containing 3	1.509
311000122Rk	RIKEN cDNA 311000122 gene	1.6	TTC308	tetratricopeptide repeat domain 308	1.508
PCF11	PCF11 cleavage and polyadenylation factor subunit	1.6	TCEANC	transcription elongation factor A (SII) N-terminal and central domain containing	1.508
CDC42BP6	CDC42 binding protein kinase gamma (DMPK-like)	1.6	PPM1K	protein phosphatase, Mg2+/Mn2+ dependent, 1K	1.507
ANGPT12	angiotensin-like 2	1.6	TRIGK	triple QxxK/R motif containing	1.507
CENL1	cyclin L1	1.6	CD27	CD27 molecule	1.507
SLC38A2	solute carrier family 38, member 2	1.6	TMM21	translocase of inner mitochondrial membrane 21 homolog (yeast)	1.503
T0B1	transducer of ERBB2, 1	1.6	RAPGEF5	Rap guanine nucleotide exchange factor (GEP) 5	1.503
WAK2	WAK (lysine deficient) protein kinase 2	1.6	SHC1	SHC (Src homology 2 domain containing) transforming protein 1	1.503
USP54	ubiquitin specific peptidase 54	1.6	ORMDL1	ORMDL-like 1 (S. cerevisiae)	1.502
DUSP3	dual specificity phosphatase 3	1.6	Serpind1b	serpine (or cysteine) peptidase inhibitor, clade B, member 1b	1.501
RSAD1	radical S-adenosylmethionine domain containing 1	1.6			
MGA14A	mammals (alpha-1, 3)-glycoprotein beta-1,4-N-acetylglucosaminyltransferase, isozyme A	1.6			
C030046G05	uncharacterized protein C030046G05	1.6			
CARS	cysteine/HRNA synthetase	1.6			
DGKG	diacylglycerol kinase, gamma 90kDa	1.6			
ISM1	isfamin 1, angiogenesis inhibitor	1.6			
PGSTN	perostin, osteoblast specific factor	1.6			
ENPDP7	ectonucleoside triphosphate diphosphohydrolase 7	1.6			
FAM212B	family with sequence similarity 212, member B	1.6			
C11orf24	chromosome 11 open reading frame 24	1.6			
ENC1	ectodermal-neural cortex 1 (with BTB domain)	1.6			
YOD1	YOD1 deubiquitinase	1.6			
C6H	cytokine inducible SH2-containing protein	1.6			
CCNA2	cyclin A2	1.6			
LNK1	ligand of numb-protein X 1, E3 ubiquitin protein ligase	1.6			
ZNF281	zinc finger protein 281	1.6			
FMOD	left-right determination factor 1	1.6			
NCAPH	fibromodulin	1.6			
ANKRD12	ankyrin repeat domain 12	1.6			
NCAPH	—	1.6			
LIF	lactotransferin	1.6			
STOX2	starchless box 2	1.6			
EIF2D	eukaryotic translation initiation factor 2D	1.6			
PPAT	phosphatidyl pyrophosphate amidotransferase	1.6			
MBP	myelin basic protein	1.6			
GNL3	guanine nucleotide binding protein-like 3 (nucleolar)	1.6			
PC	pyruvate carboxylase	1.6			
POLK	polymerase (DNA directed) kappa	1.6			
LIF	leukemia inhibitory factor	1.6			
PDE12	phosphodiesterase 12	1.5			
TF	transferrin	1.5			
CDK1	cyclin-dependent kinase 1	1.5			

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Supplementary Table S2. Continued.

Symbol	Gene name	Symbol	Fold change up	Gene name	Fold change down
ZNF131	zinc finger protein 131		1.5		
CD300A	CD300a molecule		1.5		
NFE2L2	nuclear factor, erythroid 2-like 2		1.5		
RHOB	ras homolog family member B		1.5		
STMN1	stathmin 1		1.5		
ZBTB21	zinc finger and BTB domain containing 21		1.5		
TNC	—		1.5		
HK2	hexokinase 2		1.5		
FRY	fury homolog (Drosophila)		1.5		
GRIA3	glutamate receptor, ionotropic, AMPA 3		1.5		
KIF1B	kinesin family member 1B		1.5		
CDC20	cell division cycle 20		1.5		
SEMA3D	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3D		1.5		
ZBTB2	zinc finger and BTB domain containing 2		1.5		
TCFL5	transcription factor-like 5 (basic helix-loop-helix)		1.5		
CENPA	centromere protein A		1.5		
GALNT6	UDP-N-acetyl-alpha-D-galactosamine polypeptide N-acetylglucosaminyltransferase 6 (GalNAc-6)		1.5		
BACH2	BTB and CNC homology 1, basic leucine zipper transcription factor 2		1.5		
AGT	angiotensinogen (serpin peptidase inhibitor, class A, member 8)		1.5		
KLF7	—		1.5		
SYNPO	synaptopodin		1.5		
MYH11	myosin, heavy chain 11, smooth muscle		1.5		
ACTG2	actin, gamma 2, smooth muscle, enteric		1.5		
COL4A5	collagen, type IV, alpha 5		1.5		
ZFH3	zinc finger homeobox 3		1.5		
PLCXD2	phosphatidylinositol-specific phospholipase C, X domain containing 2		1.5		
RBBP6	refinoblastoma binding protein 6		1.5		
DDX21	DEAD (Asp-Glu-Ala-Asp) box helicase 21		1.5		
PLAUR	plasminogen activator, urokinase receptor		1.5		
AAAS	achalasia, adrenergic insufficiency, alacrimia		1.5		
BRWD1	bromodomain and WD repeat domain containing 1		1.5		
NRG2	neuregulin 2		1.5		
SLC5A3	solute carrier family 5 (sodium/myo-inositol cotransporter), member 3		1.5		
CDC42EP1	CDC42 effector protein (Rho GTPase binding) 1		1.5		
DDX3X	—		1.5		
RIPK4	receptor-interacting serine-threonine kinase 4		1.5		
CPT1A	carnitine palmitoyltransferase 1A (liver)		1.5		
NUP90	nucleoporin 90kDa		1.5		
TTC25	tetratricopeptide repeat domain 25		1.5		
TP63	tumor protein p63		1.5		
IGFBP2	insulin-like growth factor 2, receptor		1.5		
YTHDF1	YTH domain family, member 1		1.5		
ATXN2	ataxin 2		1.5		

Supplementary Table S3. HBOT vs. control.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
CHAC1	ChoC, cation transport regulator homolog 1 (E. coli)	13.19573678	SLC13A3	solute carrier family 13 (sodium-dependent dicarboxylate transporter), member 3	7.862564788
TRB3	trifolins homolog 3 (Drosophila)	6.854255638	SA42	—	5.704102869
DBP	D site of albumin promoter (albumin D-box) binding protein	6.399882008	DUSP1	dual specificity phosphatase 1	5.168829401
PSAT1	phosphoserine aminotransferase 1	6.117745112	CH1A	chitinase, acidic	5.059518169
MTHFD2	methylene tetrahydrofolate dehydrogenase (NADP+ dependent) 2, methylenetetrahydrofolate cyclohydrolase	5.084126757	CXCL13	chemokine (C-X-C motif) ligand 13	4.518988858
PD4K	pyruvate dehydrogenase kinase, isozyme 4	4.633171225	MSA6A	membrane-spanning 4-domains, subfamily A, member 6A	4.187241128
ATF5	activating transcription factor 5	3.458148925	ALF1	allograft inflammatory factor 1	3.991690876
RNASE1	ribonuclease, RNase A family, 1 (pancreatic)	3.067365319	Tgfb1/Tgfp2	T cell specific GTPase 1	3.82378127
PCK2	phosphoenolpyruvate carboxykinase 2 (mitochondrial)	2.983488053	AMY1A (includes others)	amylase, alpha 1A (salivary)	3.805273105
SLC3A2	solute carrier family 3 (amino acid transporter heavy chain), member 2	2.946538435	CD52	—	3.602503919
RACS	arginyl-HRNA synthetase	2.828427125	BC12A1	BC12-related protein A1	3.575140649
DUSP4	dual specificity phosphatase 4	2.777910272	Fcrl6	Fc receptor-like 5, scavenger receptor	3.535710124
PHGDH	phosphoglycerate dehydrogenase	2.646342888	Igvl1	immunoglobulin lambda variable 1	3.506422885
Acot1	acyl-CoA thioesterase 1	2.602683711	HCK	hemopoietic cell kinase	3.484616769
SHMT2	serine hydroxymethyltransferase 2 (mitochondrial)	2.503592917	APOF	apolipoprotein F	3.410639567
SLC7A1	solute carrier family 7 (cationic amino acid transporter, y+ system), member 1	2.4794154	Igfbp1	interleukin inducible GTPase 1	3.370687318
TLL1	toll-like 1	2.470837274	CRP3	cysteine-rich secretory protein 3	3.361255009
PK3BP1	phosphoinositide-3-kinase interacting protein 1	2.438510188	LCN2	lipocalin 2	3.233283475
GF15	growth differentiation factor 15	2.368543224	Clec4e3	C-type lectin domain family 4, member a3	3.188336392
SLC7A5	solute carrier family 7 (amino acid transporter light chain, L system), member 5	2.335934789	Scd2	stearyl-Coenzyme A desaturase 2	3.116658319
IARS	isolectin-B4 binding protein 1	2.334316204	CCL8	—	3.097276111
DDIT4	DNA-damage-inducible transcript 4	2.33269874	IGHM	immunoglobulin heavy constant mu	3.071620539
COL11A1	collagen, type XI, alpha 1	2.324628215	FOS	FBJ murine osteosarcoma viral oncogene homolog	3.031433133
CARS	cysteinyl-HRNA synthetase	2.292624371	CD72	CD72 molecule	3.020946171
SLC22A4	solute carrier family 22 (organic cation/zwitterion transporter), member 4	2.239225777	IFI44	interferon-induced protein 44	3.004239854
GRB10	growth factor receptor-bound protein 10	2.205338326	M64d4b	membrane-spanning 4-domains, subfamily A, member 6B	2.969604741
BCL6	B-cell CLL/lymphoma 6	2.200757219	PRKCB	protein kinase C, beta	2.918040688
IFRD1	—	2.184041091	IK3001Z016R1K/IK13	—	2.869899069
MA6RS	methionyl-HRNA synthetase	2.162949527	DDX60	DEAD (Asp-Glu-Ala-Asp) box polypeptide 60	2.865923301
LSS	lanosterol synthase (2,3-oxidosqualene-lanosterol cyclase)	2.140577397	CLEC4A	C-type lectin domain family 4, member A	2.838246712
UBR2	ubiquitin protein ligase E3 component n1-recogin1.2	2.140577397	CS16	cystatin D	2.834314793
DDIT3	DNA-damage-inducible transcript 3	2.139094176	ITGAL	integrin, alpha L (antigen CD11A (p180), lymphocyte function-associated antigen 1; alpha polypeptide)	2.824508809
FBXO31	F-box protein 31	2.137611982	PSMB8	proteasome (prosome, macropath) subunit, beta type 8	2.783692784
PEG3	—	2.136130816	M64d4b (includes others)	—	2.749177391
CEBPG	CCAAT/enhancer binding protein (C/EBP), gamma	2.11696879	RSAD2	radical S-adenosyl methionine domain containing 2	2.711328654
D630004K10Rik	RIKEN cDNA D630004K10 gene	2.112571251	IFI47	interferon gamma inducible protein 47	2.696335463
WISP1	WNT1 inducible signaling pathway protein 1	2.108182847	C3AR1	complement component 3a receptor 1	2.681425183
HERPUD1	herpesvirus thymidine kinase interacting protein	2.1023445818	IGJ	immunoglobulin J polypeptide, linker protein for immunoglobulin alpha and mu polypeptides	2.633533844
VLDLR	very low density lipoprotein receptor	2.086377187	FCER1G	Fc fragment of IgE high affinity L receptor for gamma polypeptide	2.626242251
CDCA2BPG	CDCA2 binding protein kinase gamma (DMPK-like)	2.06095163	IFIT1B	interferon-induced protein with tetratricopeptide repeats 1B	2.611719574
EF4EBP1	eukaryotic translation initiation factor 4E binding protein 1	2.063363659	CCL2	chemokine (C-C motif) ligand 2	2.593679109
SLC6A9	solute carrier family 6 (neurotransmitter transporter, glycine), member 9	2.059080167	BA3P1	brain abundant, membrane attached signal protein 1	2.584705661
CPT1A	carbamate palmitoyltransferase 1A (liver)	2.054802879	SCD	stearyl-CoA desaturase (delta9-desaturase)	2.573978495
EF3C/EF3CL	eukaryotic translation initiation factor 3, subunit C	2.043440165	PSMB9	proteasome (prosome, macropath) subunit, beta type 9	2.517514347
RNF39	ring finger protein 39	1.990685744	HLA-C	major histocompatibility complex, class I, C	2.503592917
GP72	glucamic pyruvate transaminase (alanine aminotransferase) 2	1.976571303	RAC2	ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2)	2.503592917
NABP2L1	NEDD4 binding protein 2-like 1	1.968388804	B2M	beta-2-microglobulin	2.496661098
ATF4	activating transcription factor 4	1.945309895	TRIM30A/TRIM30d	—	2.4794154
PTN	pleiotrophin	1.937236378	GBP4	guanylate binding protein 4	2.453769955
FAP	fibroblast activation protein, alpha	1.929196369	ITGB2	integrin, beta 2 (complement component 3 receptor 3 and 4 subunit)	2.443586203
KC1D15	potassium channel tetramerization domain containing 15	1.921189728	EGFR1	early growth response 1	2.438510188
KIF2A	kinesin heavy chain member 2A	1.921189728	ApoA9/ApoA9b	apolipoprotein L 9b	2.418311352
ATP5A2	ATPase type 13A2	1.885569072	XAF1	XIAP associated factor 1	2.413287839
AAARS	alaninyl-HRNA synthetase	1.881652215	MSI2	musashi RNA-binding protein 2	2.413287839
FBN17	fibulin 7	1.880348405	CXCL9	chemokine (C-X-C motif) ligand 9	2.408274762
SEPT6	septin 6	1.875142193	BS2	bone marrow stromal cell antigen 2	2.386671486
SNORD22	small nuclear RNA, C/D box 22	1.869950396	FP22	formyl peptide receptor 2	2.381713699
CNPPD1	cyclin Pos1/PHO80 domain containing 1	1.860659583	CMPK2	immunoglobulin heavy constant alpha 1	2.366902044
TAFA	TAFII RNA polymerase II, TAFII box binding protein (TBP)-associated factor, 135kDa	1.860899315	FCGR3A	cytidine monophosphate (UMP-CMP) kinase 2, mitochondrial	2.365262
TEF	thymotrophic embryonic factor	1.855746953	GLI1P1	Fc fragment of IgG; low affinity IIa receptor (CD16a)	2.348923942
SLCSA3	solute carrier family 5 (sodium/myo-inositol cotransporter), member 3	1.842928372	LYO2 (includes others)	GLI pathogenesis-related 1	2.342420362
SARS	sevri-HRNA synthetase	1.841651394	G4LE	—	2.305372694
LONR3	LON peptidase N-terminal domain and ring finger 3	1.837825767	MZB1	UDP-galactose-4-epimerase	2.305372694

Continued on next page

Supplementary Table S3. Continued.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
KIF16B	kinesin family member 16B	1.8263945	USP18	ubiquitin specific peptidase 18	2.28627671
SLC1A4	solute carrier family 1 (glutamate/neutral amino acid transporter), member 4	1.82386331	EMR1	egr-like module containing muscin-like, hormone receptor-like 1	2.27836754
ASNS	asparagine synthetase (glutamine-hydrolyzing)	1.815038311	IGF1	isoprenyl-diphosphate delta isomerase 1	2.26891097
JDP2	Jun dimerization protein 2	1.809758755	Id1	inhibitor gamma induced G1Phase	2.264197804
NARS	asparaginyl-HRNA synthetase	1.805001465	M646dc	membrane-spanning 4-domains, subfamily A, member 6C	2.259494429
PEX11A	peroxisomal biogenesis factor 11, alpha	1.803750757	G-vin1 (includes others)	—	2.259494429
SORD	sorbitol dehydrogenase	1.797510253	CORO1A	coronin, actin binding protein, 1A	2.25792881
Mk67	antigen identified by monoclonal antibody Ki47	1.796264746	CD53	CD53 molecule	2.256334275
SMOCC2	SPARC related modular calcium binding 2	1.79129134	C1GB	complement component 1, q subcomponent, B chain	2.253238457
PHF10	PHD finger protein 10	1.786331705	IV86	lymphocyte antigen 86	2.263238457
PPP1R12C	protein phosphatase 1, regulatory subunit 12C	1.782620992	GA32	growth arrest-specific 2	2.248557846
SLC38A9	solute carrier family 38, member 9	1.780151467	TRC	transferrin receptor	2.245442844
COL4A5	collagen, type IV, alpha 5	1.776453592	Gp88	guanylate-binding protein 8	2.242332156
PAN3	PAN3 poly(A) specific ribonuclease subunit homolog (S. cerevisiae)	1.766630103	EB13	Epstein-Barr virus induced 3	2.237674202
TC2N	tandem C2 domains, nuclear	1.762960316	IFITD2B	interferon activated gene 202B	2.236123702
VNN1	vanin 1	1.759298152	Wfoc17	WAP four-disulfide core domain 17	2.225302021
DEPTOR	DEP domain containing TOR-interacting protein	1.751996663	OAS1	2'-5'-oligoadenylate synthetase 1.40/46kDa	2.223758315
NXF2/NXF2B	nuclear RNA export factor 2	1.744725412	Gp66 (includes others)	guanylate binding protein 6	2.203810232
GA85	glycyl-HRNA synthetase	1.743516479	Oas2	2'-5'-oligoadenylate synthetase-like 2	2.174976782
UPF2	UPF2 regulator of nonsense transcripts homolog (yeast)	1.741101127	NGF	nerve growth factor (beta polypeptide)	2.15546629
DHFD1	dehydrogenase E1 and transketolase domain containing 1	1.739894705	RTP4	receptor (chemosensory) transporter protein 4	2.15546629
ACADL	acyl-CoA dehydrogenase, long chain	1.738689712	SERPINA3	serpin peptidase inhibitor, clade A (alpha-1 antitrypsin), member 3	2.153972752
LPO	lactoperoxidase	1.736280455	ZBP1	Z-DNA binding protein 1	2.109644634
CTH	cystathionase (cystathionine gamma-lyase)	1.732673713	NFKB2	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, zeta	2.097978655
PHF3	PHD finger protein 3	1.730273381	PIPRC	protein tyrosine phosphatase, receptor type, C	2.095072254
CTD41	—	1.729092319	Gp62	guanylate binding protein 2	2.093620564
ADHFE1	alcohol dehydrogenase, iron containing, 1	1.721898837	IER3	immediate early response 3	2.084931522
PNPLA7	patatin-like phospholipase domain containing 7	1.715941061	KLK3	kallikrein-related peptidase 3	2.073402202
TRIM24	—	1.706452196	C4orf32	chromosome 4 open reading frame 32	2.071965527
DDX27	DEAD (Asp-Glu-Ala-Gly) box polypeptide 27	1.705269784	IFI44L	interferon-induced protein 44-like	2.065079207
RAP2EF3	Rap guanine nucleotide exchange factor (GEF) 3	1.704088819	S100A1	S100 calcium binding protein A1	2.030732202
CRISP1D2	glycine-rich secretory protein LCCL domain containing 2	1.702901745	LY6E	lymphocyte antigen 6 complex, locus E	2.025109615
EP85	glutamyly-prolyl-HRNA synthetase	1.701727459	TYROBP	TYRO protein tyrosine kinase binding protein	2.020202893
TABS	threonyl-HRNA synthetase	1.701727459	Cc6	chemokine (C-C motif) ligand 6	2.018103268
LCORL	ligand dependent nuclear receptor corepressor-like	1.694664487	IFITM2	interferon induced transmembrane protein 2	2.015307521
IPK3	tumor protein p63	1.694664487	ELOVL6	ELOVL fatty acid elongase 6	2.015307521
CRY2	cryptochrome 2 (photolyase-like)	1.688801775	SLAMF9	SLAM family member 9	1.994462593
DTMA	dehydrogenase 2 (photolyase-like)	1.687631592	SAMD9L	sterile alpha motif domain containing 9-like	1.991699506
LAMA3	laminin, alpha 3	1.686462221	SLC15A3	solute carrier family 15 (oligopeptide transporter), member 3	1.986184991
DHR54	dehydrogenase/reductase (SDR family) member 4	1.684125907	MAF	v-maf avian musculoaponeurotic fibrosarcoma oncogene homolog	1.984808749
TIAM1	T-cell lymphoma invasion and metastasis 1	1.682958965	TU882A	tubulin, beta 2A class Ia	1.984808749
SYL3	synaptotagmin-like 3	1.681792831	EV2A	ectopic viral integration site 2A	1.971098674
RPUSD2	RNA pseudouridylylase synthase domain containing 2	1.675974269	GRP93	G protein-coupled receptor 31	1.971098674
MYC	v-myc avian myelocytomatosis viral oncogene homolog	1.675974269	FCGR1A	Fc fragment of IgG, high affinity Ia, receptor (CD64)	1.937236378
SLC25A34	solute carrier family 25, member 34	1.670175839	SIAT1	signal transducer and activator of transcription 1, 9 kbDa	1.930653405
FMO5	flavin monooxygenase	1.667862088	LGALS1	lectin, galactose-binding, soluble, 1	1.927859615
NR1D2	dehydrogenase/reductase (SDR family) member 4	1.6653244197	GATM	glycine amidinotransferase 1	1.926523788
GLISCR1L	GLISCR1-like	1.663244197	PIP4K2A	phosphatidylinositol-5-phosphate 4-kinase, type II, alpha	1.921189728
SPRED1	solute carrier family 25 (carnitine/acylcarnitine translocase), member 20	1.663244197	NCF4	neutrophil cytosolic factor 4, 40kDa	1.915870436
SLC25A20	solute carrier family 25 (carnitine/acylcarnitine translocase), member 20	1.663244197	CYBA	cytochrome b-245, alpha polypeptide	1.914542916
HEPH	hephaestin	1.657489809	CESSA	carboxylesterase 5A	1.905275996
NADK2	NAD kinase 2, mitochondrial	1.657489809	PPA1	pyrophosphatase (inorganic) 1	1.903956817
HTRA3	HTRA serine peptidase 3	1.650467937	KIAA0100	KIAA0100	1.901318202
HNRNP1	heterogeneous nuclear ribonucleoprotein A1	1.650610811	CD48	CD48 molecule	1.896063993
G/PBP4	GTP binding protein 4	1.650610811	SRSF3	serine/arginine-rich splicing factor 3	1.892115293
SLC6A20	solute carrier family 6 (proline/IMINO transporter), member 20	1.64832417	C15C	complement component 1, q subcomponent, C chain	1.889494082
DUSP6	dual specificity phosphatase 6	1.645730375	LDLR	low density lipoprotein receptor	1.877743495
EHMT2	euchromatic histone-lysine N-methyltransferase 2	1.642621402	COCH	—	1.871246996
DGKZ	diacylglycerol kinase, zeta	1.641483218	ACYY2	acylphosphatase 2, muscle type	1.871246996
FBP2	fructose-1,6-bisphosphatase 2	1.641483218	RCHJ1	ras homolog family member J	1.860899315
FBXO32	F-box protein 32	1.640345822	HERC6	HECT and RLD domain containing E3 ubiquitin protein ligase family member 6	1.839100092
PSPH	phosphoserine phosphatase	1.639209215	NRIF3	nuclear receptor interacting protein 3	1.832737289
MJMI	melanoma associated antigen (mutated) 1	1.639209215	CFP	complement factor properdin	1.831467373
TPR	translocated promoter region, nuclear basket protein	1.636593863	MAIRCH1	membrane-associated ring finger (C3HC4) 1, E3 ubiquitin protein ligase	1.825130977
TSC22D3	TSC22 domain family, member 3	1.635804117	HCL1S1	hematopoietic cell-specific Lyn substrate 1	1.822602561
TYRO3	TYRO3 protein tyrosine kinase	1.635804117	PKB	protein kinase (CAMP-dependent; catalytic) inhibitor beta	1.821339667
IRC2BP2	inhibitor regulatory factor 2 binding protein 2	1.634670657	CAPN3	calpain 3, (p94)	1.820077648
EIF2S2	eukaryotic translation initiation factor 2, subunit 2, beta, 38kDa	1.633537982	JUN	jun proto-oncogene	1.813780658
RCPN1L	rhoGAP1 associated tail protein 1-like	1.630144665	PLEK	pleckstrin	1.812523877

Continued on next page

Supplementary Table S3. Continued.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
MAP3K4	mitogen-activated protein kinase kinase kinase 4	1.62788637	TMSB10/TMSB4X	—	1.807505454
RBBP6	retinoblastoma binding protein 6	1.626758396	FVB	FYN binding protein	1.80925302
EEA1	early endosome antigen 1	1.623379162	CCR4ML	CCR4 carbon catabolite repression 4-like (S. cerevisiae)	1.80125196
HECA	hectadecan homolog (Drosophila)	1.622254311	SULT1C3	sulfotransferase family, cytosolic, 1C, member 3	1.80000386
GF3C2	general transcription factor IIIC, polypeptide 2, beta 110kDa	1.62173024	EpsH1	epithelial stromal interaction 1 (breast)	1.798756624
G-ABARAPL1	GABA(A) receptor-associated protein like 1	1.617176297	C1GA	complement component 1, alpha subcomponent 1, A chain	1.793716319
Acaalb	acetyl-Coenzyme A acyltransferase 1B	1.616641738	CA13	carbonic anhydrase XIII	1.792533399
GRF1	G-rich RNA sequence binding factor 1	1.616521555	MSA47	stromal cell-derived factor 2-like 1	1.792533399
EEF2K	eukaryotic elongation factor-2 kinase	1.612165663	TMX1	membrane-spanning 4-domains, subfamily A, member 7	1.790950142
ADCK3	arid domain containing kinase 3	1.612165663	IRGM	thioredoxin-related transmembrane protein 1	1.786260992
GLUL	glutamate-aminonia ligase	1.611048882	SLA	immunity-related GTPase family, M	1.782670325
FAM135A	family with sequence similarity 135, member A	1.609932275	IFI202	Src-like adaptor	1.778917987
NCL	nucleolin	1.609932275	IFI202 (includes others)	interferon activated gene 204	1.77399261
H6PD	hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase)	1.609932275	MAN1A1	mannosidase, alpha, class 1A, member 1	1.772763398
CITEF2	Cbp/p300-interacting transcription factor, with Glu/Asp-rich carboxy-terminal domain, 2	1.605474777	LYVE1	lymphatic vessel endothelial hyaluronan receptor 1	1.767855042
ERBB3	v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 3	1.604362333	AW112010	expressed sequence AW112010	1.767855042
ADORA1	adenosine A1 receptor	1.602139755	LPXN	leupaxin	1.767855042
YARS	tyrosyl-tRNA synthetase	1.599202057	CP	caruloplasmin (ferroxidase)	1.767855042
SON3DACH	sonosudach ankyrin repeat domain family member A	1.599202057	H2-L	histocompatibility 2, D region locus L	1.767855042
H53T3B1	heparan sulfate (glucosamine) 3-O-sulfotransferase 3B1	1.598811661	Cox8b	cytochrome c oxidase subunit VIIIb	1.7626960316
MGA	MGA, MAX dimerization protein	1.597703833	GBP7	guanylate binding protein 7	1.758079122
AUTS2	—	1.597703833	LRG1	leucine-rich alpha-2-glycoprotein 1	1.758079122
FTS3	Fts3 homolog 3 (E. coli)	1.596596773	FERMT3	fermitin family member 3	1.755860936
AGMO	alkylglycerol monooxygenase	1.596596773	NABP1	nucleic acid binding protein 1	1.75199663
ZFYVE1	zinc finger, FYVE domain containing 1	1.59549048	TNFRSF12A	tumor necrosis factor receptor superfamily, member 12A	1.75199663
ABI3BP	ABI family member 3 (NESH) binding protein	1.594384953	PEI100	PEI100 homolog (S. cerevisiae)	1.750782659
PRR2	regulation of nuclear pre-mRNA domain containing 2	1.592176198	IFB7	interferon regulatory factor 7	1.74956963
HADHB	hydroxyacyl-CoA dehydrogenase/3-ketoadyl-CoA thiolase/enoyl-CoA hydratase (functional protein), beta subunit	1.587767862	SRGN	seignin	1.747145792
SCARA5	scavenger receptor class A, member 5 (putative)	1.587767862	IFI2T2	interferon, alpha-inducible protein 27-like 2	1.743516479
SIC19A2	solute carrier family 11 (thiamine transporter), member 2	1.586667686	SIC11A1	regulator of G-protein signaling 2, 24kDa	1.739290874
TAM2	T-cell lymphoma invasion and metastasis 2	1.585568273	RG32	DEXH (Asp-Glu-X-Hs) box polypeptide 58	1.739290874
KIAA1737	KIAA1737	1.583371732	HMX58	GRPase, IMAP family member 4	1.737848437
ALDH1L2	aldehyde dehydrogenase 1 family, member L2	1.583371732	GIMAF4	complement component 3	1.736280455
PER3	period circadian clock 3	1.582274602	C3	complement component 3	1.736280455
PLXND2	phosphatidylinositol-specific phospholipase C, X domain containing 2	1.581178233	DBI	diazepam binding inhibitor (GABA receptor modulator, acyl-CoA binding protein)	1.735077374
ABCC9	ATP-binding cassette, sub-family C (CFR/MRP), member 9	1.579600048	GCHI	GTP cyclohydratase 1	1.733875127
DSP	desmoplakin	1.579570772	LGALS3BP	lectin, galactose-binding, soluble, 3 binding protein	1.728679117
TRM37	tripartite motif containing 37	1.579570772	GBP2	guanylate binding protein 2, interferon-inducible	1.723092319
GKAP1	G kinase anchoring protein 1	1.574615953	CTSS	cathepsin S	1.723092319
FOXRED2	FAD-dependent oxidoreductase domain containing 2	1.574615953	ARRGDIB	Rho GDP dissociation inhibitor (GDI) beta	1.7173130873
FAM64B	family with sequence similarity 84, member B	1.573524891	RIKEN cDNA 503343015.9k	RIKEN cDNA 503343015 gene	1.7171310873
CTSDP2	CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) small phosphatase 2	1.573524891	ACTB	actin, beta	1.715941061
TMEM209	transmembrane protein 209	1.572434584	SURP	SPA stem-loop interacting RNA binding protein	1.712376569
NPM1	nucleophosmin (nucleolar phosphoprotein B23, nuradlin)	1.572434584	LGMIN	legumin	1.712376569
AC02	acyl-CoA thioesterase 2	1.571345033	MSN	moesin	1.71190061
PEX17G	peroxisomal biogenesis factor 11 gamma	1.569168196	IFM2	immunofly-related GTPase family M member 2	1.711190061
DRP4	dipeptidyl-peptidase 4	1.569168196	IGSF6	immunoglobulin superfamily, member 6	1.704452196
CRY1	cryptochrome 1 (photolyase-like)	1.569168196	CCND1	cyclin D1	1.705269784
LARS	leucyl-tRNA synthetase	1.569168196	IFIT2	interferon-induced protein with tetratricopeptide repeats 2	1.697015803
Aox3	aldehyde oxidase 3	1.569168196	INTS2	integrator complex subunit 2	1.695839929
INPP5K	inositol polyphosphate-5-phosphatase K	1.568080908	BDH1	3-hydroxybutyrate dehydrogenase, type 1	1.69466487
TMK2	tyrosine kinase, non-receptor, 2	1.568080908	CH229/Ch22b	cytokinetic lymphocyte-associated protein 2, alpha	1.693490625
EP3A	eukaryotic translation initiation factor 3, subunit A	1.566006908	NME1	NME1/NM23 nucleoside diphosphate kinase 1	1.693490625
RORC	retinoid receptor	1.565908893	CASP1	caspase 1, apoptosis-related cysteine peptidase	1.688801775
HDAC11	histone deacetylase 11	1.565908893	FABP4	fatty acid binding protein 4, adipocyte	1.688801775
SIC38A2	solute carrier family 38, member 2	1.565908893	BCL3	BCL3 family member 3	1.68801775
ITM2A	integral membrane protein 2A	1.564823563	NDRG1	N-myc downstream regulated 1	1.68462221
SIC23A1	solute carrier family 23 (ascorbic acid transporter), member 1	1.564823563	SUFN1/2L	—	1.681792831
PPAT	phosphatidyl pyrophosphate amidotransferase	1.563792984	PSMB10	proteasome (prosome, macropain) subunit, beta type, 10	1.68027594
YPO1	scitibled planar cell polarity protein	1.563792984	S100A6	S100 calcium binding protein A6	1.679462986
SCRIB	scribble planar cell polarity protein	1.559409885	H2-S6	histocompatibility 2, epsilon locus 5	1.675974289
UCHL5	ubiquitin carboxy-terminal hydrolase L5	1.559329159	FLBD1	phosphoinositide 3-kinase domain containing 1	1.674812975
PLCLR	prolactin receptor	1.555092072	UQC22	ubiquitin-cytochrome c reductase complex assembly factor 2	1.673652485
NCLB	nucleolar protein 8	1.554014538	HSP90B1	heat shock protein 90kDa beta (Grp94), member 1	1.6724928
DPEF1	dipeptidase 1 (renin)	1.554014538	PDGFD	platelet derived growth factor D	1.671333918
HNRNP1	heterogeneous nuclear ribonucleoprotein L	1.554014538	IGK	immunoglobulin kappa chain complex	1.670175839
SRP68	signal recognition particle 68kDa	1.55293775	HSP2BP	heat shock transcription factor 2 binding protein	1.670175839
RXRB	retinoid X receptor, beta	1.55293775	P1PKK	protein tyrosine phosphatase, receptor type, K	1.667862088
SEI3	—	1.551861709	GOLT1B	golgi transport 1B	1.663241917

Continued on next page

Supplementary Table S3. Continued.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
HNRP1U	heterogeneous nuclear ribonucleoprotein U (scaffold attachment factor A)	1.551861709	C19orf10	chromosome 19 open reading frame 10	1.60940048
LEM2D	—	1.550784013	CFB	complement factor B	1.659789171
DRK1A	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 1A	1.550786413	CcPp	chemokine (C-C motif) ligand 9	1.659789171
ISG20L2	—	1.550786413	NUD25	nucleoside diphosphate linked moiety X-type motif 5	1.659789171
SLC9A3R2	solute carrier family 9, subfamily A (NHE3, cation proton antiporter 3), member 3 regulator 2	1.549711862	LSM6	LSM6 homolog, US small nuclear RNA associated (S. cerevisiae)	1.657489809
TAF1D	TAF1A box binding protein (TBP)-associated factor, RNA polymerase I, D, 41kDa	1.549711862	STAF1	signal transducing adaptor family member 1	1.657489809
FAM63A	family with sequence similarity 63, member A	1.548638056	S100A9	S100 calcium binding protein A9	1.652900636
HCOX2	hook microtubule-tethering protein 2	1.546492675	MAL	mol. T-cell differentiation protein	1.652900636
ASRGL1	asparaginase like 1	1.545421099	ITGAM	integrin, alpha M (complement component 3 receptor 3 subunit)	1.65175633
DGKG	diacylglycerol kinase, gamma 90kDa	1.545421099	LCP2	lymphocyte cytosolic protein 2 (SH2 domain containing leukocyte protein of 76kDa)	1.649040691
RCC2	regulator of chromosome condensation 2	1.544350266	PLAC8	placenta-specific 8	1.648900137
HSP19	heat shock 70kDa protein 9 (montain)	1.543280175	Sra	seminal vesicle antigen	1.643760375
ANKRD12	ankyrin repeat domain 12	1.543280175	DDX6	DEAD (Asp-Glu-Ala-Asp) box helicase 6	1.638073396
PKI3C2G	phosphatidylinositol(4)-phosphate 3-kinase, catalytic subunit type 2, gamma	1.543280175	UBA7	ubiquitin-like modifier activating enzyme 7	1.638073396
KTN1	kinesin 1 (kinesin receptor)	1.543280175	HSD17B12	hydroxysteroid (17-beta) dehydrogenase 12	1.636938363
IL6ST	interleukin 6 signal transducer (gp130, oncostatin M receptor)	1.543280175	S100A4	S100 calcium binding protein A4	1.636938363
ODF2	outer dense fiber of sperm tails 2	1.543280175	AZIN1	antizyme inhibitor 1	1.632406092
NANPC1	anaphase promoting complex subunit 16	1.542210825	NA4A	N-acetylthioamide acid amidase	1.630144665
NUA2	nuclear protein, transcriptional regulator, 1	1.541142217	Wfcb18	WAP four-disulfide core domain 18	1.629758396
INP35B	inositol polyphosphate-5-phosphatase, 75kDa	1.540074848	WFD2C	WAP four-disulfide core domain 2	1.624604793
PHYH	phytanoyl-CoA 2-hydroxylase	1.540074848	LMAN1	lectin, mannose-binding, 1	1.623379162
ARL14EP	ADP-ribosylation factor-like 14 effector protein	1.539007022	LD83	—	1.616641738
ANGPTL4	angiotensin-like 4	1.539007022	HLA-F	major histocompatibility complex, class I, F	1.615521555
COL4A2	collagen, type IV, alpha 2	1.539007022	PPP1R3C	protein phosphatase 1, regulatory subunit 3C	1.613283518
HistH4	histone cluster 2, H4	1.537940831	UXS1	UDP-glucuronate decarboxylase 1	1.609932275
(includes others)					
HPGD	hydroxyprostaglandin dehydrogenase 15-(NAD)	1.537940831	Zfp932 (includes others)	zfp finger protein 932	1.608816742
VWA8	von Willebrand factor A domain containing 8	1.537940831	P2RY14	purinergic receptor P2Y, G-protein coupled, 14	1.608816742
CUL4B	culin 4B	1.536875181	STXB5L	syntaxin binding protein 5-like	1.608816742
LTBP3	latent transforming growth factor beta binding protein 3	1.536875181	NDUFA5	NADH dehydrogenase (ubiquinone) complex I, assembly factor 5	1.607019181
STMN1	stathmin 1	1.536875181	Pnl1/Prp2	proline rich protein Hoell subfamily 1	1.606897994
FNPI1	folliculin interacting protein 1	1.534746096	SP1	secreted phosphoprotein 1	1.605474777
FAM129A	family with sequence similarity 129, member A	1.533682626	CCNY	cyclin Y	1.602139755
SEDF2	SET domain containing (lysine methyltransferase) 7	1.533682626	MITD1	MIT, microtubule interacting and transport, domain containing 1	1.602139755
POLR3A	polymyrase (RNA) III (DNA directed) polypeptide A, 155kDa	1.533682626	Mup1 (includes others)	—	1.601029621
RORA	RAR-related orphan receptor A	1.531557997	ODC1	ornithine decarboxylase 1	1.601029621
AB32039N20Rik	RKEN cDNA, AB32039N20 gene	1.531557997	SERPINB5	serpin peptidase inhibitor, clade B (ovalbumin), member 5	1.599920257
MMS19	MMS19 nucleotide excision repair homolog (S. cerevisiae)	1.529456278	Cyc5	cytochrome c, somatic	1.599202057
GRR155	G-protein-coupled receptor 155	1.529456278	CYP22	cytochrome P-450, CYP22	1.598811661
FAM110C	family with sequence similarity 110, member C	1.528376521	PRPF31	pre-mRNA processing factor 31	1.596596773
UPF3B	UPF3 regulator of nonsense transcripts homolog B (yeast)	1.528376521	HLA-B	HLA-B	1.596596773
SLAIN2	SLAIN motif family, member 2	1.528376521	LGALS3	lectin, galactoside-binding, soluble, 3	1.596596773
HMI13	histocompatibility (minor) 13	1.527317498	Cp9orf16	chromosome 9 open reading frame 16	1.594309048
NFKK	zfp finger protein 992	1.526259209	APOL3	—	1.594309048
ZNF592	zfp finger protein 592	1.526259209	CLEC2D	C-type lectin domain family 2, member D	1.594309048
XPO5	exportin 5	1.525201653	SLC41A2	solute carrier family 41 (magnesium transporter), member 2	1.592176198
SEMA3D	semaphorin 3D	1.525201653	0610040B09Rik	RKEN cDNA, 0610040B09 gene	1.5888688
SLC16A7	solute carrier family 16 (monocarboxylate transporter), member 7	1.52414483	PFM1K	protein phosphatase, Mg2+/Mn2+ dependent, 1K	1.587767862
WDR45	—	1.52414483	EIF2AK2	eukaryotic translation initiation factor 2-alpha kinase 2	1.584469622
SRNG1	strawberry notch homolog 1 (Drosophila)	1.52414483	NCKAIP1	NCK-associated protein 1-like	1.584469622
SNIC5	structural maintenance of chromosomes 5	1.523088874	CYTH4	cytohesin 4	1.581178233
ERBB2IP	—	1.523088874	SRP54	signal recognition particle 54kDa	1.581178233
REV3L	REV3-like, polymerase (DNA directed), zeta, catalytic subunit	1.522033381	SEC13	SEC13 homolog (S. cerevisiae)	1.580082624
LZFL1	leucine zipper transcription factor-like 1	1.522033381	CAUR	calreticulin	1.578987773
TCFL5	transcription factor-like 5 (basic helix-loop-helix)	1.520978753	CLEFAC	—	1.578987773
ANK2	—	1.519924856	IGFBP2	insulin-like growth factor binding protein 2, 36kDa	1.577893682
VWF	von Willebrand factor	1.519924856	PSMD14	proteasome (prosome, macropain) 26S subunit, non-AIPase, 14	1.577893682
DDPEY2	doppel family member 2	1.51887169	AIF3	activating transcription factor 3	1.574615953
MAI22	matrilin 2	1.51887169	LAI1R1	leukocyte-associated immunoglobulin-like receptor 1	1.570256237
KDM6C	lysine (K)-specific demethylase 5C	1.517819253	CCNG1	cyclin G1	1.568080908
CC14	chaperonin containing TCP1, subunit 4 (delta)	1.517819253	CXCL16	chemokine (C-X-C motif) ligand 16	1.568080908
PNM2D1	peptidase M20 domain containing 1	1.516767545	ACF5	killer cell lectin-like receptor, subfamily A, member 2	1.566994374
SOX2	SRY (sex determining region Y)-box 2	1.515716567	Kira2	integrin, beta 6	1.565908593
C16orf87	chromosome 16 open reading frame 87	1.515716567	ITGB6	transmembrane protein 176A	1.564823563
PP1G	peptidylprolyl isomerase G (cyclophilin G)	1.514666316	TMEM176A	eukaryotic translation initiation factor 4 gamma, 1	1.563739286
CTSF	cathespin F	1.514666316	EIF4G1	plasmalemma vesicle associated protein	1.561572985
DDI2	DNA-damage inducible 1 homolog 2 (S. cerevisiae)	1.514666316	PLIAP	—	1.561572985

Continued on next page

Supplementary Table S3. Continued.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
CBLR	Cbl proto-oncogene B, E3 ubiquitin protein ligase	1.513616793	TNFSF13B	tumor necrosis factor (ligand) superfamily, member 13b	1.56049096
GRR126	G protein-coupled receptor 126	1.513616793	API32	adaptor-related protein complex 1, sigma 2 subunit	1.56049096
TNEM201	transmembrane protein 201	1.512567997	CAULM14	caudal-like 4	1.568329159
GRIPEL2	GripE-like 2, mitochondrial (E. coli)	1.512567997	THRSP	thyroid hormone responsive	1.568329159
KLHL24	kelch-like family member 24	1.511519928	TNEM256	transmembrane protein 256	1.568329159
FOXK1	forkhead box K1	1.510472586	C19orf38	chromosome 19 open reading frame 38	1.568329159
MAP1LC3B	microtubule-associated protein 1 light chain 3 beta	1.50733491	TAC1	tachykinin precursor 1	1.568329159
GNAL14	guanine nucleotide binding protein 1 light chain, alpha 14	1.506290467	TGFB2	transforming growth factor, beta 2	1.568329159
GRAM	glycerol-3-phosphate acyltransferase, mitochondrial	1.506290467	C14orf2	chromosome 14 open reading frame 2	1.557249382
SPARC	secreted protein, acidic, cysteine-rich (osteonectin)	1.506290467	S100A8	S100 calcium binding protein A8	1.557249382
AKAP12	A kinase (PRKA) anchor protein 12	1.506290467	ALOX5AP	arachidonate 5-lipoxygenase-activating protein	1.557249382
TNPO1	transporin 1	1.506290467	SRXN1	sulfiredoxin 1	1.556170353
COON	cell adhesion associated, oncogene regulated	1.506290467	TNFSF10	tumor necrosis factor (ligand) superfamily, member 10	1.555920272
DCDC2	doublecortin domain containing 2	1.505246747	RC3H2	ring finger and CCCH-type domains 2	1.554014538
CIDN12	claudin 12	1.505246747	GAUNT1	UDP-N-acetyl-alpha-D-galactosamine:poly(epsilon-L-glutamic acid) N-acetylglucosaminyltransferase 1 (GalNAc-T1)	1.55293775
KLHL21	kelch-like family member 21	1.504203751	TUBA1A	tubulin, alpha 1a	1.55293775
PLEKHH1	pleckstrin homology domain containing, family H (with MYTH domain) member 1	1.504203751	USMG5	up-regulated during skeletal muscle growth 5 homolog (mouse)	1.50786413
MYO6	myosin VI	1.504203751	SFC33	signal peptidase complex subunit 3 homolog (S. cerevisiae)	1.50786413
PEL2	pellino E3 ubiquitin protein ligase family member 2	1.503161478	COX7A1	cytochrome c oxidase subunit VIIa polypeptide 1 (muscle)	1.548638056
MFN1	mitofusin 1	1.503161478	Gmi16440	—	1.547564994
			(includes others)		
APPL2	adaptor protein, phosphotyrosine interaction, PH domain and leucine zipper containing 2	1.503161478	CCL7	chemokine (C-C motif) ligand 7	1.546492675
STAU2	staufen double-stranded RNA binding protein 2	1.502119927	Gp49a/Il1rb4	leukocyte immunoglobulin-like receptor, subfamily B, member 4	1.546492675
NFXL1	nuclear transcription factor X-box binding-like 1	1.502119927	FAT2H	fatty acid 2-hydroxylase	1.546492675
SIC2&46	solute carrier family 26 (anion exchanger), member 6	1.500038989	FAM49B	family with sequence similarity 49, member B	1.544350266
			TMM48B	translocase of inner mitochondrial membrane 8 homolog B (yeast)	1.542210825
			Tpm4	tropomyosin 4	1.542210825
			ASGR1	asialoglycoprotein receptor 1	1.541142217
			Sec61g	SEC61, gamma subunit	1.541142217
			PAPP14	poly (ADP-ribose) polymerase family, member 14	1.53900722
			FAM177A1	family with sequence similarity 177, member A1	1.537940831
			CXCL10	chemokine (C-X-C motif) ligand 10	1.536875181
			LBH	limb bud and heart development	1.536875181
			OSTC	oligosaccharyltransferase complex subunit (non-catalytic)	1.527317498
			IL2RG	interleukin 2 receptor, gamma	1.527317498
			HFGDS	hematopoietic prostaglandin D synthase	1.52039677
			SOC33	suppressor of cytokine signaling 3	1.52039677
			MAINF	—	1.52414483
			GZMA	granzyme A (granzyme 1, cytotoxic T-lymphocyte-associated serine esterase 3)	1.52414483
			IGFALS	insulin-like growth factor binding protein, acid labile subunit	1.52414483
			CCND2	cyclin D2	1.522033381
			PNPT1	polyribonucleotide nucleotidyltransferase 1	1.522033381
			EDN3	endothelin 3	1.51887169
			Cd69a	CD69a antigen	1.517819253
			NDUFB2	NADH dehydrogenase (ubiquinone) 1 beta subcomplex 2, 8kDa	1.515716567
			PRRX1	paired related homeobox 1	1.515716567
			C1GALT1	core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase, 1	1.514666316
			PSME2	proteasome (prosome, macropain) activator subunit 2 (PA28 beta)	1.514666316
			PDCD10	programmed cell death 10	1.513616793
			PPL1	peptidylprolyl isomerase (cyclophilin)-like 1	1.512567997
			TRUB2	—	1.512567997
			SAAT1	serum amyloid A1	1.512567997
			TPGS2	tubulin polyglutamylase complex subunit 2	1.510472586
			MRROS	negative regulator of reactive oxygen species	1.509425949
			DOCK2	dedicator of cytokinesis 2	1.508338077
			CXCL11	—	1.50733491
			SREBF1	sterol regulatory element binding transcription factor 1	1.506290467
			CSRNP1	cysteine-serine-rich nuclear protein 1	1.506290467
			S100A10	S100 calcium binding protein A10	1.505246747
			TU886	tubulin, beta 6 class V	1.505246747
			ASB2	ankyrin repeat and SOCS box containing 2	1.505246747
			CHPT1	choline phosphotransferase 1	1.503161478
			MYCBP	MYC binding protein	1.502119927
			FGFBP1	fibroblast growth factor binding protein 1	1.500038989
			PODLX	podocalyxin-like	1.500038989

Supplementary Table S4. RT+HBOV vs. control.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
DBP	D. site of albumin promoter (albumin D-box) binding protein	89.39	ARNTL	aryl hydrocarbon receptor nuclear translocatorlike	8.88
USP2	ubiquitin specific peptidase 2	6.86	NPA52	neuronal PAS domain protein 2	6.95
CA3	carbonic anhydrase III, muscle specific	4.84	IGJ	immunoglobulin J polypeptide, linker protein for immunoglobulin alpha and mu polypeptides	4.65
PAG1	phosphoprotein associated with glycosphingolipid microdomains 1	4.53	IGHA1	immunoglobulin heavy constant alpha 1	4.34
DUSP4	dual specificity phosphatase 4	4.43	CXCL13	chemokine (C-X-C motif) ligand 13	3.63
TEF	thymotrophic embryonic factor	3.90	IGV1	immunoglobulin lambda variable 1	3.15
EDA2R	ectodysplasin A2 receptor	3.86	ARL4A	ADP-ribosylation factor-like 4A	2.85
CHAC1	ChAc, cation transport regulator homolog 1 (E. coli)	3.79	KLK3	kallikrein-related peptidase 3	2.80
PER3	period circadian clock 3	3.59	IGHM	immunoglobulin heavy constant mu	2.68
GRR155	G protein-coupled receptor 155	3.55	NFIL3	nuclear factor, interleukin 3 regulated	2.62
CFD	complement factor D (gadpsin)	3.43	RHOJ	ras homolog family member J	2.51
KCNE1	potassium voltage-gated channel, Iik-related family, member 1	1.82	Foln1	folate hydrolase 1	2.48
Reg3g	regenerating islet-derived 3 gamma	1.81	ZC3H12D	zinc finger CCHC-type containing 12D	2.46
AZIN1	antizyme inhibitor 1	1.80	MZB1	marginal zone B and B1 cell-specific protein	2.43
SOX2	SRY (sex determining region Y)-box 2	1.80	NABP1	nucleic acid binding protein 1	2.42
TOP2A	topoisomerase (DNA) II alpha 170kDa	1.80	GPR31	G protein-coupled receptor 31	2.29
GALNT6	UDP-N-acetyl-alpha-D-galactosamine polypeptide N-acetylgalactosaminyltransferase 6 (GalNAc-T6)	1.80	SIC16A6	solute carrier family 16, member 6	2.24
PDE4DIP	phosphodiesterase 4D interacting protein	1.79	TACR3	tachykinin receptor, 3	2.15
CDCA8	cell division cycle associated 8	1.79	ASGR1	asialoglycoprotein receptor 1	2.13
ENPPD7	ectonucleoside triphosphate diphosphohydrolase 7	1.79	CIRBP	cold inducible RNA binding protein	2.07
SULF2	sulfatase 2	1.78	INSIG1	insulin induced gene 1	2.03
FUS	fused in sarcoma	1.77	RAB27B	RAB27B, member RAS oncogene family	2.02
SLC23A2	solute carrier family 23 (ascorbic acid transporter), member 2	1.77	PK3R1	phosphoinositide-3-kinase, regulatory subunit 1 (alpha)	2.01
XIST	X inactive specific transcript (non-protein coding)	1.77	JUN	jun proto-oncogene	1.99
SLC5A3	solute carrier family 5 (sodium/myo-inositol cotransporter), member 3	1.76	CLDN1	claudin 1	1.97
PKM3	pim-3 oncogene	1.76	Igk	immunoglobulin kappa chain complex	1.96
BFA2	BPI fold containing family A, member 2	1.75	OSGIN2	oxidative stress induced growth inhibitor family member 2	1.94
GPCPD1	glycerophosphocholine phosphodiesterase GBE1 homolog (S. cerevisiae)	1.75	RAB17	RAB17, member RAS oncogene family	1.91
HERPUD1	homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain member 1	1.75	GULP1	GULP engulfment adaptor PTB domain containing 1	1.88
BAX	BCL2-associated X protein	1.75	DLEU7	deleted in lymphocytic leukemia, 7	1.88
BHLHE40	basic helix-loop-helix family, member e40	1.75	PK3CG	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit gamma	1.87
LCOR	ligand dependent nuclear receptor corepressor	1.74	SULT1C3	sulfotransferase family, cytosolic, 1C, member 3	1.86
CARS	cysteine-HRNA synthetase	1.74	HIST1HC	histone cluster 1, H1C	1.80
AAARS	alanyl-HRNA synthetase	1.74	Cpsr (includes others)	—	1.80
C1GALT1	core 1 synthase, glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase, 1	1.74	ID1	—	1.79
AUTS2	—	1.74	ABO	ABO blood group, transferase A, alpha 1-3-N-acetylgalactosaminyltransferase; transferase B, alpha 1-3-galactosyltransferase)	1.77
GRB10	growth factor receptor-bound protein 10	1.73	Grf13	glutathione S-transferase, theta 3	1.75
UCP2	uncoupling protein 2 (mitochondrial, proton carrier)	1.73	CHST3	carbohydrate (chondroitin-4) sulfotransferase 13	1.75
ZNFX319	zinc finger protein 319	1.73	SERPIN9	serpin peptidase inhibitor, clade B (ovalbumin), member 9	1.74
SLCSA1	solute carrier family 5 (sodium/glucose cotransporter), member 1	1.73	Cdorr32	chromosome 4 open reading frame 32	1.74
ANGPTL4	angiopoietin-like 4	1.73	PPRD2	regulation of nuclear pre-miRNA domain containing 2	1.74
LUC7L2	LUC7-like 2 (S. cerevisiae)	1.72	Cest1d	carboxylesterase 1D	1.73
COL17A1	collagen, type XVII, alpha 1	1.72	CAMK2D	calcium/calmodulin-dependent protein kinase II delta	1.72
SLC12A1	solute carrier family 12 (sodium/potassium/chloride transporter), member 1	1.72	B4GALU6	UDP-Gal:betaGalNAc-beta 1,4-galactosyltransferase, polypeptide 6	1.72
TP53NP1	tumor protein p53 inducible nuclear protein 1	1.71	SRXN1	sulfiredoxin 1	1.71
PNN	pilin, desmosome associated protein	1.71	UCWA	upper zone of growth plate and cartilage matrix associated	1.71
IGDCC4	immunoglobulin superfamily DCC subclass, member 4	1.71	LDLR	low density lipoprotein receptor	1.70
KLIF5	Kruppel-like factor 5 (testis)	1.71	HLA-C	major histocompatibility complex, class I, C	1.70
SLC14A4	solute carrier family 14 (glutamate/neutral amino acid transporter), member 4	1.71	BIG2	BIG family, member 2	1.69
TXNIP	thioredoxin interacting protein	1.70	FABP5	—	1.69
RSAD1	radical S-adenosyl methionine domain containing 1	1.70	CUN8	ceroid-lipofuscinosis, neuronal 8 (epilepsy, progressive with mental retardation)	1.69
CTGF	connective tissue growth factor	1.70	FOXO1	forkhead box O1	1.67
FUBP1	far upstream element (FUSE) binding protein 1	1.70	SCD	stearoyl-CoA desaturase (delta-9-desaturase)	1.67
MHR9	myosin, heavy chain 9, non-muscle	1.70	ARHGEF37	Rho guanine nucleotide exchange factor (GEF) 37	1.66
PABPN1	poly(A) binding protein, nuclear 1	1.69	MAN1C1	mammoside, alpha, class 1C, member 1	1.66
WNK2	WNK lysine deficient protein kinase 2	1.69	SDCA4	syndecan 4	1.66
HSPA8	heat shock 70kDa protein 8	1.69	LYPD6	—	1.66
SUZ12	SUZ12 polycomb repressive complex 2 subunit	1.69	CHMP2B	charged multivesicular body protein 2B	1.66
PTFR2	protein tyrosine phosphatase, receptor type, N polypeptide 2	1.69	5033430115Rk	RKEN cDNA 5033430115 gene	1.65
Cbr04	chromosome 8 open reading frame 4	1.69	Sp100	nuclear antigen Sp100	1.65
Acoat1b	acyl-Coenzyme A, acyltransferase 1B	1.67	SRP54	signal recognition particle 54kDa	1.64
IRS2	insulin receptor substrate 2	1.67	ARHGAP29	Rho GTPase activating protein 29	1.64
CFR66	—	1.67	SLC29A1	solute carrier family 29 (equilibrative nucleoside transporter), member 1	1.64
RP524	ceramide synthase 6	1.67	LY6G6D	lymphocyte antigen 6 complex, locus G6D	1.64
MEIS1	—	1.67	FMO2	flavin containing monooxygenase 2 (non-functional)	1.64
RAP1H	Meis homeobox 1	1.66	ZNFHC2	zinc finger, DHRF-type containing 2	1.63
	Ras association (RalGDS/AF-6) and plectstrin homology domains 1				

Continued on next page

Supplementary Table S4. Continued.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
TRIM24	—	1.66	Ccorf1	—	1.62
CPY2	cryptochrome 2 (photolyase-like)	1.66	VEGFC	vascular endothelial growth factor C	1.62
MYO1	myosin	1.66	VAV2	vav 2 guanine nucleotide exchange factor	1.61
NFE2L2	nuclear factor, erythroid 2-like 2	1.66	FgfR3	fibroblast growth factor binding protein 3	1.61
STIM1	stathmin 1	1.65	STAT5A	signal transducer and activator of transcription 5A	1.60
PRAT	phosphoribosyl pyrophosphate amidotransferase asparaginase like 1	1.65	GABARAPL1	GABA(A) receptor-associated protein like 1	1.60
ASRGL1	asparaginase like 1	1.65	TJP3	—	1.60
FAM46B	family with sequence similarity 46, member B	1.65	GCAT	glycine C-acetyltransferase	1.60
APAF	v-rat murine sarcoma 3611 viral oncogene homolog	1.65	APORR	apolipoprotein B receptor	1.60
NANP	N-acetylneuraminic acid phosphatase	1.64	LEO1	Leol1, Paf1 /RNA polymerase II complex component, homolog (S. cerevisiae)	1.60
FARP2	FERM, RhoGEF and pleckstrin domain protein 2	1.64	DNAJC12	DnaJ (Hsp40) homolog, subfamily C, member 12	1.59
CCR2	chemokine (C-C motif) receptor 2	1.64	H2-124	histocompatibility 2, 1 region locus 24	1.59
RBP6	retinoblastoma binding protein 6	1.64	Ces1e	carboxylesterase 1E	1.59
KDM5C	lysine (K)-specific demethylase 5C	1.64	DDX6	DEAD (Asp-Glu-Ala-Asp) box helicase 6	1.59
SRK1	SH3-binding domain kinase 1	1.64	NABP21	NEDD4 binding protein 2, like 1	1.59
NCA9H	—	1.64	ARMC8	armadillo repeat containing 8	1.59
GTPBP4	GTP binding protein 4	1.64	FAM69A	family with sequence similarity 69, member A	1.59
RPL41	ribosomal protein L41	1.64	HLA-DOA	major histocompatibility complex, class II, DO alpha	1.59
NBR4A3	nuclear receptor subfamily 4, group A, member 3	1.64	SMIM3	small integral membrane protein 3	1.58
ZNF7	zinc finger protein 7	1.63	PISR	polymeric immunoglobulin receptor	1.57
ANXA3	annexin A3	1.63	COCH	—	1.57
VANGL1	VANGL planar cell polarity protein 1	1.63	GNG4	—	1.57
RCN1	reticulocalbin 1, EF-hand calcium binding domain	1.63	RHOBTB3	Rho-related BTB domain containing 3	1.57
ISM1	isthmin 1, angiogenesis inhibitor	1.63	POLB	polymerase (DNA directed), beta	1.56
GALNT4	UDP-N-acetyl-alpha-D-galactosamine polypeptide N-acetylgalactosaminyltransferase 4 (GalNAcT4)	1.63	TAPBP1	TAP binding protein-like	1.55
THRAP3	thyroid hormone receptor associated protein 3	1.63	SQLE	squalene epoxidase	1.55
NDN	nectin, melanoma antigen (MAGE) family member	1.62	CM1M7	CKLF-like MARVEL transmembrane domain containing 7	1.55
ZNF461	zinc finger protein 461	1.62	ITGB6	integrin, beta 6	1.55
NUS1	nuclear undecaprenyl pyrophosphate synthase 1 homolog (S. cerevisiae)	1.62	RVN2	formin 2	1.55
LAMA3	laminin, alpha 3	1.62	SVZB	synaptic vesicle glycoprotein 2B	1.55
TAF4	TAF4 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 135kDa	1.62	EFNA1	ephrin-A1	1.55
C1orf51	chromosome 1 open reading frame 51	1.62	PHF11	—	1.54
SSX2IP	synovial sarcoma, X breakpoint 2 interacting protein	1.61	CLEC2D	C-type lectin domain family 2, member D	1.54
HSDL2	hydroxysteroid dehydrogenase like 2	1.61	TMEM54	transmembrane protein 54	1.54
PTRT	—	1.61	PNRC1	proline-rich nuclear receptor coactivator 1	1.54
SEMA3D	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3D	1.61	SCN8A	sodium channel, voltage gated, type VIII, alpha subunit	1.53
TNRC6A	truncaloid repeat containing 6A	1.61	PNM1	phosphotransferase 1	1.53
KPNA1	karyopherin alpha 1 (importin, alpha 5)	1.60	TIPA	tocopherol (alpha) transfer protein	1.53
PBK	PDZ binding kinase	1.60	MSI2	musashi RNA-binding protein 2	1.52
XPOT	—	1.60	TAB2	TGF-beta activated kinase 1/MAP3K7 binding protein 2	1.51
MARCH7	membrane-associated ring finger (C3HC4) 7, E3 ubiquitin protein ligase	1.60	METTL1	methyltransferase like 1	1.51
FNT1	fibronectin 1	1.60	IFNGR2	interferon gamma receptor 2 (interferon gamma transducer 1)	1.51
NCOL1	nuclear and colloid-body phosphoprotein 1	1.60	CHPT1	choline phosphotransferase 1	1.50
STOX2	storkhead box 2	1.59	CPD	carboxypeptidase D	1.50
ALTB2	ankyrin repeat and BTB (POZ) domain containing 2	1.59			
KLF4	Kruppel-like factor 4 (gulf)	1.59			
FOXP1	forkhead box P1	1.59			
ADORA1	adenosine A1 receptor	1.58			
ATF4	activating transcription factor 4	1.58			
TRIB3	tribbles homolog 3 (Drosophila)	1.58			
DCXR	—	1.58			
LMNA	lamin A/C	1.58			
AHCY1	AT hook containing transcription factor 1	1.58			
STB3A6	S18 alpha-N-acetyl-neuramide alpha-2,8-sialyltransferase 6	1.58			
DYRK3	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 3	1.57			
ASPH	aspartate beta-hydroxylase	1.57			
let-7	microRNA let-7a-1	1.57			
CGN1Z	cyolin 1Z	1.57			
CGN1Z	—	1.57			
TAR5	threonyl-HRNA synthetase	1.57			
TNC	—	1.57			
TULP4	tubby like protein 4	1.56			
CHEB3	cytoplasmic polyadenylation element binding protein 3	1.56			
G-CLC	glutamate-cysteine ligase, catalytic subunit	1.56			
ZNF281	zinc finger protein 281	1.56			
TP63	tumor protein p63	1.56			
ERO1L	ERO1-like (S. cerevisiae)	1.56			
Ccnb1/Gmt5593	cyolin B1	1.55			
CCNA2	cyolin A2	1.55			
KIF1B	kinesin family member 1B	1.55			

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Supplementary Table S4. Continued.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
MBP	myelin basic protein	1.55			
MDM4	Mdm4 p53 binding protein homolog (mouse)	1.55			
CLMN	calmin (calponin-like, transmembrane)	1.55			
ZMIZ1	zinc finger, MIZ-type containing 1	1.55			
EIF2D	eukaryotic translation initiation factor 2D	1.55			
PDE4B	phosphodiesterase 4B, cAMP-specific	1.55			
MATN2	matrin 2	1.55			
UVSSA	UV-stimulated scaffold protein A	1.55			
SYMM	synemin, intermediate filament protein	1.55			
SYT7	synaptotagmin VII	1.55			
TARDBP	TAR DNA binding protein	1.54			
SLC38A2	solute carrier family 38, member 2	1.54			
DDIT4L	—	1.54			
RAK5	arginyl-HRNA synthetase	1.54			
HELZ2	helicase with zinc finger 2, transcriptional coactivator	1.54			
ARRDC4	—	1.53			
ANGPTL2	angiotensin-like 2	1.53			
TRA2A	transformer 2 alpha homolog (Drosophila)	1.53			
MYH11	myosin, heavy chain 11, smooth muscle	1.53			
KIAA0101	—	1.53			
KIAA0101	apoptotic peptidase activating factor 1	1.53			
APAF1	regulator of cell cycle	1.53			
RGCC	ubiquitin specific peptidase 7 (herpes virus-associated)	1.53			
USP7	se-1 suppressor of lin-12-like 3 (C. elegans)	1.53			
SEL1L3	isoleucyl-HRNA synthetase	1.53			
IAB5	—	1.53			
RC3RA	RAR-related orphan receptor A	1.53			
NTRK3	neurotrophic tyrosine kinase, receptor, type 3	1.53			
THYNY1	thymocyte nuclear protein 1	1.53			
CEP55	centrosomal protein 55kDa	1.53			
BRD8	bromodomain containing 8	1.53			
Grn3515	predicted gene.3515	1.53			
HSRA1A/HSRA1B	heat shock 70kDa protein 1A	1.52			
PSFH	phosphoserine phosphatase	1.52			
KLF9	Kruppel-like factor 9	1.52			
TSC2D23	TSC22 domain family, member 3	1.52			
RMV5	RNA binding motif protein 5	1.52			
SLAIN2	SLAIN motif family, member 2	1.52			
Aldh1a7	aldehyde dehydrogenase family 1, subfamily A7	1.52			
KLF7	—	1.52			
SCARA3	scavenger receptor class A, member 3	1.52			
PNISR	PNN-interacting serine/arginine-rich protein	1.51			
DNAJC10	DnaJ (Hsp40) homolog, subfamily C, member 10	1.51			
MALTI	mucosa associated lymphoid tissue lymphoma translocation gene 1	1.51			
SLC3A2	solute carrier family 3 (amino acid transporter heavy chain), member 2	1.51			
PCMTD2	—	1.51			
rsRC2	—	1.51			
TIAM2	arginine/serine-rich coiled-coil 2	1.51			
AOC3	T-cell lymphoma invasion and metastasis 2	1.51			
TMC7	amine oxidase, copper containing 3	1.51			
NFB	transmembrane channel-like 7	1.51			
SIGGAL1	nuclear factor I/B	1.51			
FOXK1	SI3 beta-galactoside alpha-2,3-sialyltransferase 1	1.51			
PCSTN	forkhead box K1	1.51			
CDC42BP6	perforin, osteoblast specific factor	1.51			
ECT2	CDC42 binding protein kinase gamma (DMPK-like)	1.51			
PEX11A	—	1.51			
CSMK1G1	peroxisomal biogenesis factor 11, alpha	1.51			
POFU12	casein kinase 1, gamma 1	1.51			
UBE2B	protein O-tucosyltransferase 2	1.51			
Nik	ubiquitin-conjugating enzyme E2B	1.50			
BCLAF1	—	1.50			
OGT	BCL2-associated transcription factor 1	1.50			
SSR1	O-linked N-acetylglucosamine (GlcNAc) transferase	1.50			
DDX21	signal sequence receptor, alpha	1.50			
TOX1AIP2	DEAD (Asp-Glu-Ala-Asp) box helicase 21	1.50			
	tarsin A interacting protein 2	1.50			

Supplementary Table S5. RT+HBO₂ vs. RT.

Symbol	Gene name	Fold change up	Symbol	Gene name	Fold change down
GAS5	growth arrest-specific 5 (non-protein coding)	2.7	FOS	FBJ murine osteosarcoma viral oncogene homolog	15.5
SOX2	SRY (sex determining region Y)-box 2	2.6	EGR3	early growth response 3	13.9
TRFC	transferrin receptor	2.6	EGR1	early growth response 1	12.2
MEIS1	Meis homeobox 1	2.4	DUSP1	dual specificity phosphatase 1	10.6
Mup1 (includes others)		2.3	JUN	jun proto-oncogene	7.8
MALAT1	metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)	2.1	Ptn1/Ptp2	praline rich protein HaeIII subfamily 1	5.6
PABPC1	poly(A) binding protein, cytoplasmic 1	2.0	BTG2	BTG family member 2	4.9
ESRRG	estrogen-related receptor gamma	2.0	EGR2	early growth response 2	4.6
TEF	thymotrophic embryonic factor	1.9	CYR61	cysteine-rich, angiogenic inducer, 61	4.6
TARDBP	TAR DNA binding protein	1.9	IER3	immediate early response 3	3.2
Nik	—	1.9	IER2	immediate early response 2	3.2
Aco11	acyl-CoA thioesterase 1	1.8	ZFP36	ZFP36 ring finger protein	3.0
PNISR	PNU-interacting serine/arginine-rich protein	1.8	JUNB	jun B proto-oncogene	2.7
KZFP2	IKAROS family zinc finger 2 (helix)	1.8	CD83	CD83 molecule	2.2
CtIP4	CAP-GLY domain containing linker protein family member 4	1.8	SOC33	suppressor of cytokine signaling 3	2.2
MYOT	myofillin	1.8	REN	renin	2.1
Cxpr5 (includes others)		1.8	LMCD1	LIM and cysteine-rich domains 1	2.1
KCNE1	potassium voltage-gated channel, Isk-related family, member 1	1.8	NGF	nerve growth factor (beta polypeptide)	1.8
NFIB	nuclear factor I/B	1.8	FMN2	formin 2	1.8
C1orf63	chromosome 1 open reading frame 63	1.7	DYRK3	dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 3	1.8
SYT7	synaptotagmin VII	1.7	RET	ret proto-oncogene	1.8
FAM214A	family with sequence similarity 214, member A	1.7	DITNA	—	1.7
RBM5	RNA binding motif protein 5	1.7	FAM177A1	family with sequence similarity 177, member A1	1.7
PER3	period circadian clock 3	1.7	KLK3	kallikrein-related peptidase 3	1.6
RBM25	RNA binding motif protein 25	1.7	MOB3B	MOB kinase activator, 3B	1.6
PGCMTD2	—	1.7	DUSP26	dual specificity phosphatase 26 (putative)	1.5
MAPRE2	microtubule-associated protein, RP7EB family, member 2	1.7	C10orf90	chromosome 10 open reading frame 90	1.5
SCRN3	secernin 3	1.7			
AGFG2	—	1.7			
FOXP1	forkhead box P1	1.7			
Mea3	maternally expressed 3	1.7			
CAS3C4	cancer susceptibility candidate 4	1.7			
TAF1D	TATA box binding protein (TBP)-associated factor, RNA polymerase I, D, 41kDa	1.6			
PRPF4B	PRP4 pre-mRNA processing factor 4 homolog B (yeast)	1.6			
RPS24	—	1.6			
IGDCC4	immunoglobulin superfamily, DCC subclass, member 4	1.6			
SFPQ	splicing factor proline/glutamine-rich	1.6			
NCALD	neurocadin delta	1.6			
CLU	—	1.6			
B3GNT6	UDP-GlcNAc:betaGal beta-1,3-N-acetylgalactosaminyltransferase 6 (core 3 synthase)	1.6			
TASP1	taspace, threonine aspartase, 1	1.6			
APAF	v-rat murine sarcoma 3611 viral oncogene homolog	1.6			
LUC7L2	LUC7-like 2 (S. cerevisiae)	1.6			
RPL41	ribosomal protein L41	1.6			
FGL2	fibinogen-like 2	1.6			
PABPN1	poly(A) binding protein, nuclear 1	1.6			
PGLYRP1	peptidoglycan recognition protein 1	1.6			
SORBS2	sorbin and SH3 domain containing 2	1.6			
SIC16A12	solute carrier family 16, member 12	1.5			
SLC36A2	solute carrier family 35 (UDP-galactose transporter), member A2	1.5			
BACE2	beta-site APP-cleaving enzyme 2	1.5			
Zfp157	zinc finger protein 157	1.5			
RPRED1A	regulation of nuclear pre-mRNA domain containing 1A	1.5			
Kat1a12b	potassium channel tetramerisation domain containing 12b	1.5			
OGT	O-linked N-acetylglucosamine (GlcNAc) transferase	1.5			
RMDN1	regulator of microtubule dynamics 1	1.5			