

**Data S1. Gene/protein names and their corresponding abbreviations.**

ACAA2	Acetyl-CoA acyltransferase 2
ABCA12	ATP binding cassette subfamily A member 12
ABL2	ABL proto-oncogene 2, non-receptor tyrosine kinase
AFAP1-AS1	Actin filament associated protein 1 antisense RNA 1
Ago2	Argonaute-2
AGPG	Actin gamma 1 pseudogene
ALKBH5	Alkb homolog 5, RNA demethylase
ac4C	N4-acetylcytidine
BAALC	Binder of MAP3K1 and KLF4
BBOX1	Gamma-butyrobetaine hydroxylase 1
BCAR4	Breast Cancer Anti-Estrogen Resistance 4
BCL9	BCL9 transcription coactivator
BMI1	BMI1 proto-oncogene, polycomb ring finger
CASC2	Cancer susceptibility candidate 2
CASC8	Cancer susceptibility candidate 8
CASC15	Cancer susceptibility candidate 15
CCAT2	Colon cancer associated transcript 2
CCND1	Cyclin D1
CD44	CD44 molecule (IN blood group)
CD151	CD151 molecule (Raph blood group)
CDC25A	Cell division cycle 25A
CDC25B	Cell division cycle 25B
CDC42	Cell division cycle 42
CDK1	Cyclin dependent kinase 1
CTNNB1	Catenin beta 1
C-met	MET proto-oncogene, receptor tyrosine kinase
C9orf139	Chromosome 9 open reading frame 72
DANCR	Differentiation antagonizing non-protein coding RNA
DGCR5	DiGeorge syndrome critical region gene 5
DLEU1	Deleted in lymphocytic leukemia 1

DPAGT1	Dolichyl-phosphate N-acetylglucosaminophosphotransferase 1
DYNLL1	Dynein light chain LC8-type 1
DUSP6	Dual specificity phosphatase 6
DUXAP10	Double homeobox A pseudogene 10
DVL3	Dishevelled segment polarity protein 3
ELAVL1	ELAV like RNA binding protein 1
EZH2	Enhancer of zeste 2 polycomb repressive complex 2 subunit
EIF5A	Eukaryotic translation initiation factor 5A
ENPEP	Glutamyl aminopeptidase
EIF4A3	Eukaryotic translation initiation factor 4A3
E2F1	E2F transcription factor 1
E2F4	E2F transcription factor 4
EEPD1	Endonuclease/exonuclease/phosphatase family domain containing 1
ELF3	E74 like ETS transcription factor 3
EGFR	Epidermal growth factor receptor
ESCCAL-1	ESCC-related lncRNAs transcript 1
FAM83A-AS1	Family with sequence similarity 83, member A, antisense RNA 1
FAM83H-AS1	Family with sequence similarity 83, member H, antisense RNA 1
FAM225A	Family with sequence similarity 225, member A
FUS	FUS RNA binding protein
FSCN1	Fascin actin-bundling protein 1
FOXM1	Forkhead box M1
FYN	FYN proto-oncogene, Src family tyrosine kinase
FN1	Fibronectin 1
FOXP4	Forkhead box P4
FTO	FTO alpha-ketoglutarate dependent dioxygenase
FOXC2	Forkhead box C2
FOXD2	Forkhead box D2

FGFR2	Fibroblast growth factor receptor 2
FOXP1	Forkhead box P1
GACAT3	Gastric cancer associated transcript 3
GATA2	GATA binding protein 2
GK-IT1	GK intronic transcript 1
Girdin	Girdin
G3BP2	GTPase activating protein (SH3 domain) binding protein
GPX4	Glutathione peroxidase 4
GLUT4/SLC2A4	Solute carrier family 2 (facilitated glucose transporter), member 4/solute carrier family 2 member 4
GSTP1	Glutathione S-transferase pi 1
HCP5	HLA complex P5
HK2	Hexokinase 2
H2AX	H2A.X variant histone
H3K4me3	Tri-methylation of lysine 4 on histone H3
HMGA1	High mobility group AT-hook 1
HIF1 $\alpha$	Hypoxia inducible factor 1 subunit alpha
HDAC11	Histone deacetylase 11
HOXB2	Homeobox B2
HDAC9	Histone deacetylase 9
HDGF	Heparin binding growth factor
HDM2/MDM2	MDM2 proto-oncogene
HEIH	High expression in hepatocellular carcinoma
HNF1A-AS1	Hepatocyte nuclear factor 1 alpha antisense RNA 1
HNRNPC	Heterogeneous nuclear ribonucleoprotein C
hnRNPL	Heterogeneous nuclear ribonucleoprotein L
HTR3A	5-hydroxytryptamine receptor 3A
HOXB13	Homeobox B13
HOXC-AS1	HOXC cluster antisense RNA 1
HIF1AN	Hypoxia inducible factor 1 subunit alpha inhibitor
Hsp27	Heat shock protein 27

HNRNPF	Heterogeneous nuclear ribonucleoprotein F
IDO1	Indoleamine 2,3-dioxygenase 1
ILF2	Interleukin enhancer binding factor 2
IGF2	Insulin like growth factor 2
IGF2BP2	Insulin like growth factor 2 mRNA binding protein 2
ILF3	Interleukin enhancer binding factor 3
JAK2	Janus kinase 2
JPX	Juxtaposed with X-inactivation center
JUN	Jun proto-oncogene, AP-1 transcription factor subunit
JUNB	JunB proto-oncogene, AP-1 transcription factor subunit
KDM4A-AS1	Lysine demethylase 4A antisense RNA 1
KLF2	KLF transcription factor 2
KLF3	KLF transcription factor 3
KLF4	KLF transcription factor 4
KLF10	KLF transcription factor 10
KTN1	Kinectin 1
LGALS1/Gal-1	Galectin 1
LRP6	LDL receptor related protein 6
LASP1	LIM and SH3 protein 1
LBX2	Ladybird homeobox 2
LEF1	Lymphoid enhancer binding factor 1
LINK-A	Long intergenic noncoding RNA for kinase activation
LIPH-4	Lipase H 4
LUESCC	Homo sapiens uncharacterized LOC100507002
MAPK1	Mitogen-activated protein kinase 1
Mcl-1	Myeloid cell leukemia 1
MAFG-AS1	MAF BZIP transcription factor G antisense RNA 1
MALR	Macrophage-associated long noncoding RNA
MBP-1	Promoter-binding protein-1
MYO5A	Myosin VA
MDM2	MDM2 proto-oncogene
miR31HG	MIR31 host gene

MLL1	Mixed lineage leukemia protein 1
MLL2	Mixed lineage leukemia protein 2
MNX1-AS1	Motor neuron and pancreas homeobox 1 antisense RNA 1
MCM/PIK3CA	Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha
MT1M	Metallothionein 1M
MTA2	Metastasis associated 1 family member 2
MTDH	Metadherin
MTX2	Metaxin 2
NCK1	NCK adaptor protein 1
NRSN2	Neurensin 2
NP90/ILF3	Interleukin enhancer binding factor 3
NAT10	N-acetyltransferase 10
NEAT1	Nuclear paraspeckle assembly transcript 1
NF-κB	Nuclear factor kappa-B
NETO2	Neuropilin and tolloid like 2
NORAD	Non-coding RNA activated by DNA damage
NPM1	Nucleophosmin 1
NLIPMT	Novel lncRNA inhibiting proliferation and metastasis
NNT-AS1	Nicotinamide nucleotide transhydrogenase antisense RNA 1
OCT4/POU5F1	Octamer-binding transcription factor 4/POU class 5 homeobox 1
OIP5-AS1	Opa interacting protein 5 antisense RNA 1
PFKFB3	6-Phosphofructo-2-kinase/fructose-2,6-biphosphatase 3
PCAT5	Prostate cancer associated transcript 5
PCAT6	Prostate cancer associated transcript 6
PCNA	Proliferating cell nuclear antigen
PDK1	Pyruvate dehydrogenase kinase 1
PDCD5	Programmed cell death 5
PDIA3P1	Protein disulfide isomerase family A member 3 pseudogene 1

PD-L1	Programmed cell death 1 ligand 1
PRKAA1	Protein kinase AMP-activated catalytic subunit alpha 1
PAK6	p21 (RAC1) activated kinase 6
PART1	Prostate androgen-regulated transcript 1
PBX3	PBX homeobox 3
PDX1	Pancreatic and duodenal homeobox 1
PTGS2	Prostaglandin-endoperoxide synthase 2
PHD/PDC	Phosducin
PHF8	PHD finger protein 8
PHF20	PHD finger protein 20
PFN2	Profilin 2
PMEPA1	Prostate transmembrane protein, androgen induced 1
PTCH1	Patched 1
PTPRG	Protein tyrosine phosphatase receptor type G
PTPN12	Protein tyrosine phosphatase non-receptor type 12
PGK1	Phosphoglycerate kinase 1
P21/CDKN1A	Cyclin dependent kinase inhibitor 1A
PUM1	Pumilio RNA binding family member 1
PSMA3	Proteasome 20S subunit alpha 3
PTBP1	Polypyrimidine tract binding protein 1
PRUNE2	Prune homolog 2 with BCH domain
RASA1	RAS p21 protein activator 1
RASSF8	Ras association domain family member 8
RISC	RNA-induced silencing complex
RNF114	Ring finger protein 114
ROCK1	Rho associated coiled-coil containing protein kinase 1
ROR	Nuclear receptor
RAB14	RAB14, member RAS oncogene family
RAB10	RAB10, member RAS oncogene family
RBBP4	RB binding protein 4, chromatin remodeling factor
RPL34	Ribosomal protein L34
SBF2	SET binding factor 2

SRSF1	Serine and arginine rich splicing factor 1
SLC7A11	Solute carrier family 7 member 11
SOX4	SRY-box transcription factor 4
STAT3	Signal transducer and activator of transcription 3
SIGLEC9	Sialic acid binding Ig like lectin 9
SIRT1	Sirtuin 1
SIRT7	Sirtuin 7
SIM2	Single-minded 2
SGMS2	Sphingomyelin synthase 2
SNHG17	Small nucleolar RNA host gene 17
STRN3	Striatin 3
SPHK1	Sphingosine kinase 1
SPIN1	Spindlin 1
SOX2	SRY-box transcription factor 2
SOX2OT	SOX2 overlapping transcript
SLC25A21	Solute carrier family 25 member 21
SKA1	Spindle and kinetochore associated complex subunit 1
SPI1	Spi-1 proto-oncogene
SF3B3	Splicing factor 3b subunit 3
SOX6	SRY-box transcription factor 6
SOCS1	Suppressor of cytokine signaling 1
SOCS2	Suppressor of cytokine signaling 2
SOCS4	Suppressor of cytokine signaling 4
SMAD4	SMAD family member 4
SNHG5	Small nucleolar RNA host gene 5
SNHG6	Small nucleolar RNA host gene 6
SNHG12	Small nucleolar RNA host gene 12
TRBP	Transactivation response element RNA-binding protein
TCF4	Transcription factor 4
THAP9-AS1	THAP domain-containing protein 9 Antisense RNA 1
TRAF4	TNF receptor associated factor 4
TK1	Thymidine kinase 1

TPX2	TPX2 microtubule nucleation factor
TMEM44	Transmembrane protein 44
TMEM161B	Transmembrane protein 161B
TMPO	Thymopoietin
TP53	Tumor protein p53
TNF $\alpha$	Tumor necrosis factor alpha-like
TOB1	Transducer of ERBB2, 1
TTY15	Testis-specific transcript, Y-linked 15
TTP	ZFP36 ring finger protein
TUG1	Taurine Upregulated Gene 1
UTP3	UTP3 small subunit processome component
VAMP3	Vesicle associated membrane protein 3
VEGFA	Vascular endothelial growth factor A
VEGF	Vascular endothelial growth factor
WDFY3	WD repeat and FYVE domain containing 3
XIST	X-inactive specific transcript
YBX1	Y-box binding protein 1
YTHDF2	YTH N6-methyladenosine RNA binding protein F2
YTHDF1	YTH N6-methyladenosine RNA binding protein F1
ZFAS1	ZNFX1 antisense RNA 1
ZFPM2-AS1	zinc finger protein, FOG family member 2 antisense RNA 1
ZEB1	Zinc finger E-box binding homeobox 1
ZEB	Zinc finger E-box binding homeobox
ZNF184	Zinc finger protein 184
ZNF667	Zinc finger protein 667
ZNF750	Zinc finger protein 750