

Supplementary Data

Mutated Tumor Suppressors Follow Oncogenes Profile by the Gene Hypermethylation of Partners in the Protein Interaction Networks

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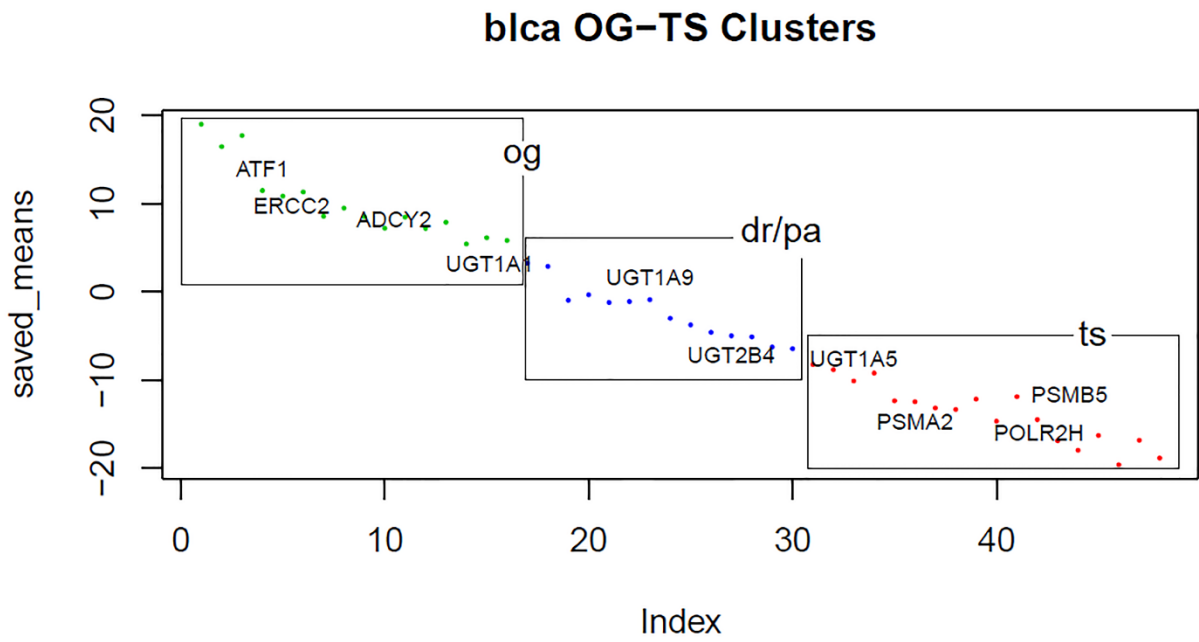


Figure S1: Cluster for BLCA

cesc OG-TS Clusters

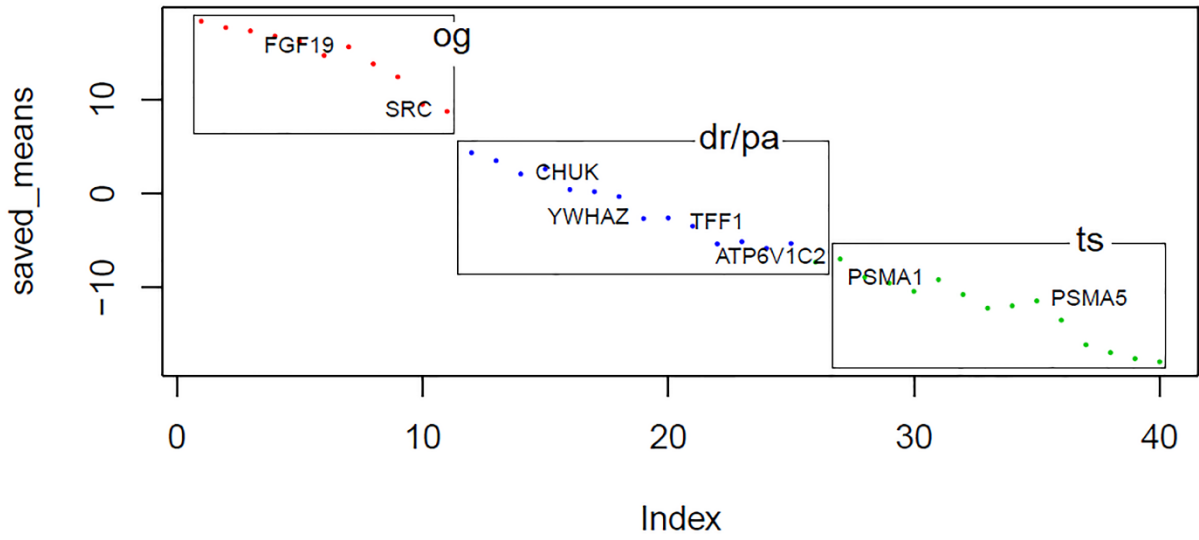


Figure S2: Cluster for CESC

coad OG-TS Clusters

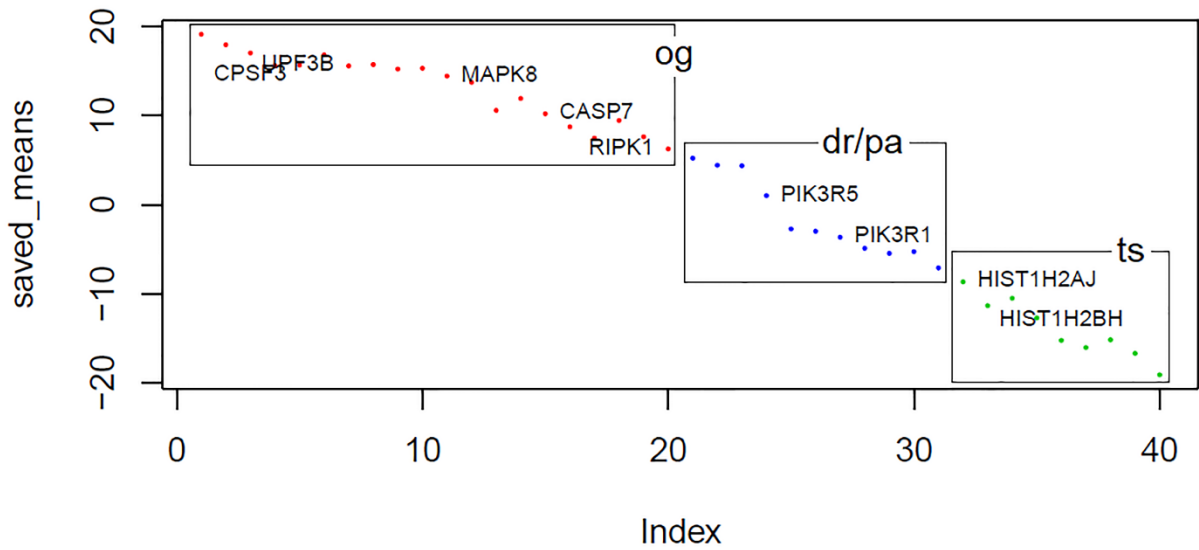


Figure S3: Cluster for COAD

hnesc OG-TS Clusters

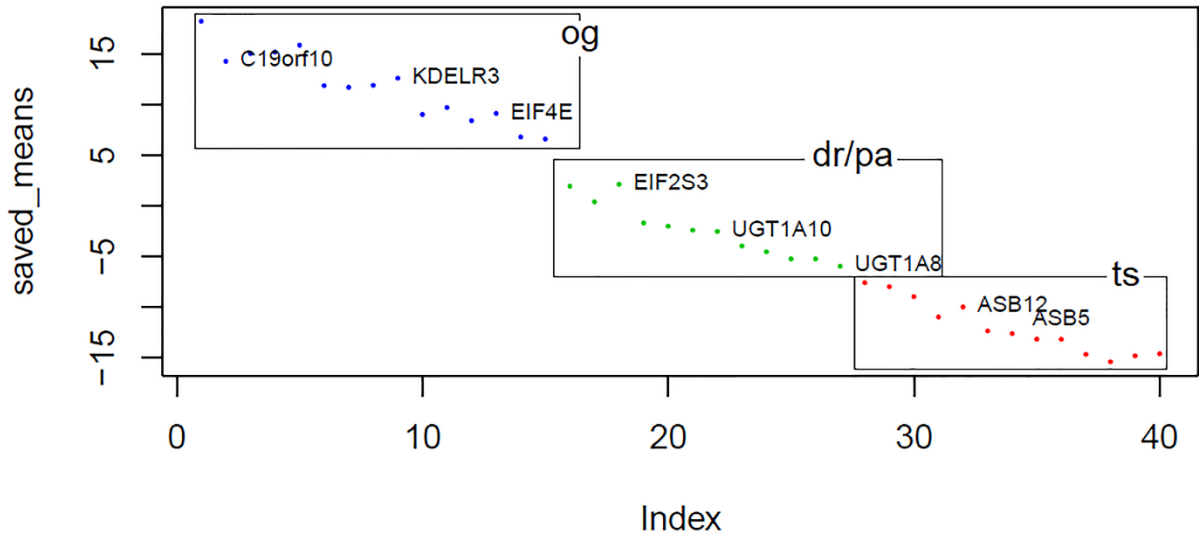


Figure S4: Cluster for HNSC

kich OG-TS Clusters

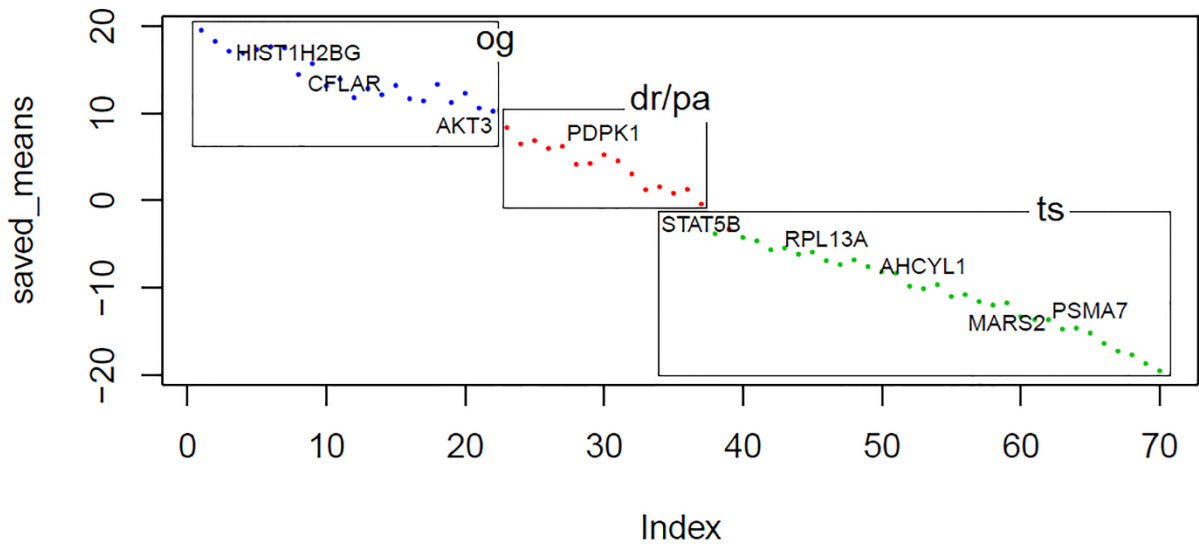


Figure S5: Cluster for KICH

kirc OG-TS Clusters

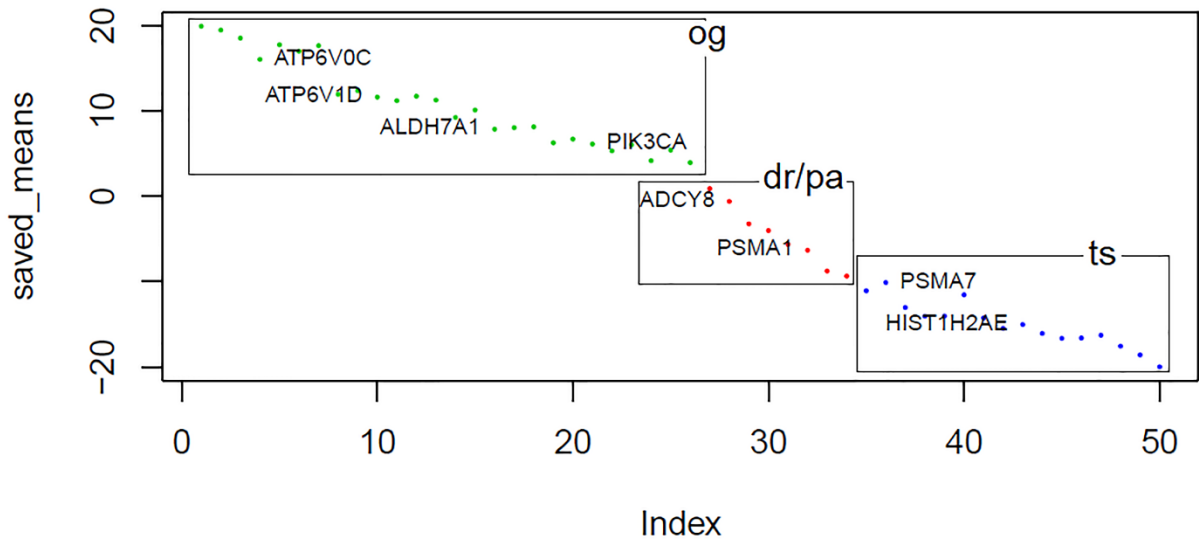


Figure S6: Cluster for KIRC

kirp OG-TS Clusters

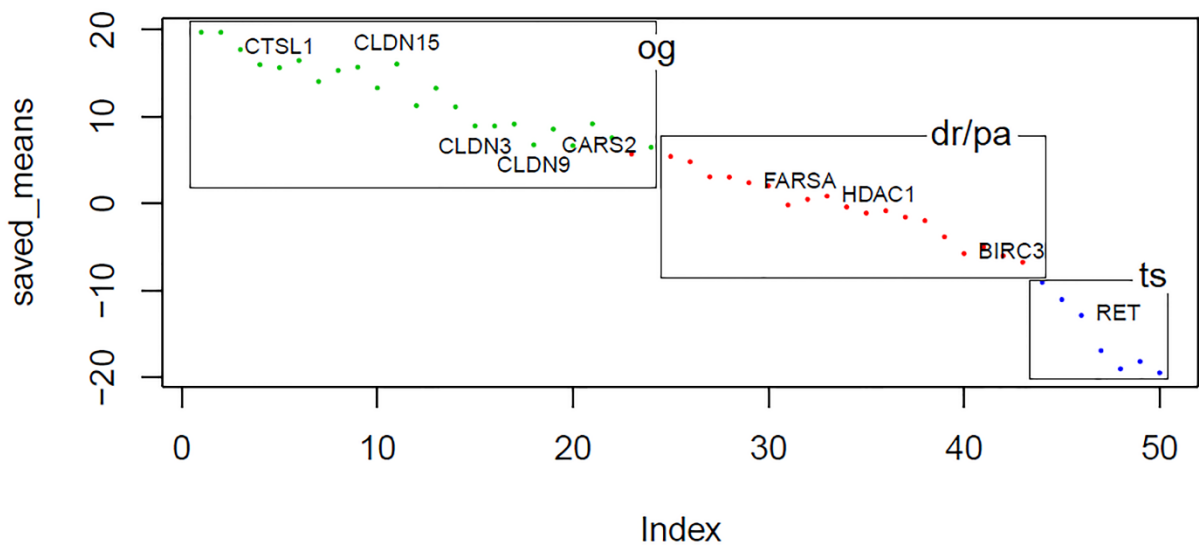


Figure S7: Cluster for KIRC

Igg OG-TS Clusters

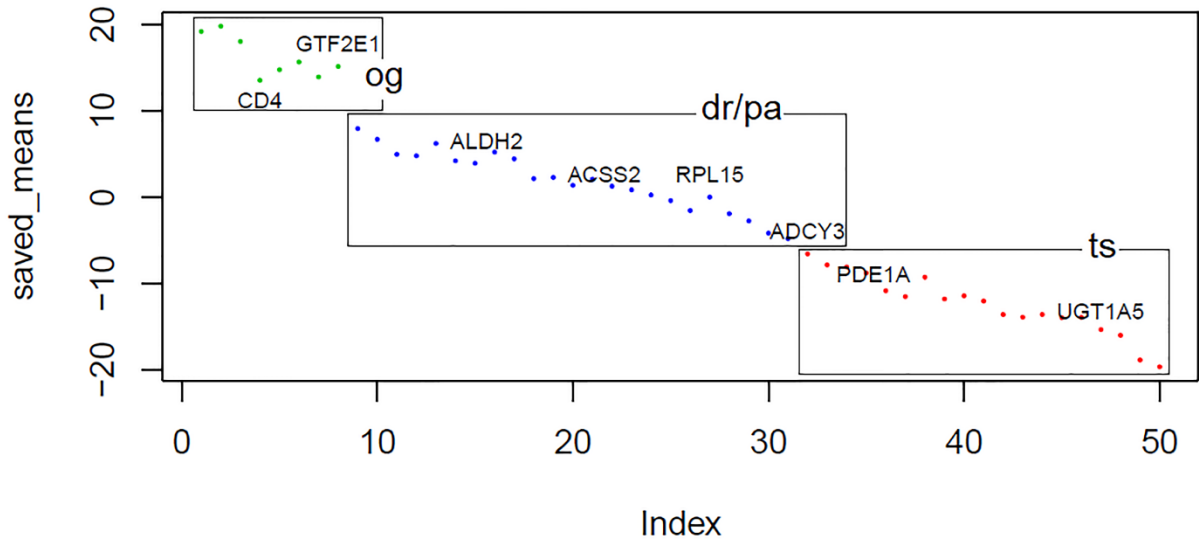


Figure S8: Cluster for LGG

lihc OG-TS Clusters

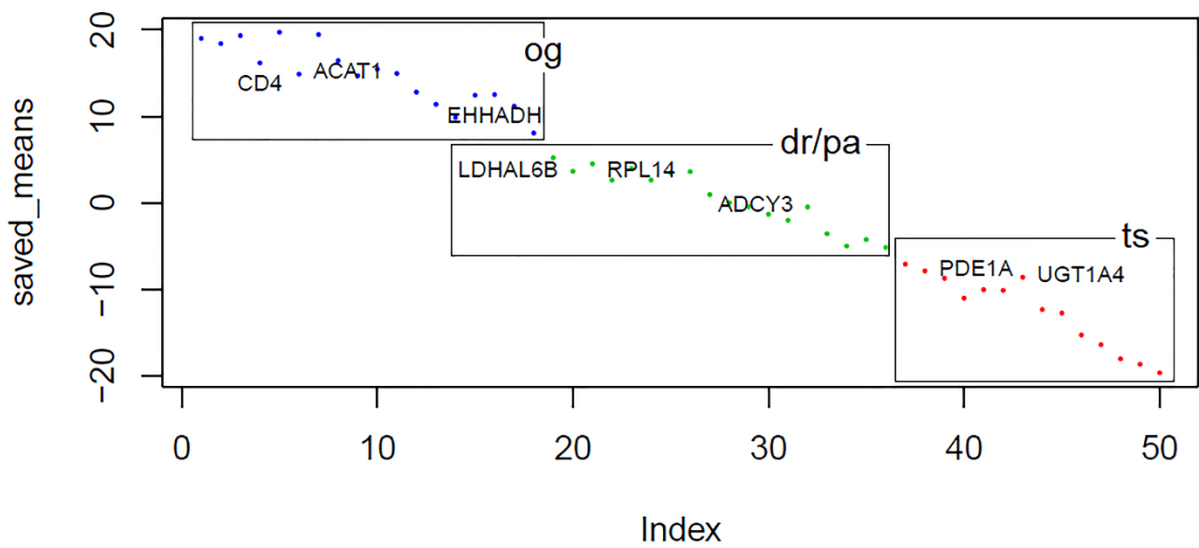


Figure S9: Cluster for LIHC

lusc OG-TS Clusters

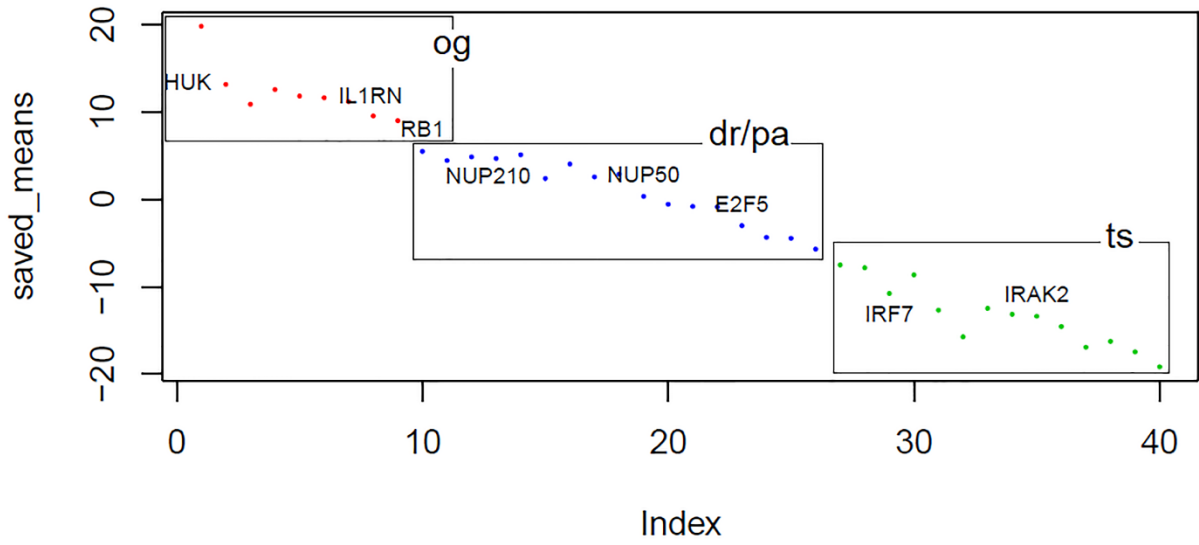


Figure S10: Cluster for LUSC

ov OG-TS Clusters

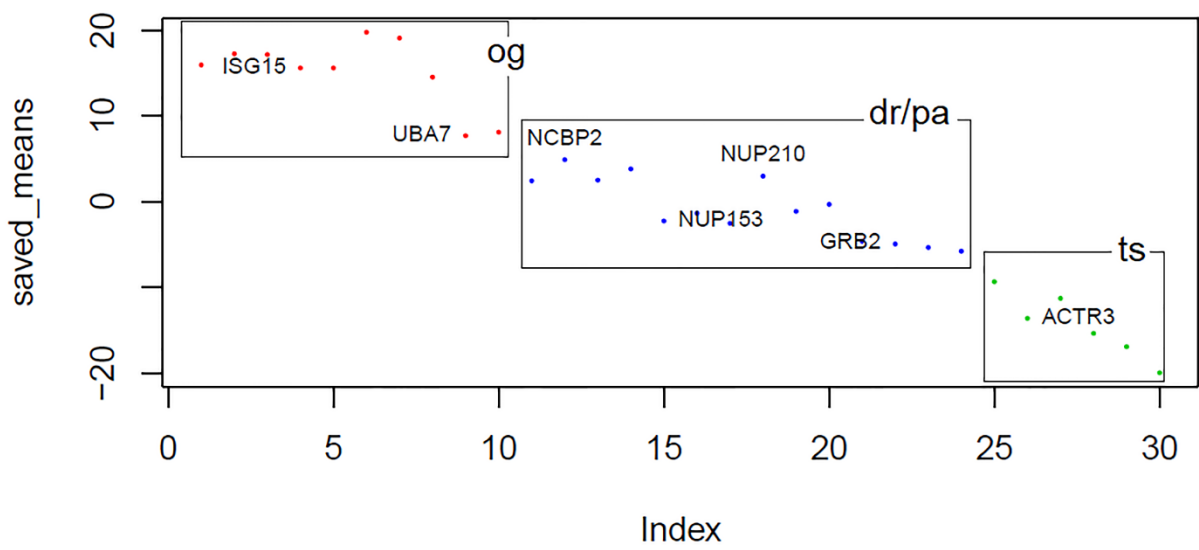


Figure S11: Cluster for OV

prad OG-TS Clusters

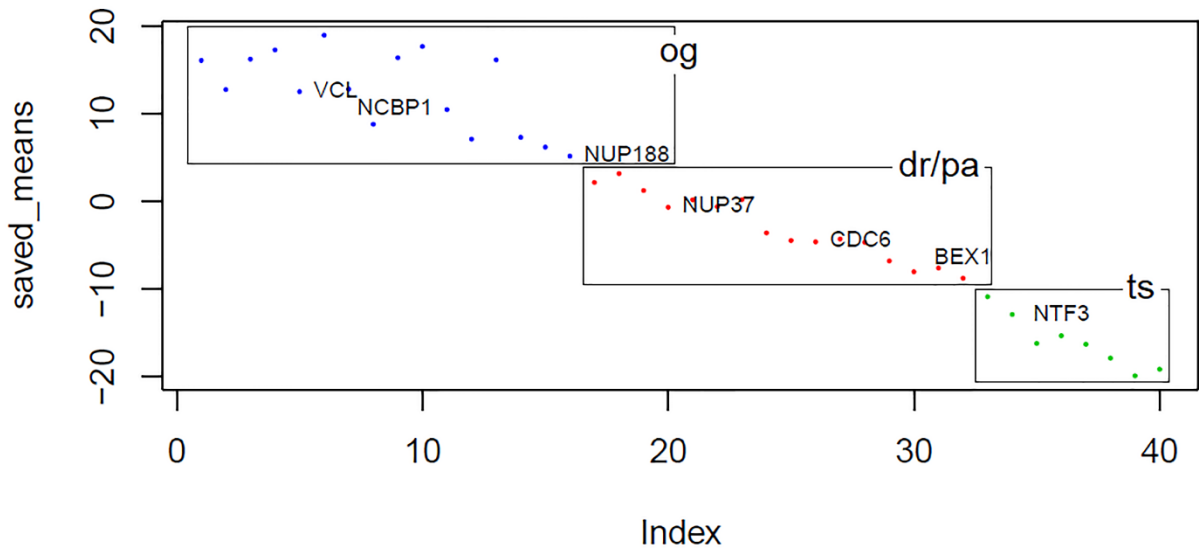


Figure S12: Cluster for PRAD

stad OG-TS Clusters

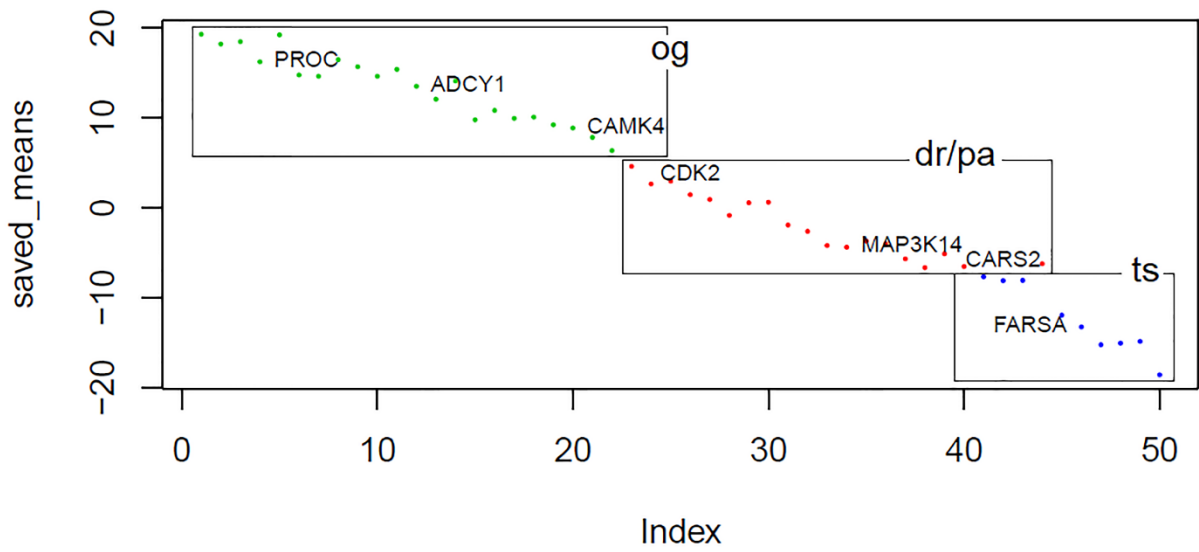


Figure S13: Cluster for STAD

thca OG-TS Clusters

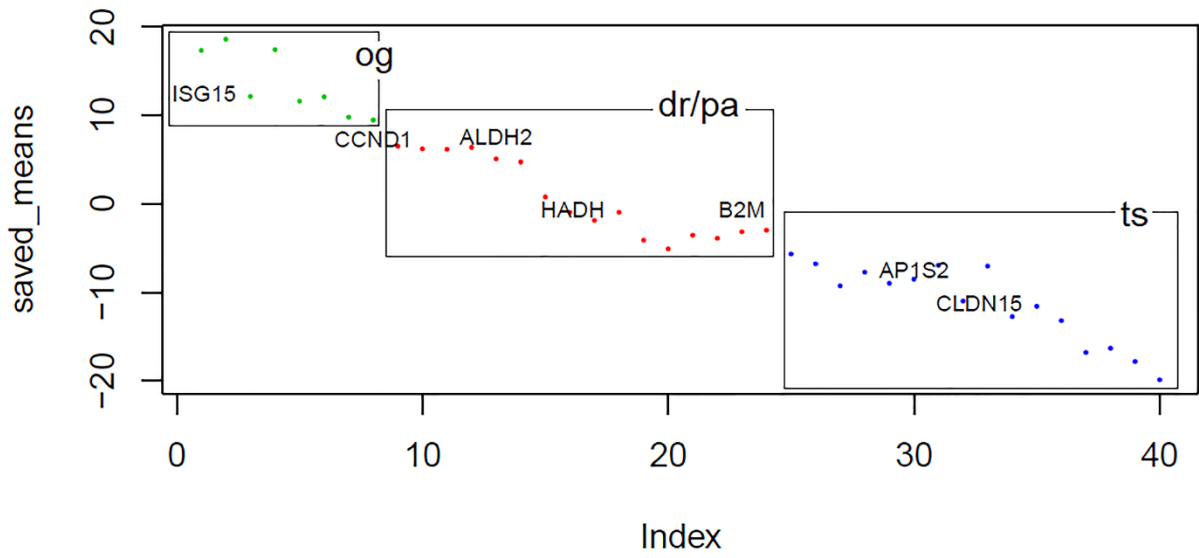


Figure S14: Cluster for THCA

ucec OG-TS Clusters

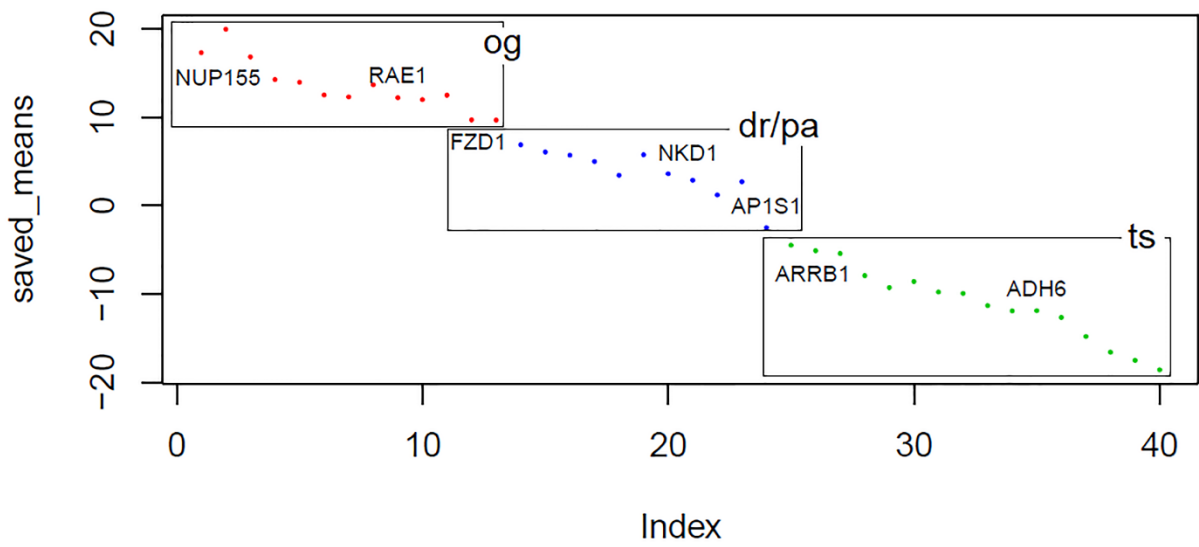


Figure S15: Cluster for UCEC

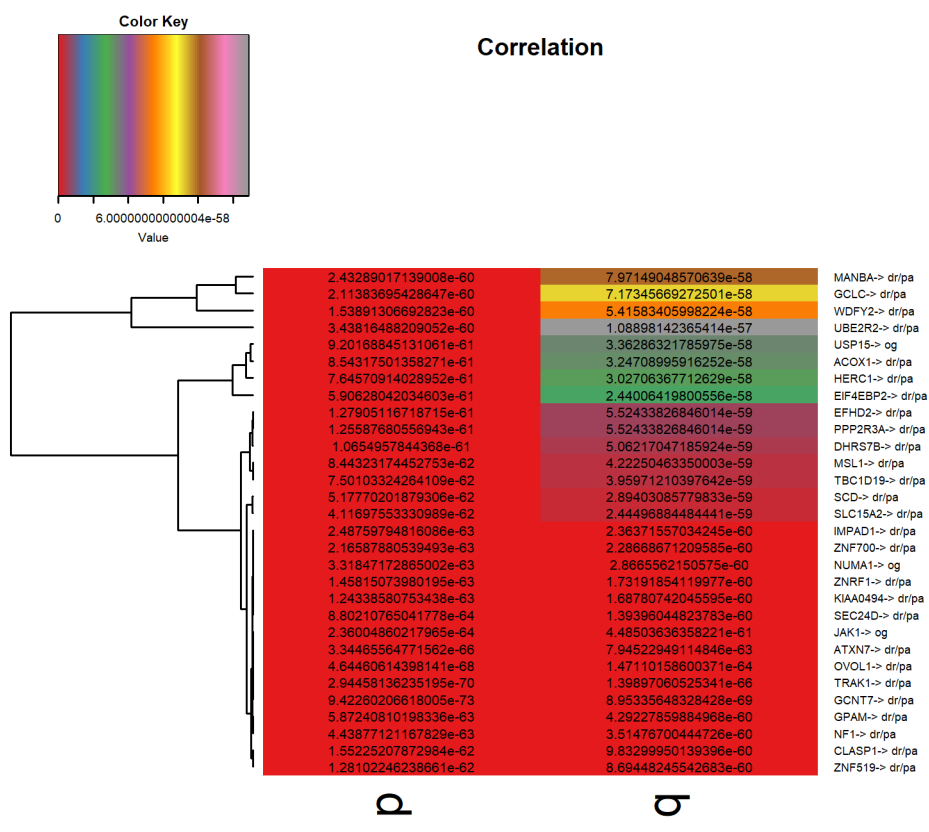


Figure S16: Marker genes heatmap for BLCA

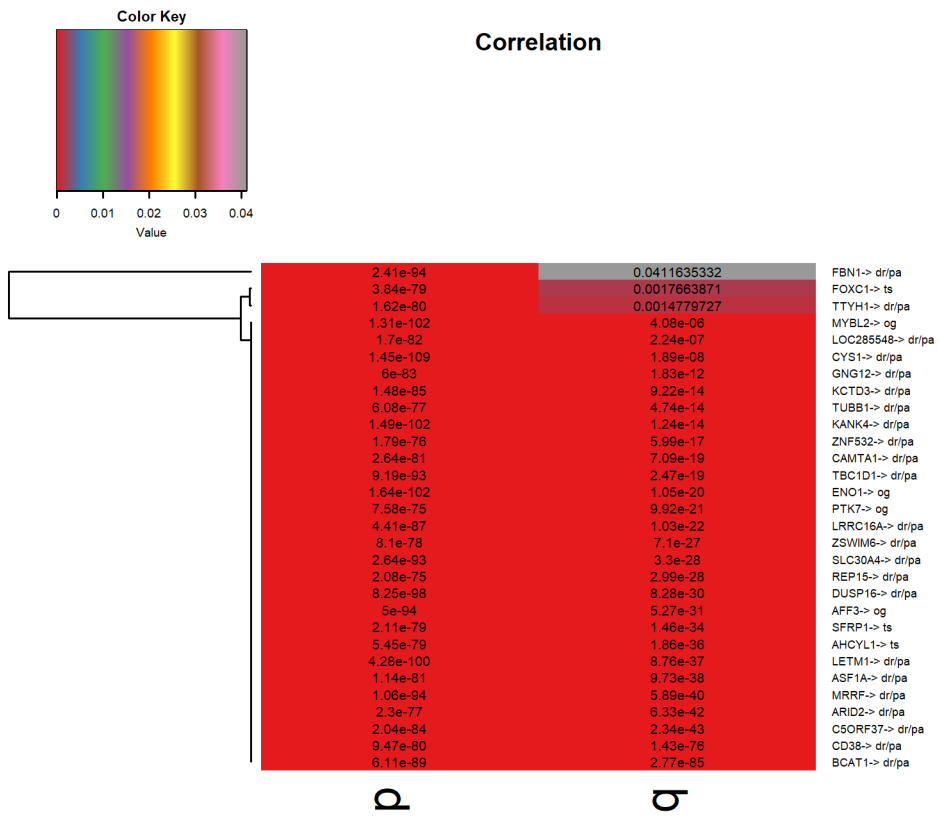


Figure S17: Marker genes heatmap for BRCA

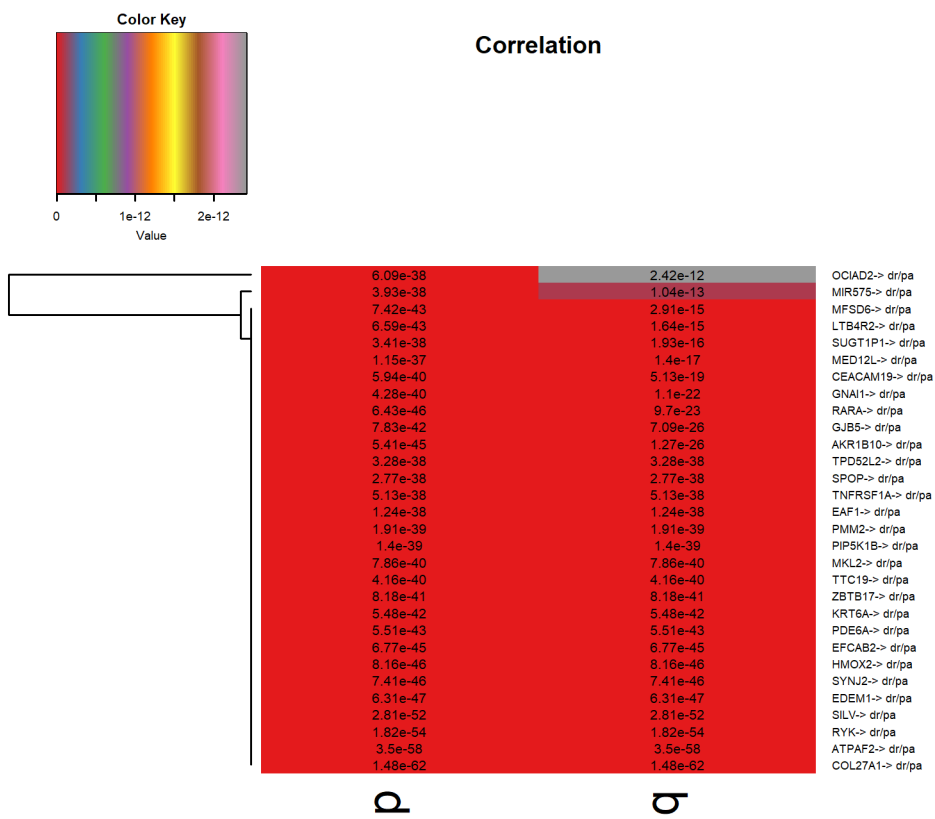


Figure S18: Marker genes heatmap for CESC

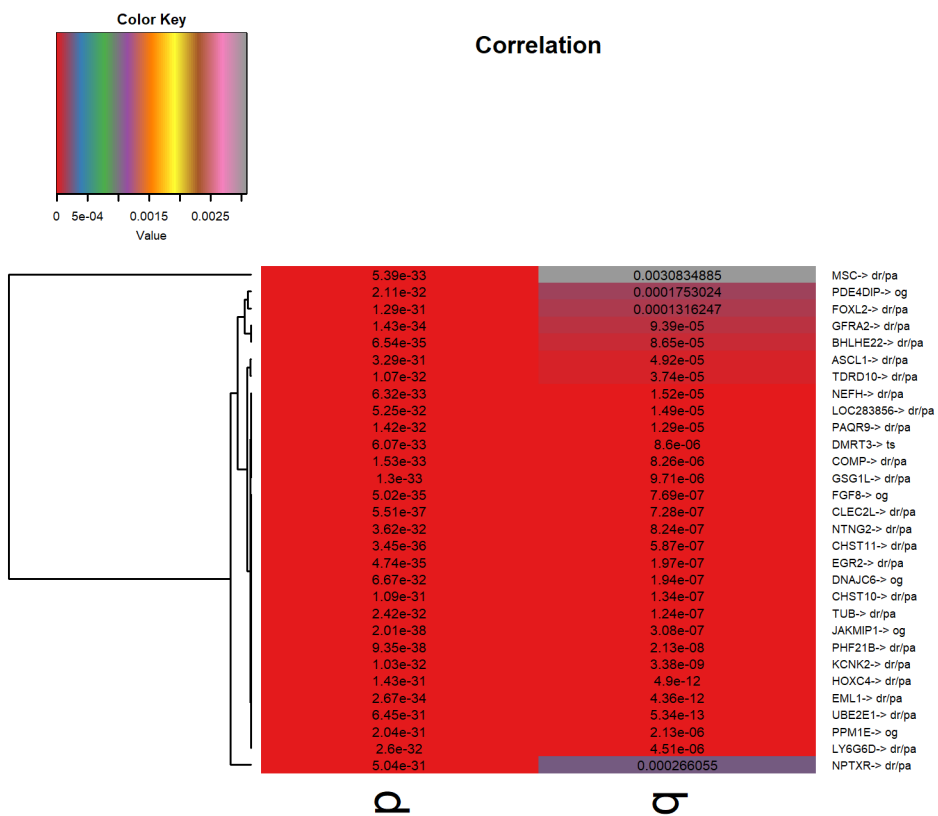


Figure S19: Marker genes heatmap for COAD

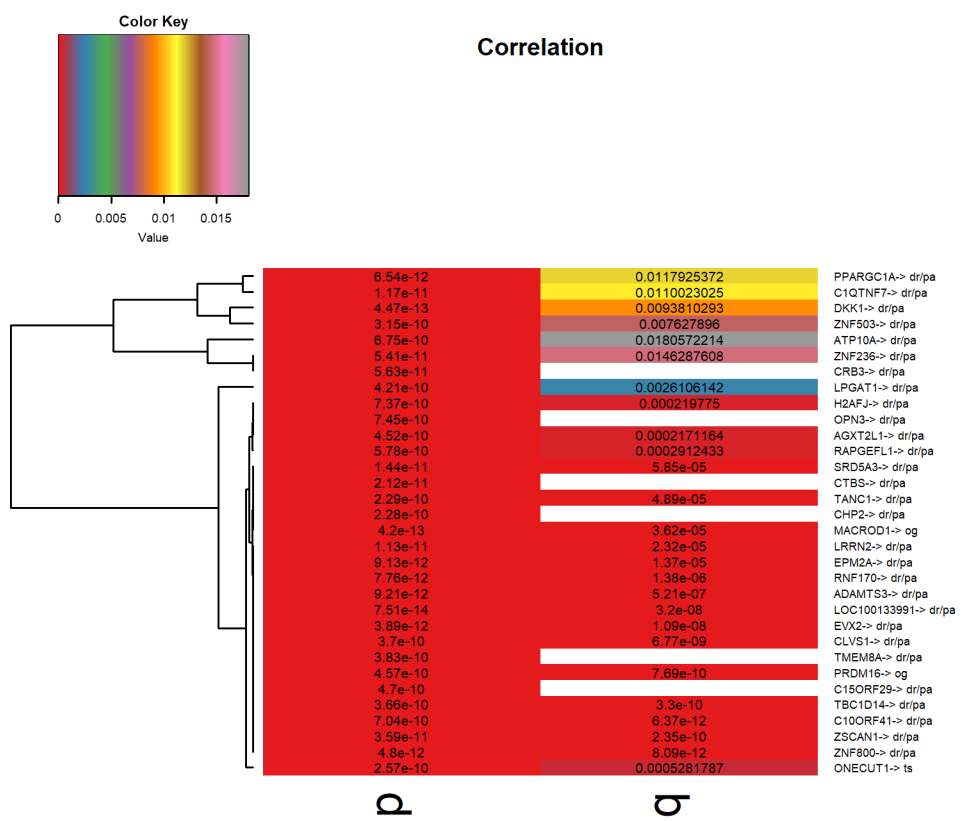


Figure S20: Marker genes heatmap for DLBC

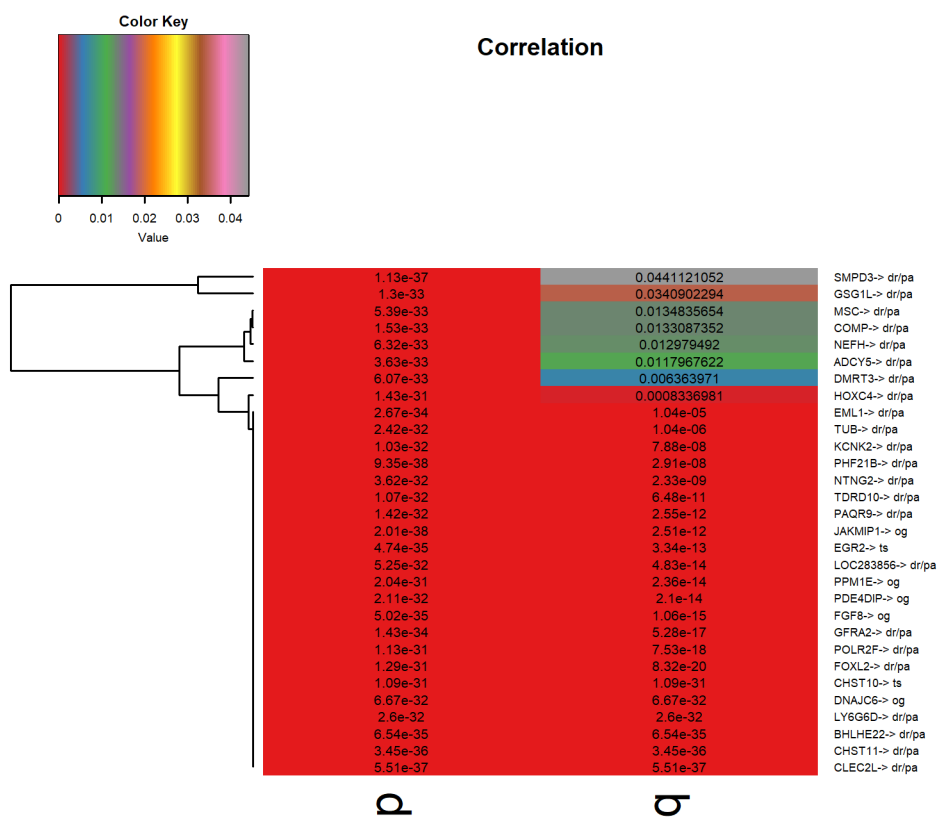


Figure S21: Marker genes heatmap for GBM

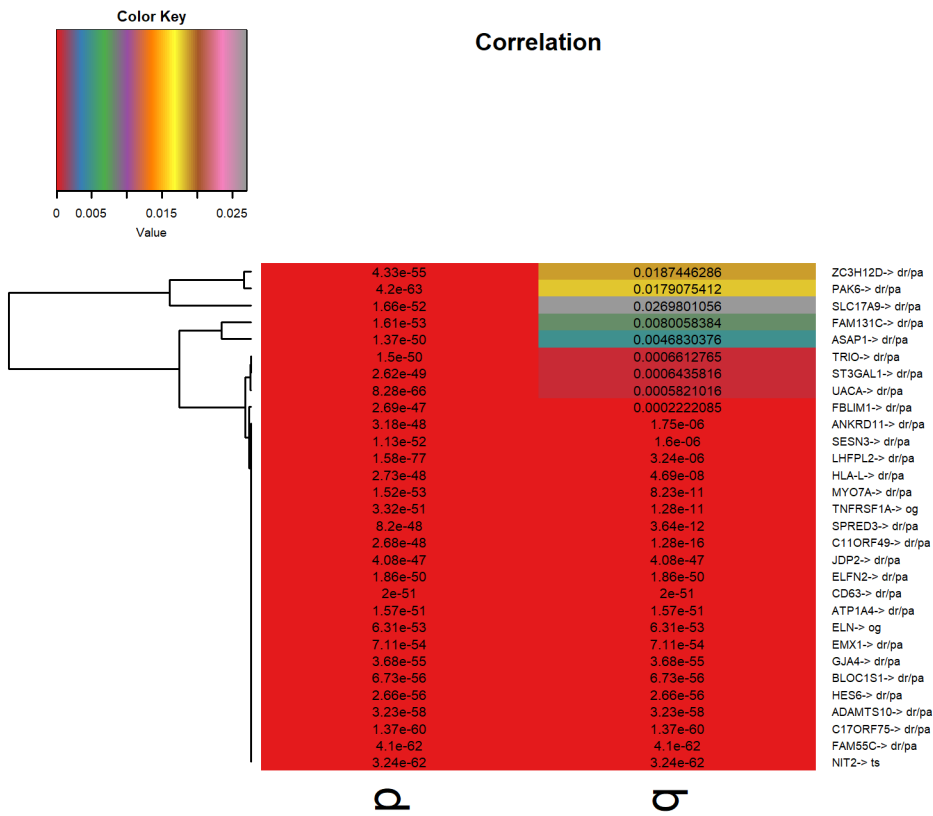


Figure S22: Marker genes heatmap for HNSC

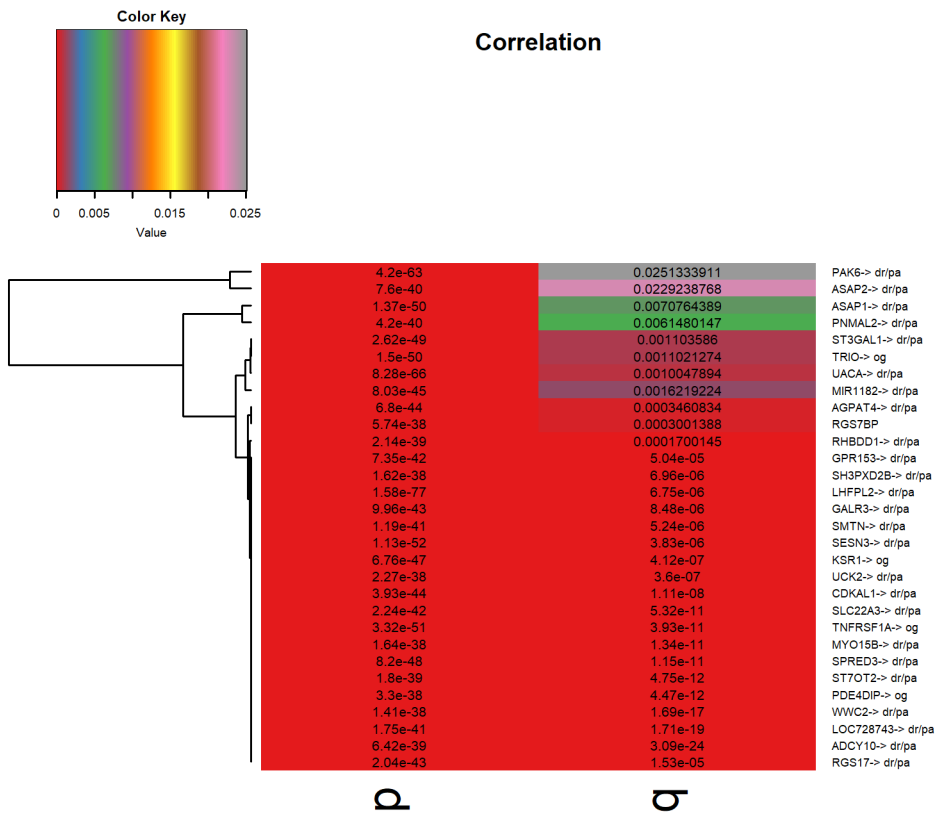


Figure S23: Marker genes heatmap for KICH

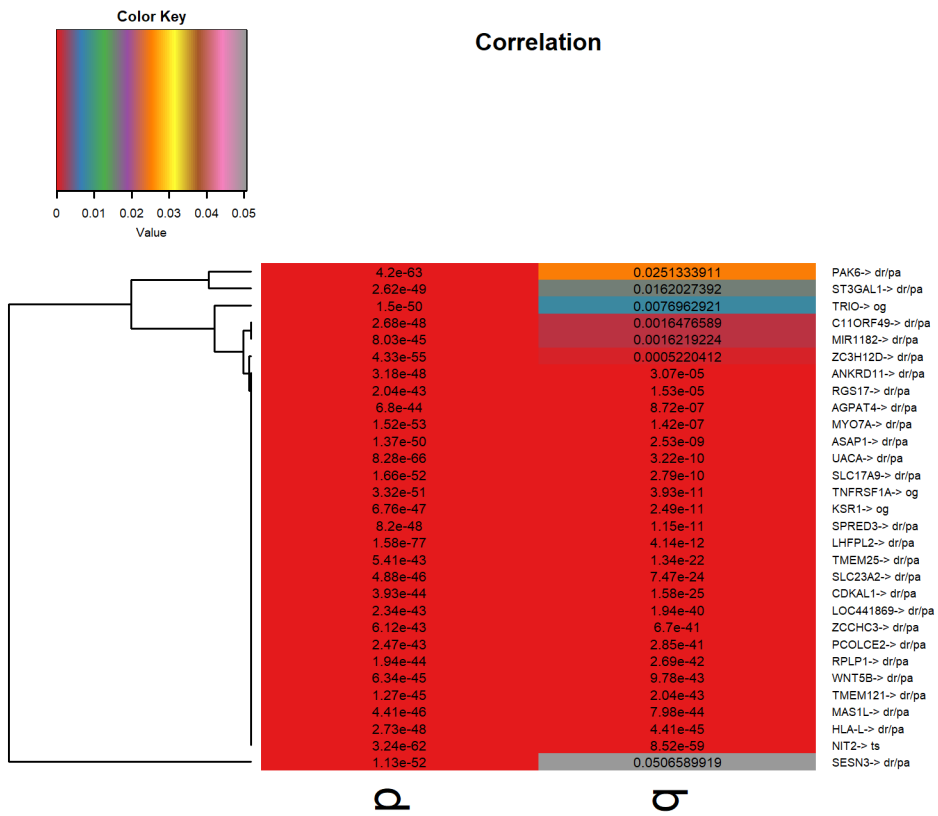


Figure S24: Marker genes heatmap for KIRC

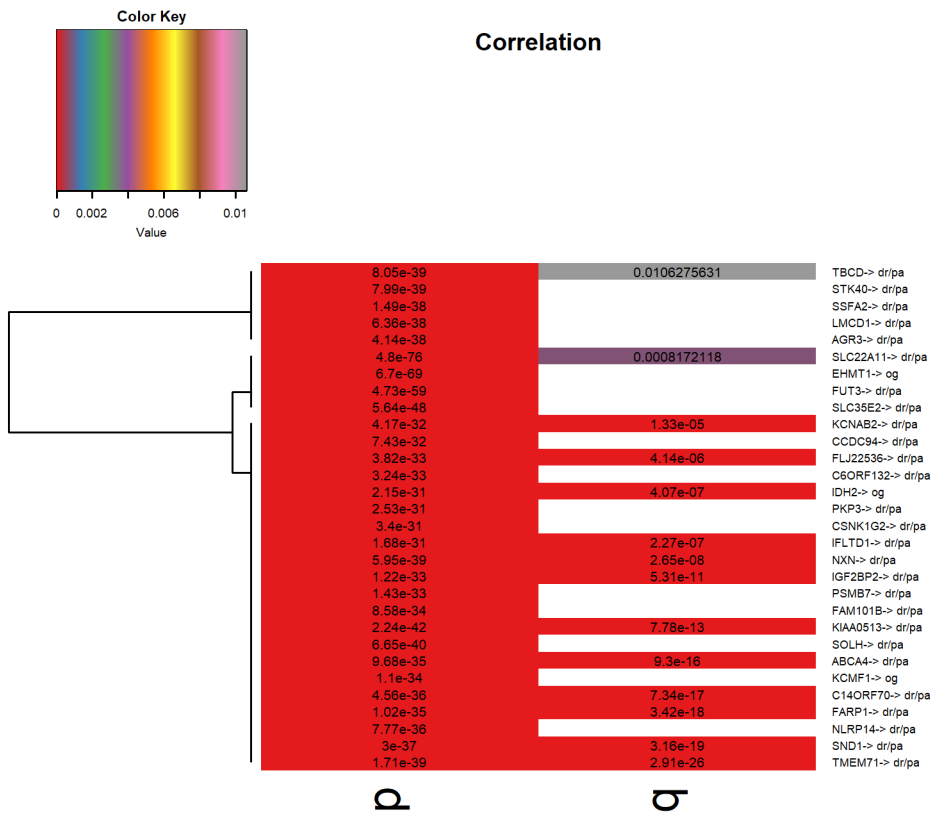


Figure S25: Marker genes heatmap for KIRP

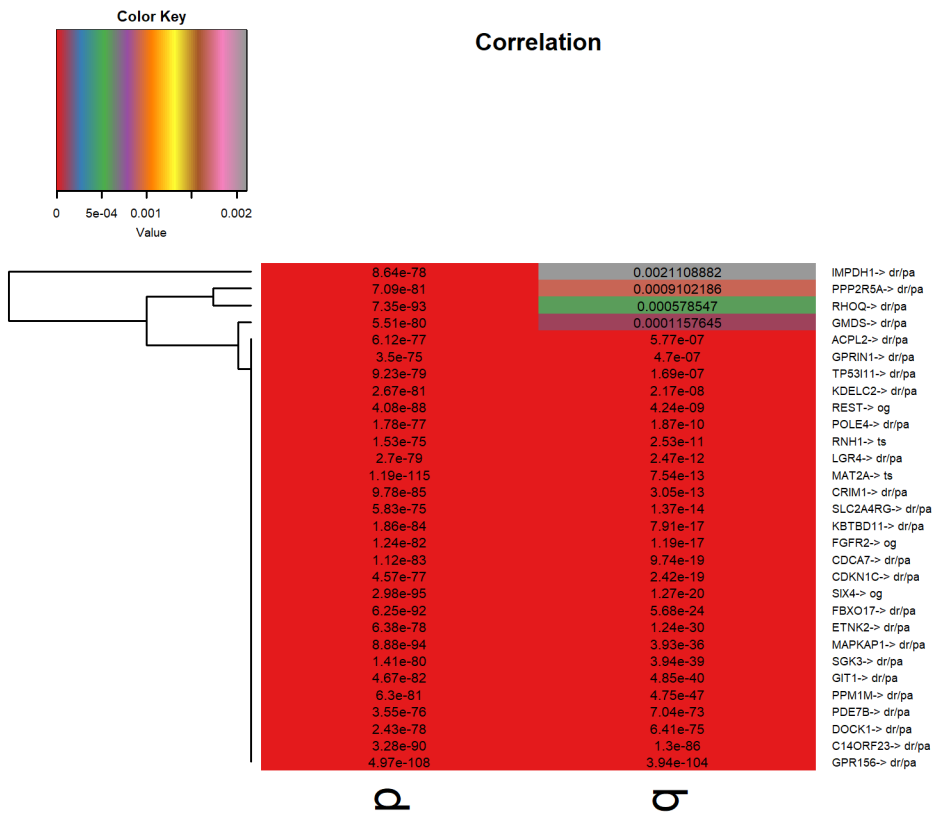


Figure S26: Marker genes heatmap for LGG

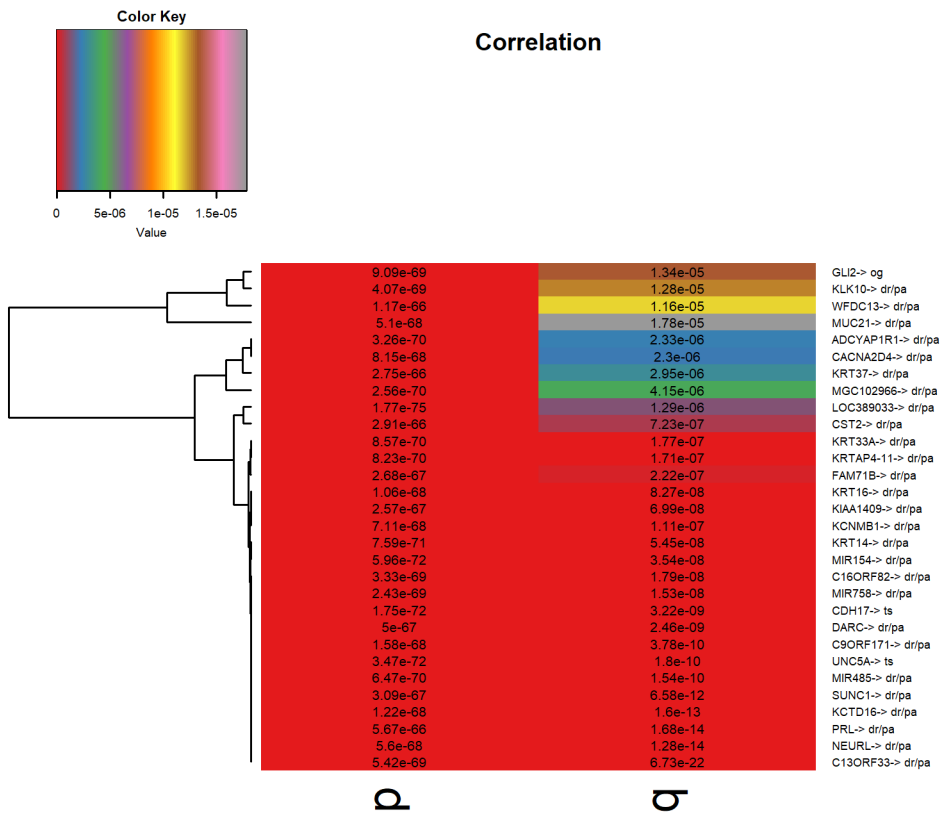


Figure S27: Marker genes heatmap for LIHC

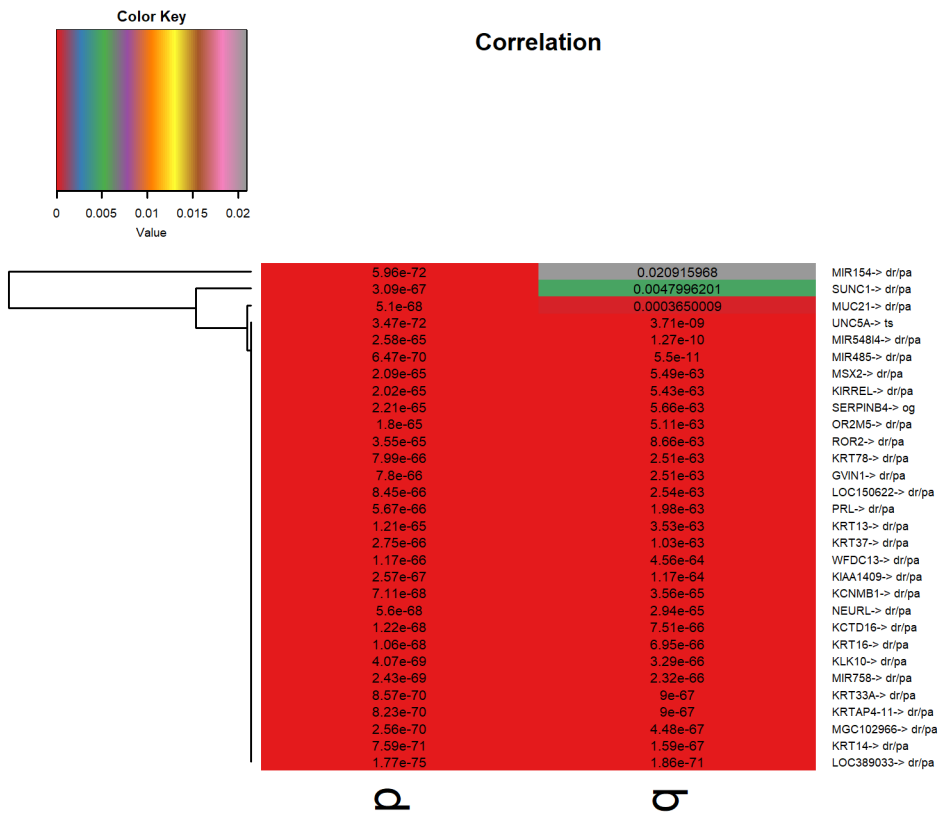


Figure S28: Marker genes heatmap for LUSC

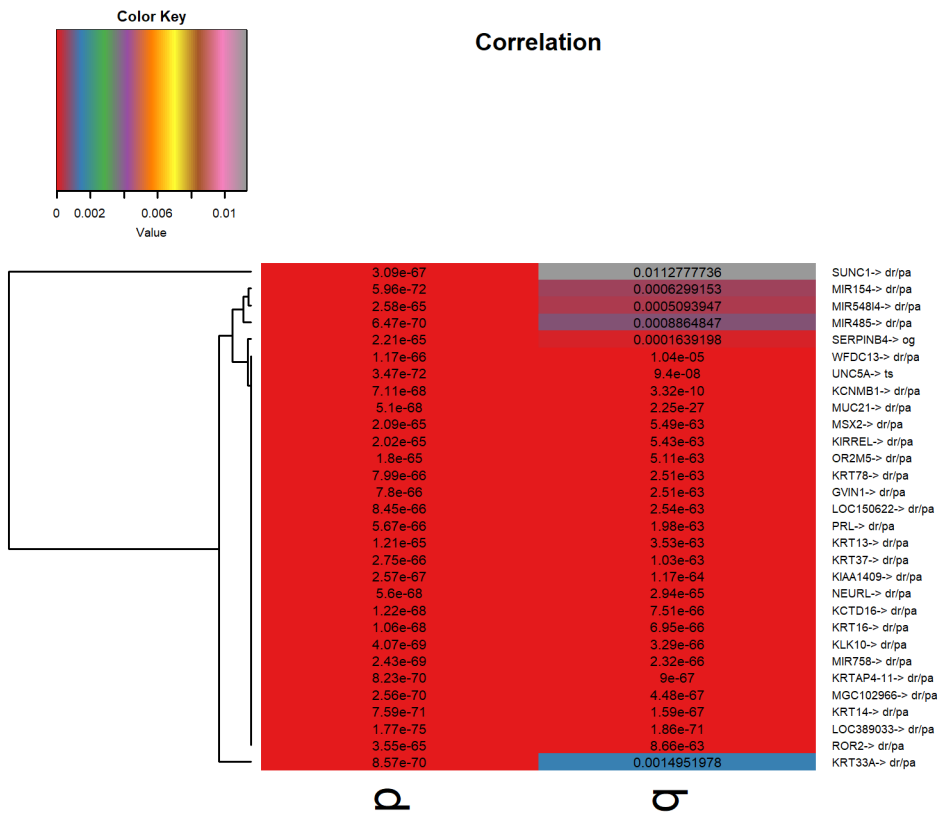


Figure S29: Marker genes heatmap for OV

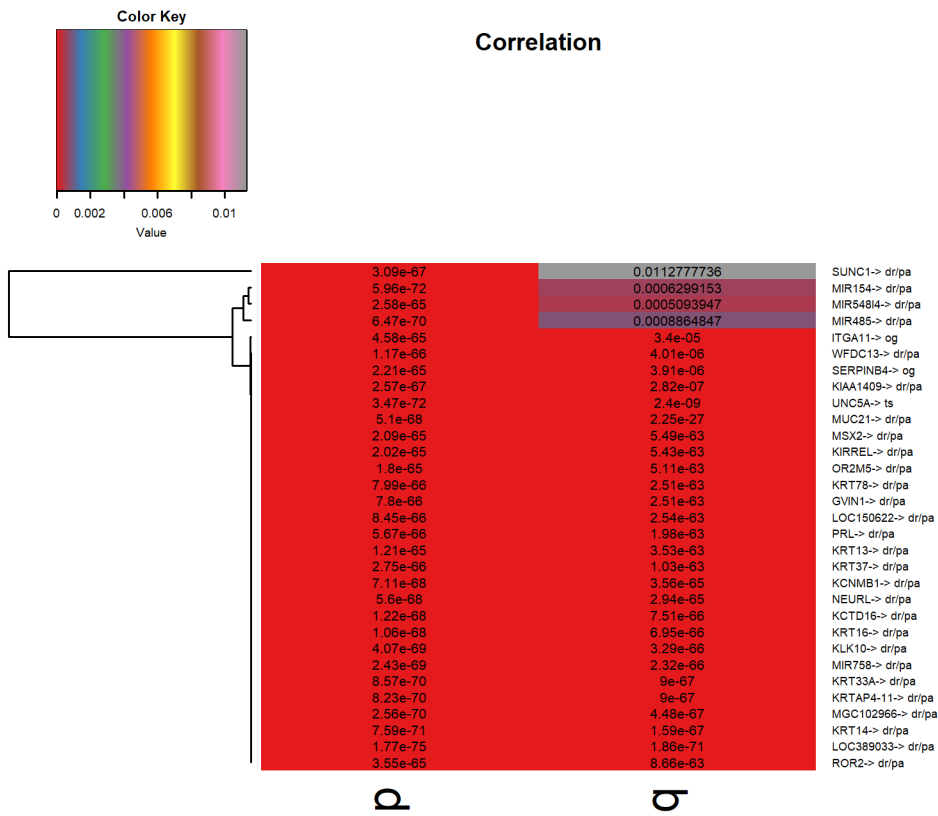


Figure S30: Marker genes heatmap for PACA

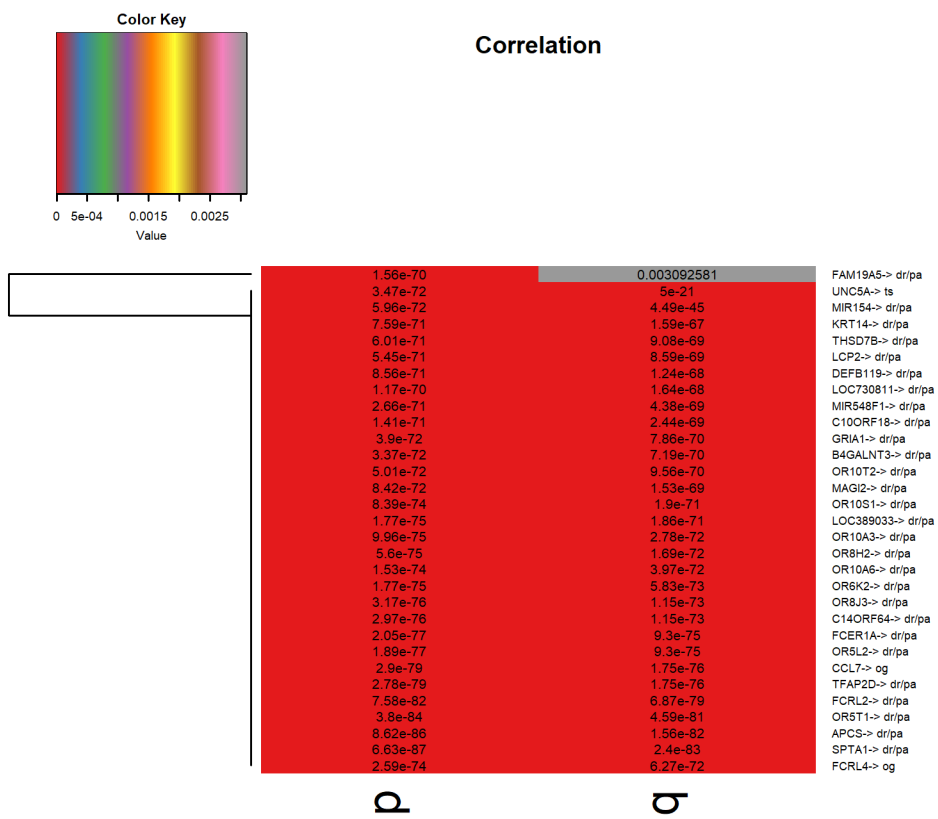


Figure S31: Marker genes heatmap for PRAD

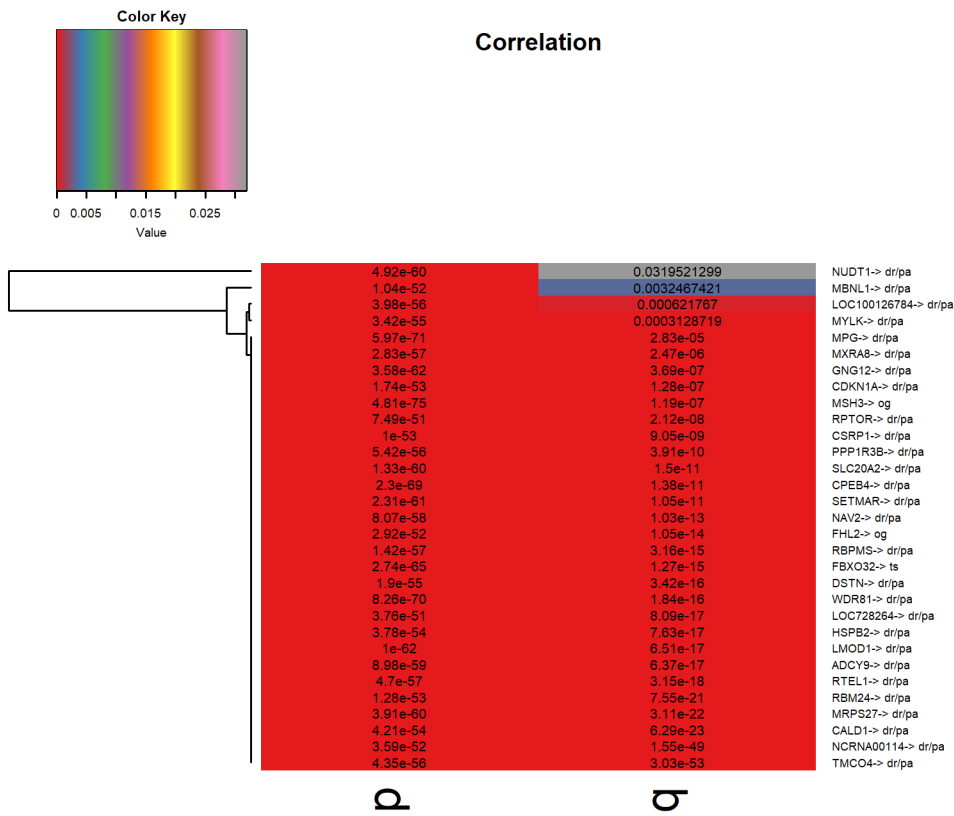


Figure S32: Marker genes heatmap for SARC

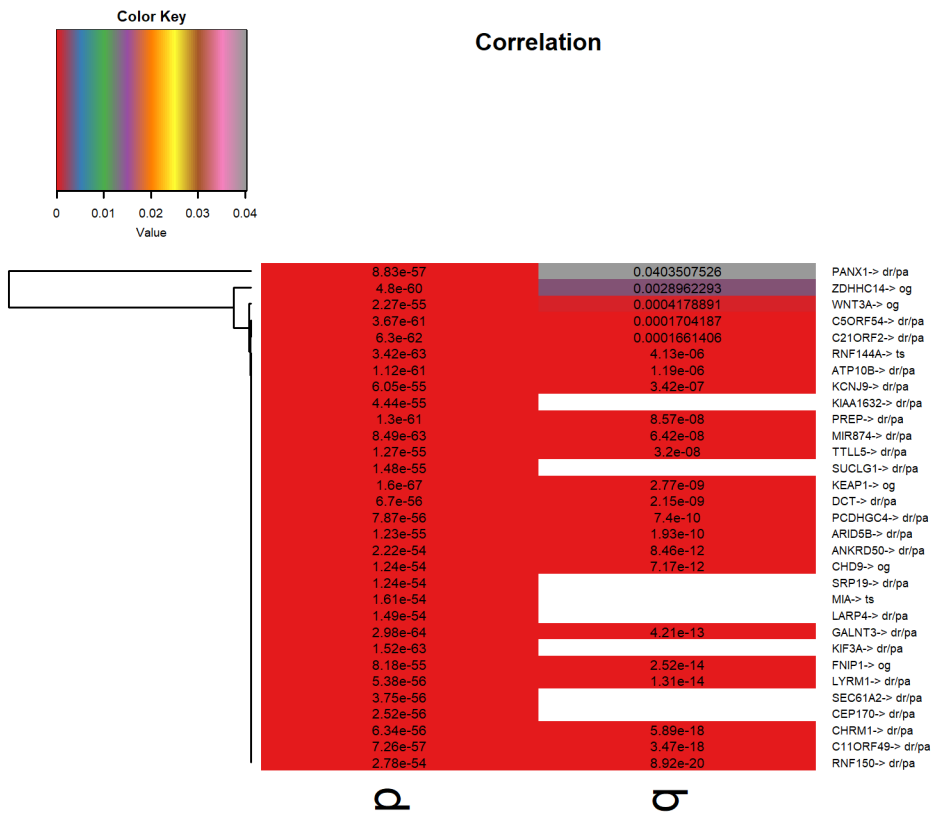


Figure S33: Marker genes heatmap for SKCM

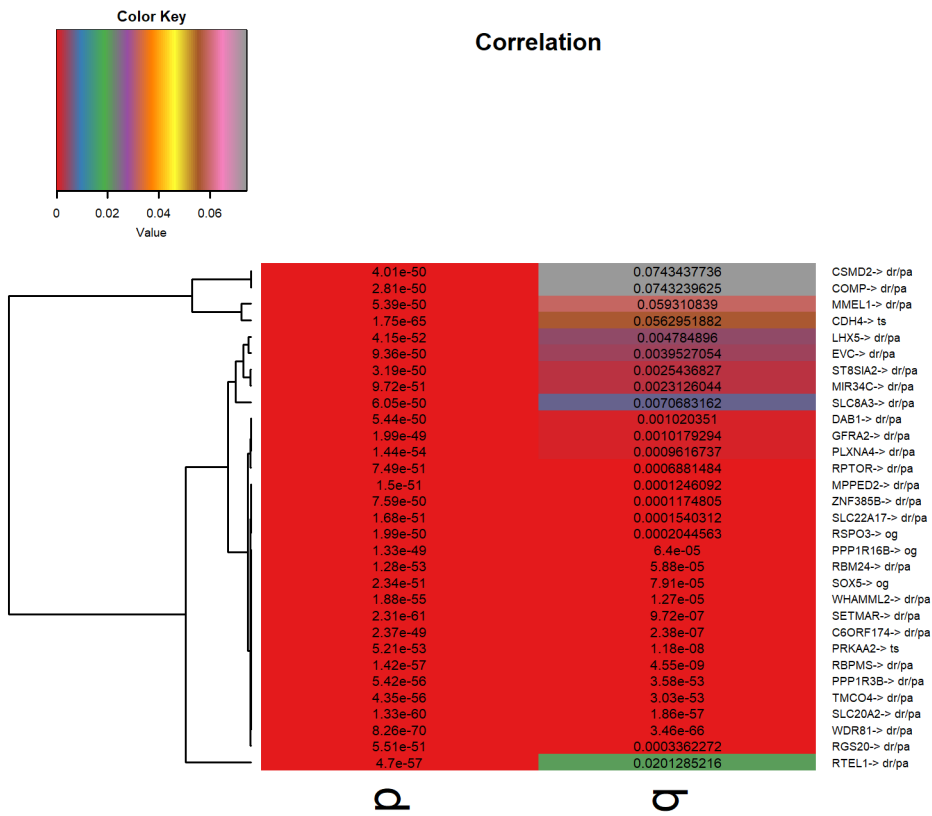


Figure S34: Marker genes heatmap for STAD

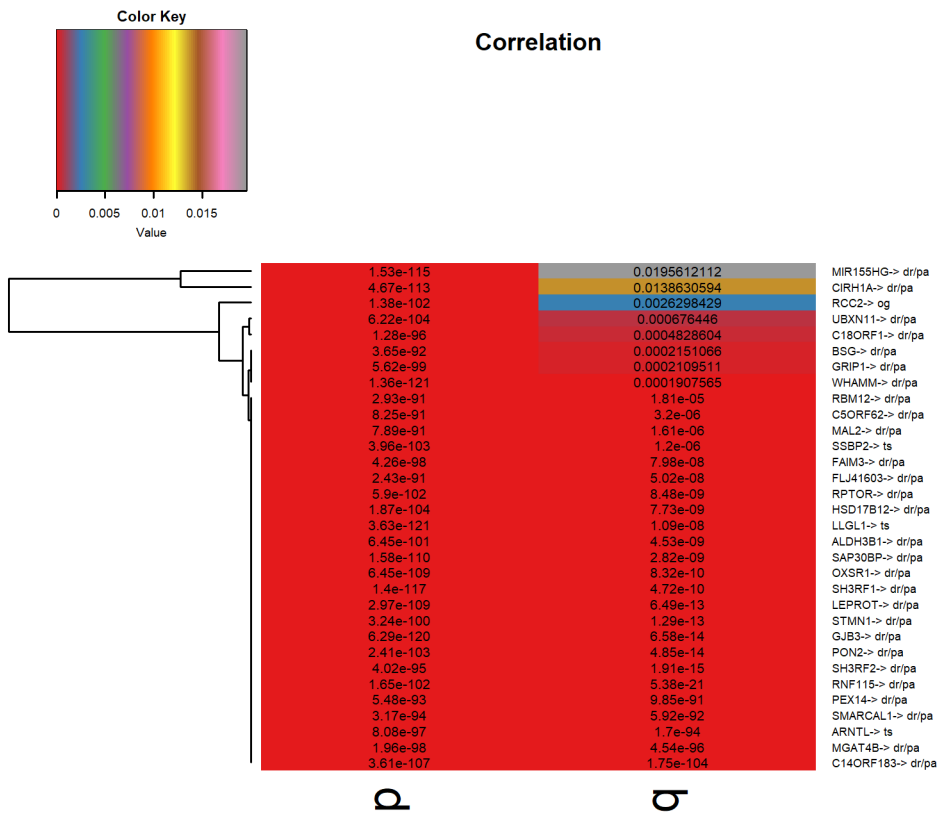


Figure S35: Marker genes heatmap for THCA

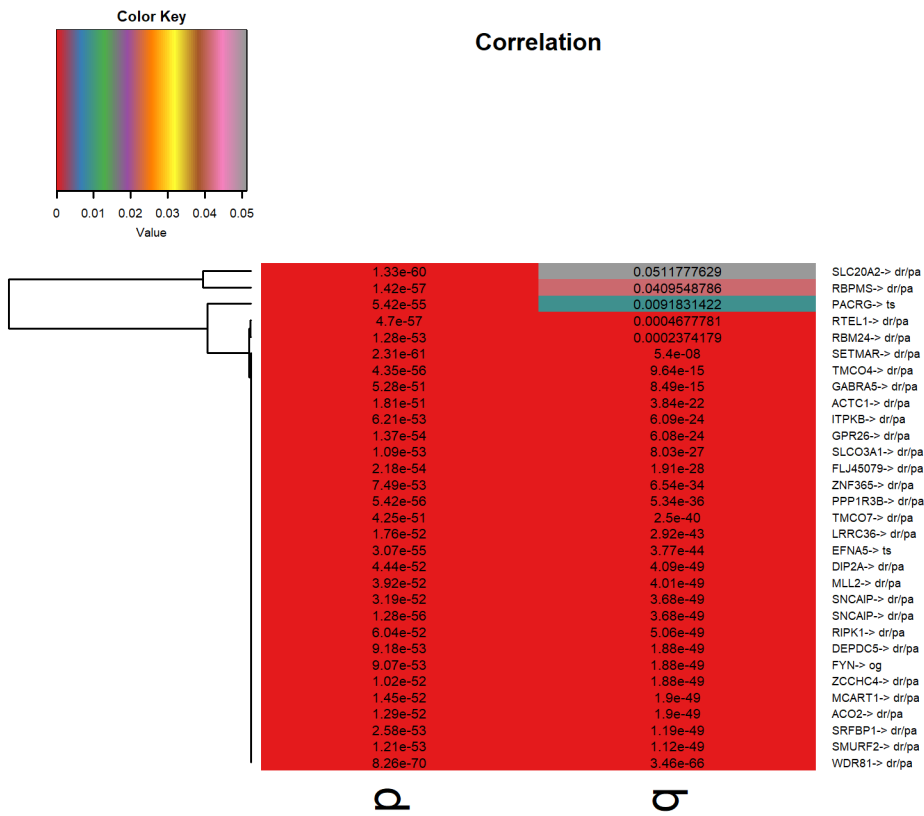


Figure S36: Marker genes heatmap for UCEC

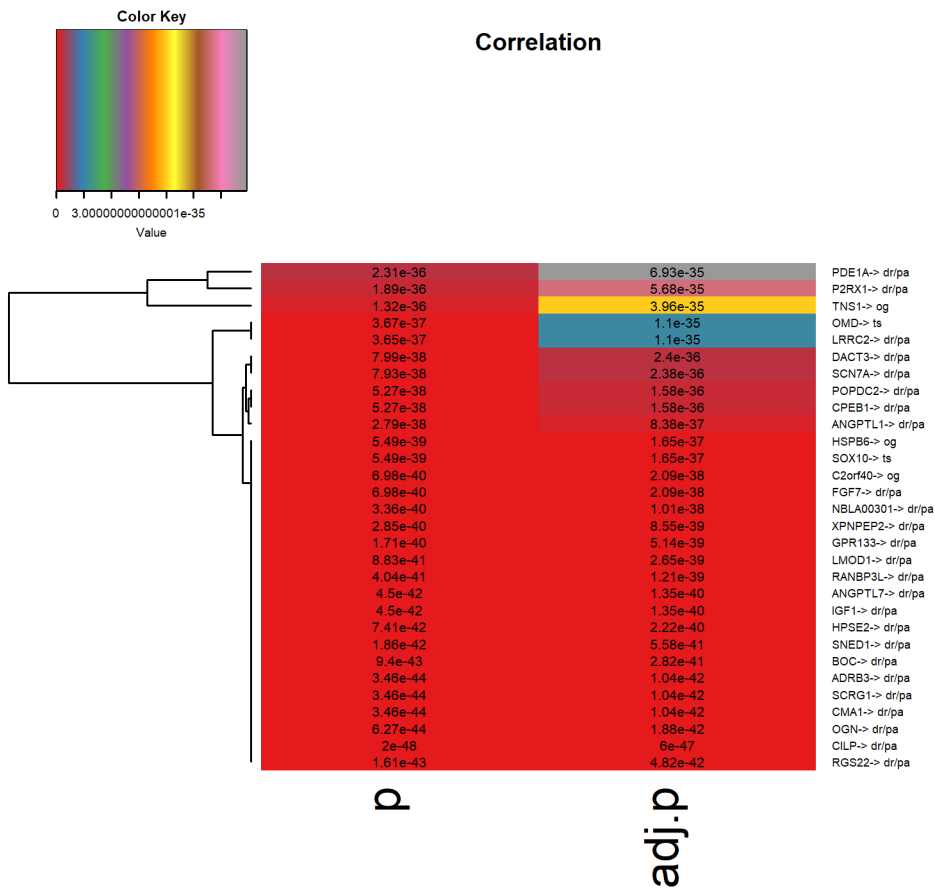


Figure S37: Significant genes heatmap for BLCA

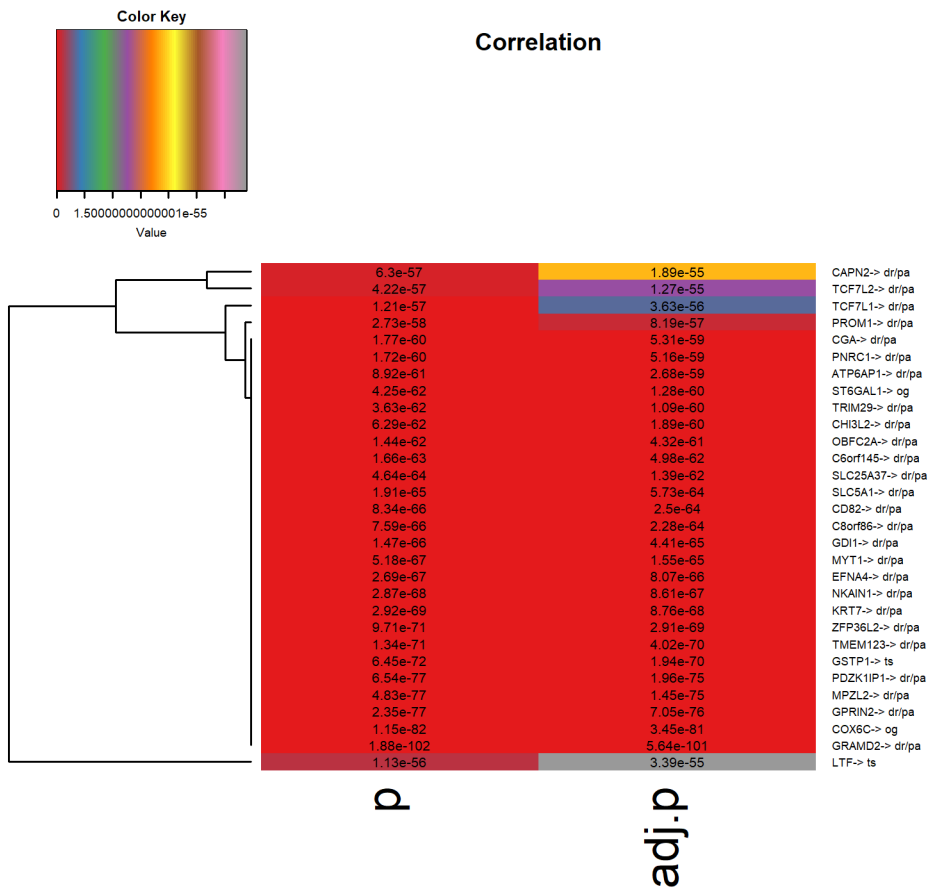


Figure S38: Significant genes heatmap for BRCA

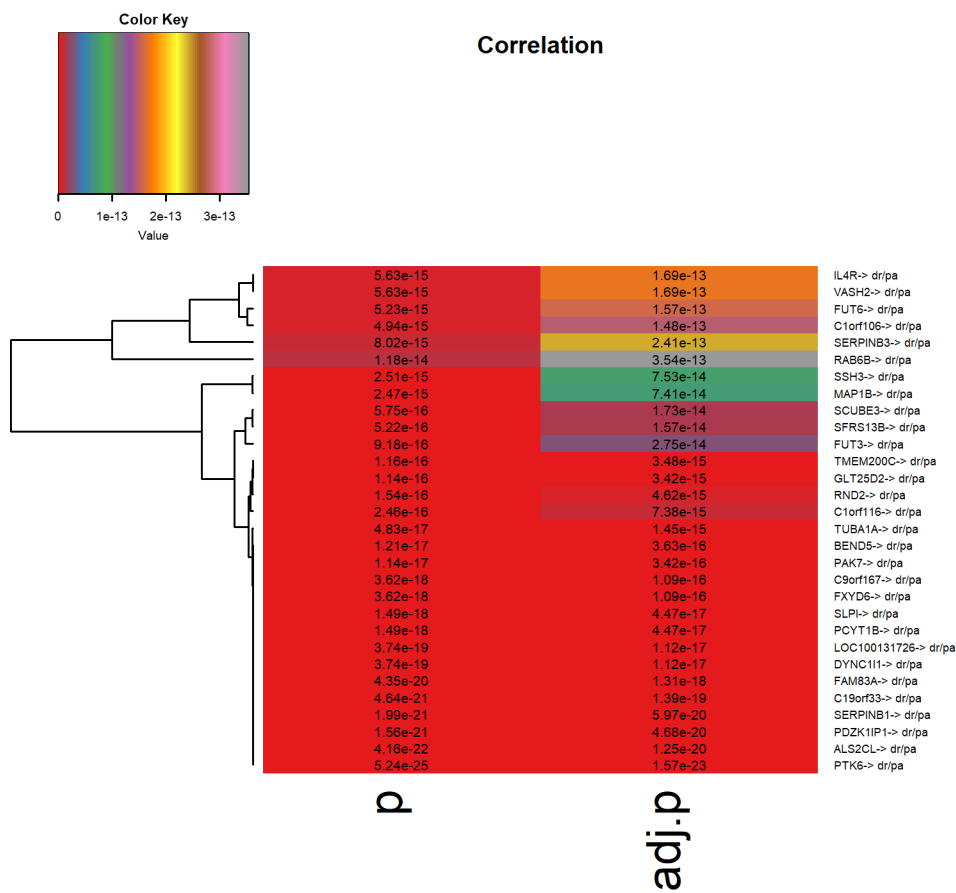


Figure S39: Significant genes heatmap for CESC

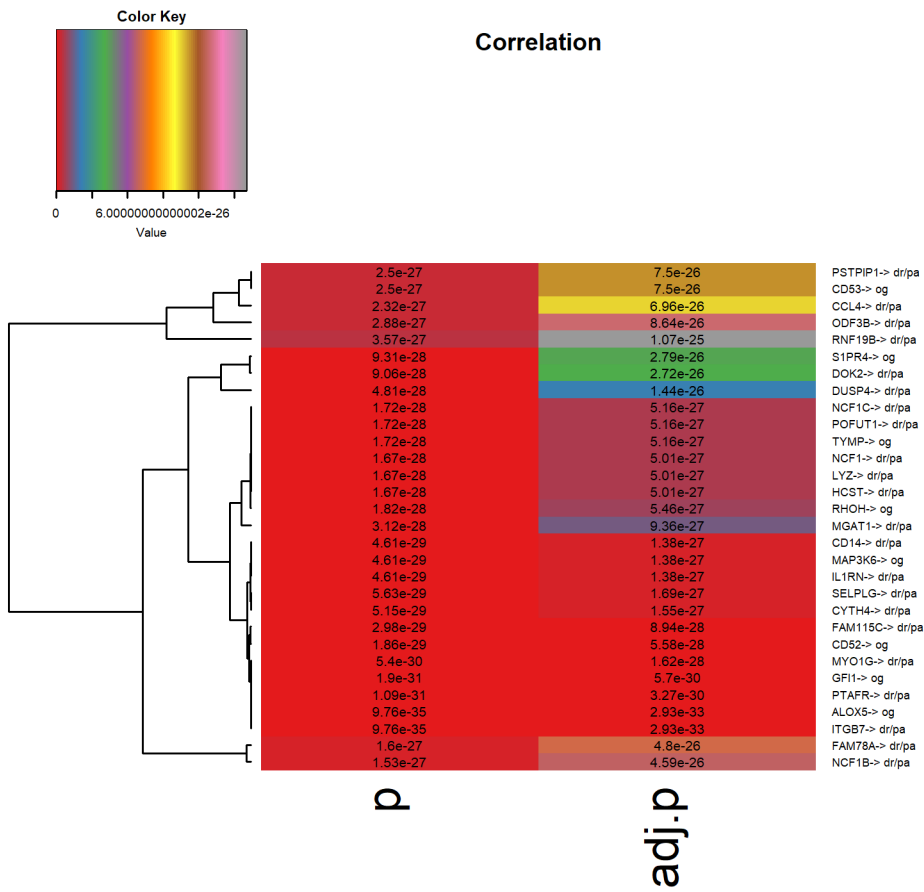


Figure S40: Significant genes heatmap for COAD

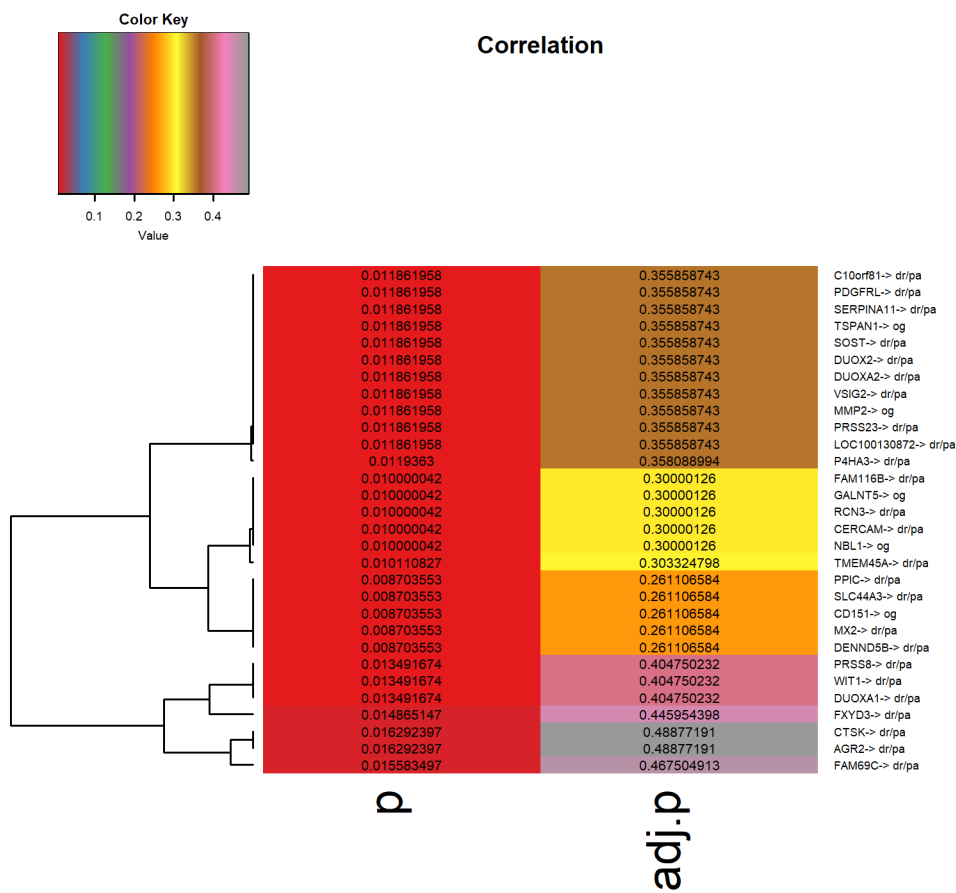


Figure S41: Significant genes heatmap for DLBC

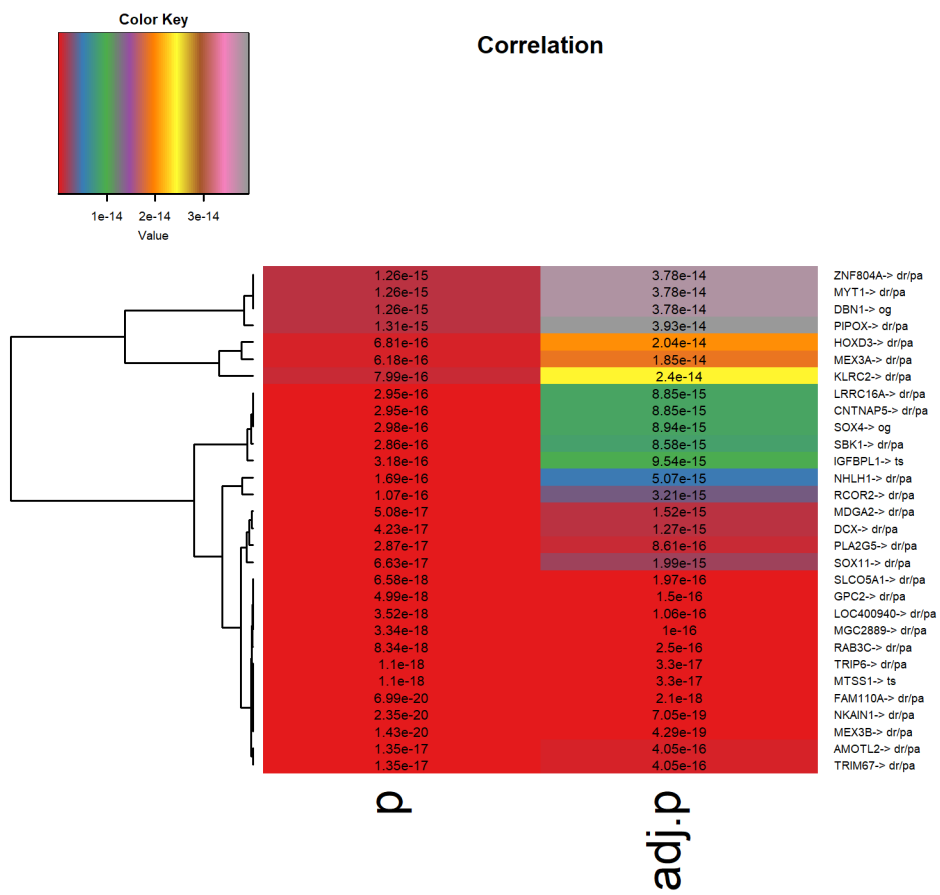


Figure S42: Significant genes heatmap for GBM

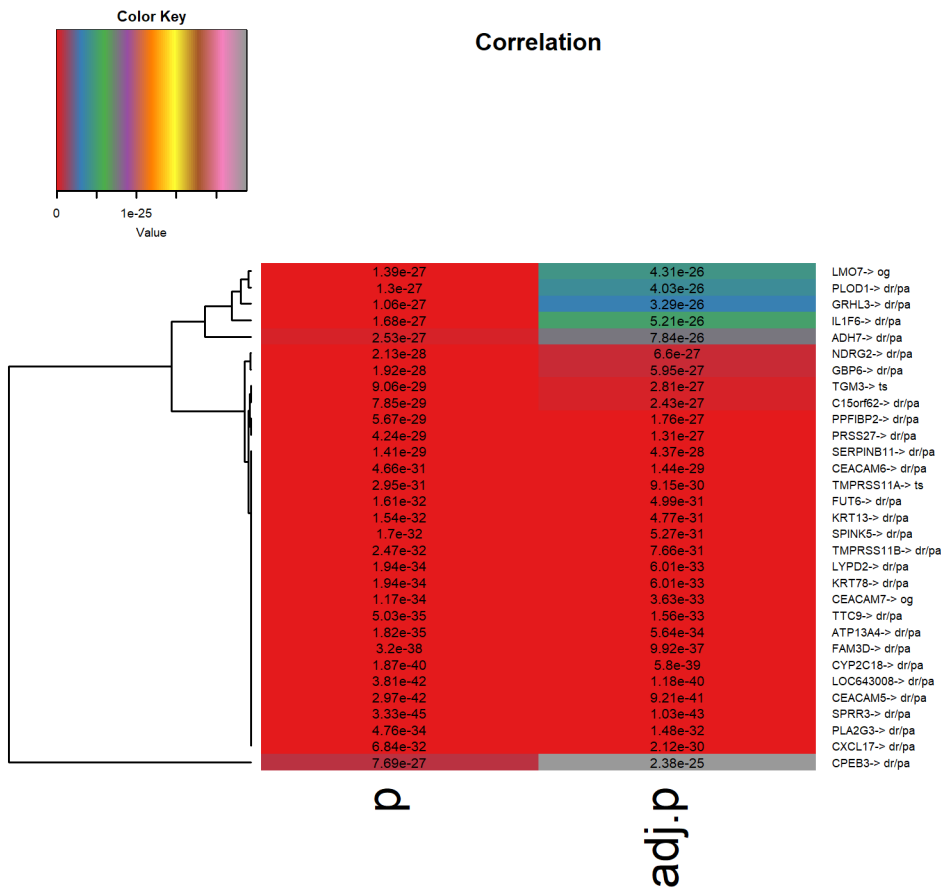


Figure S43: Significant genes heatmap for HNSC

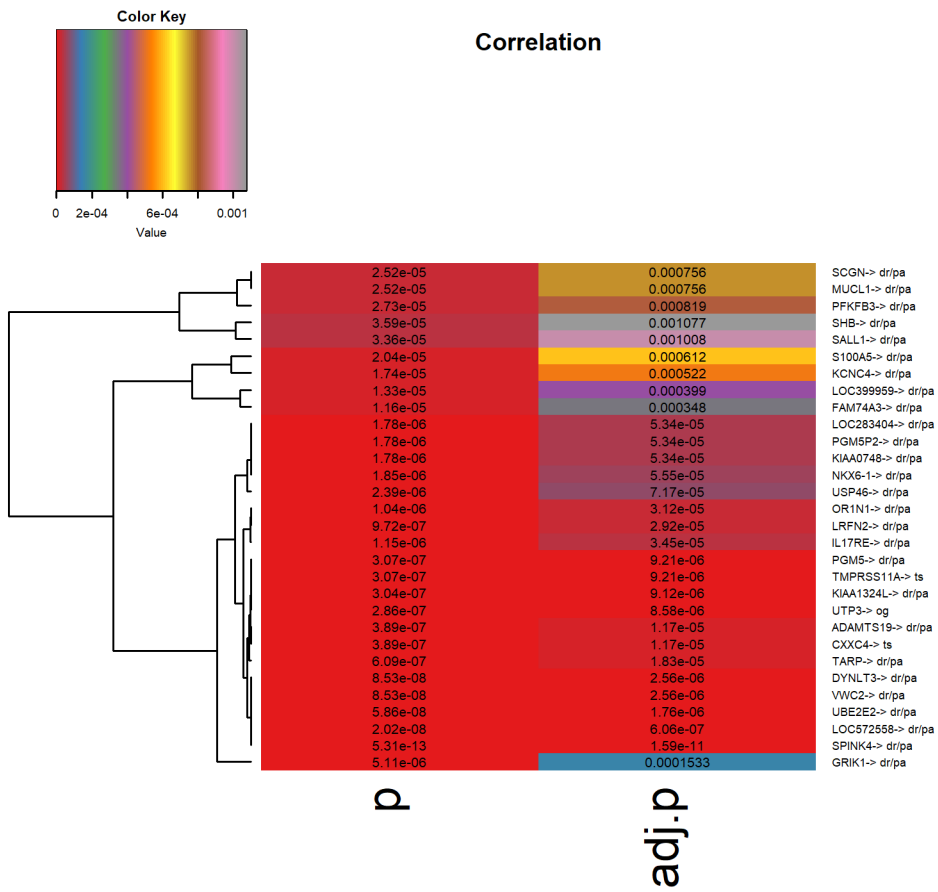


Figure S44: Significant genes heatmap for KICH

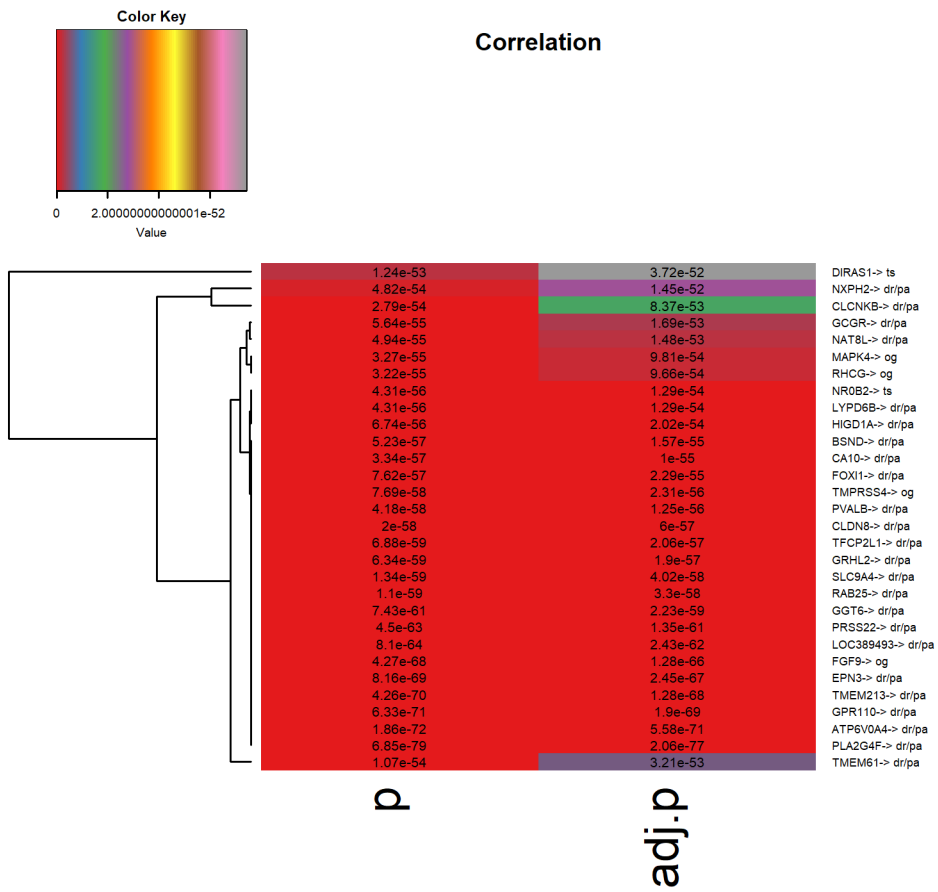


Figure S45: Significant genes heatmap for KIRC

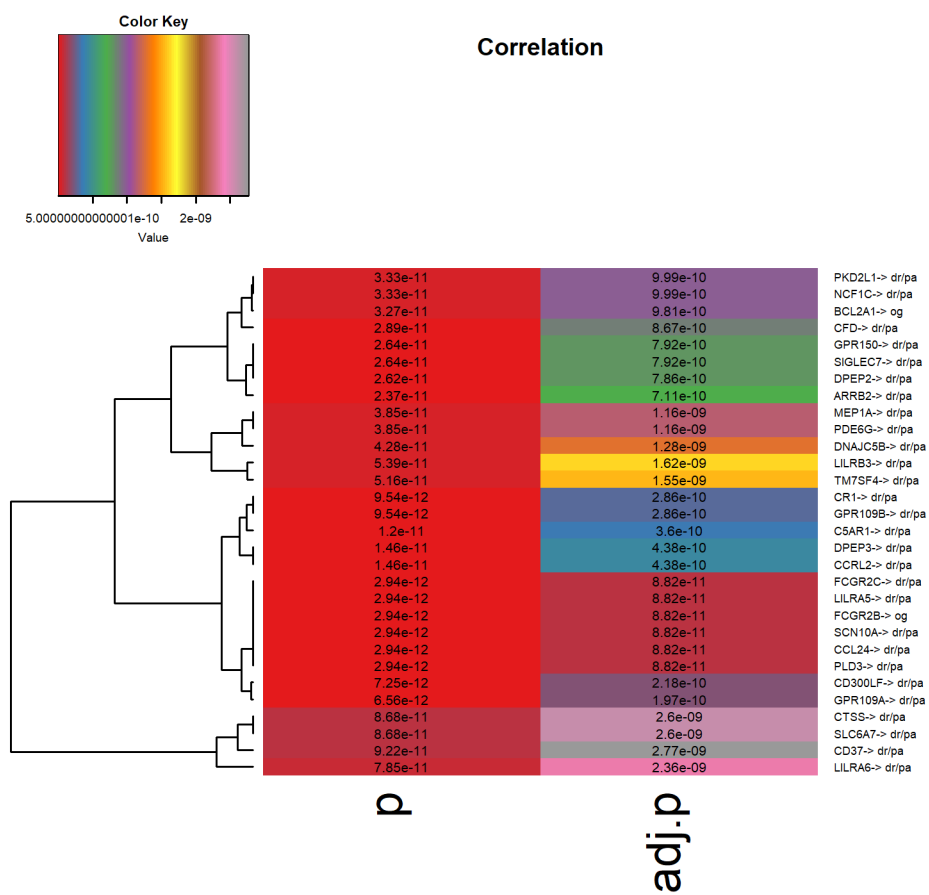


Figure S46: Significant genes heatmap for KIRP

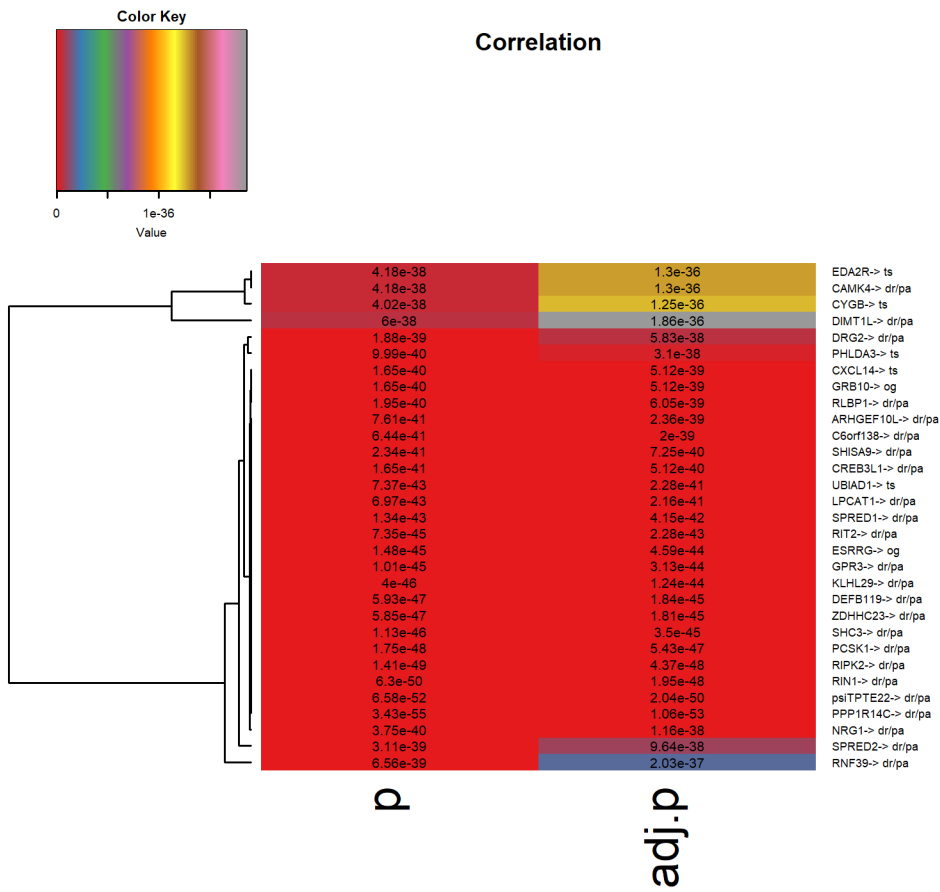


Figure S47: Significant genes heatmap for LGG

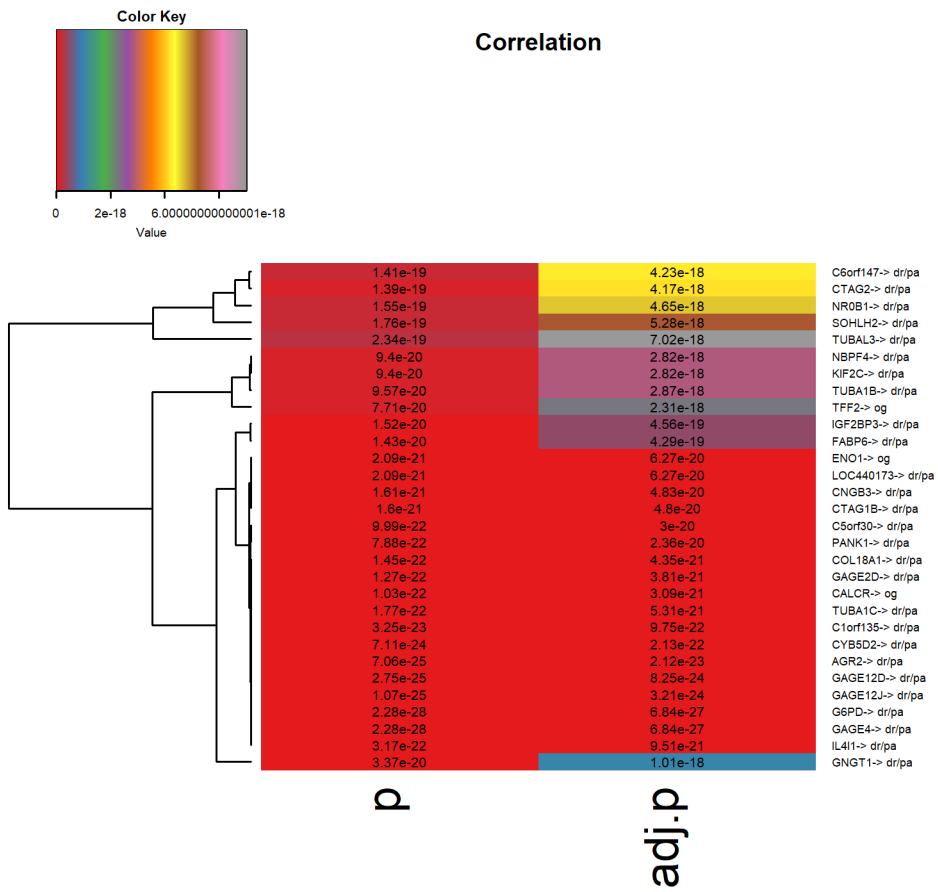


Figure S48: Significant genes heatmap for LIHC

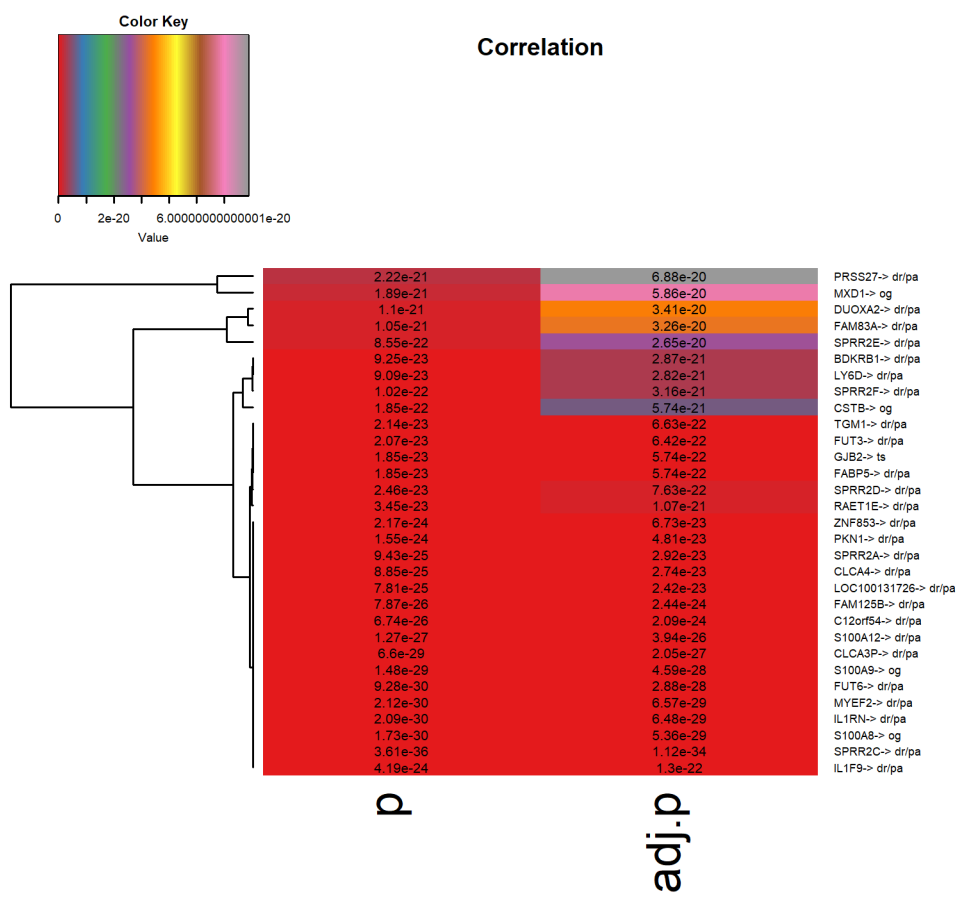


Figure S49: Significant genes heatmap for LUSC

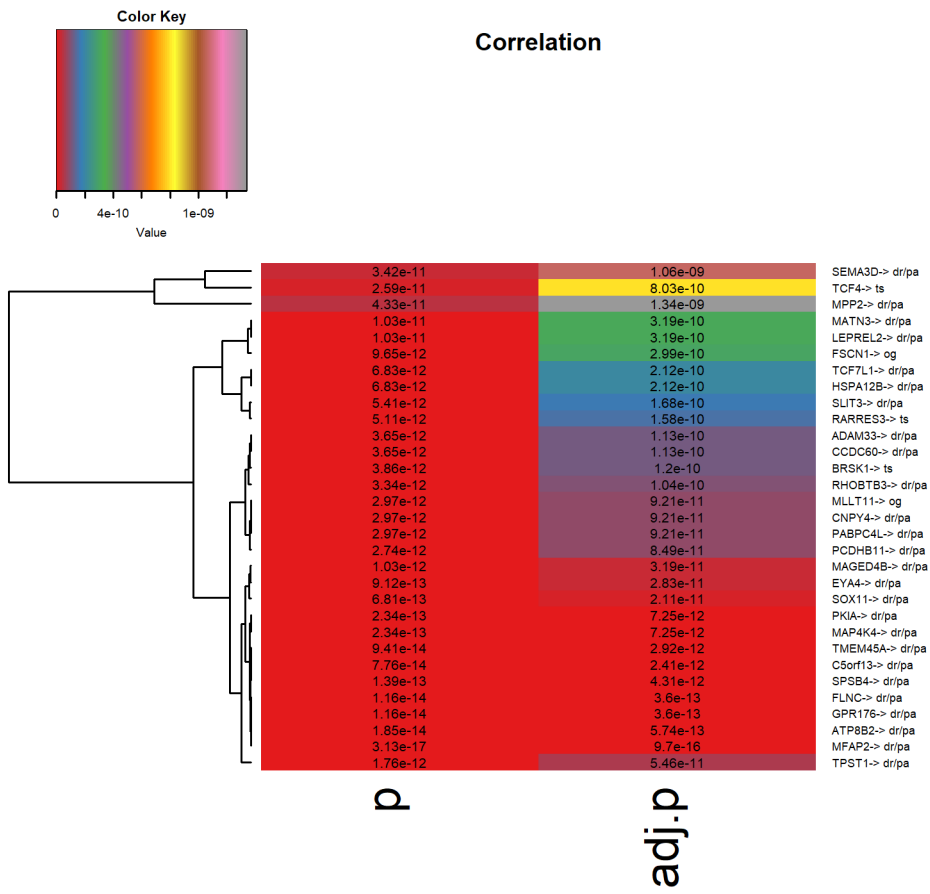


Figure S50: Significant genes heatmap for OV

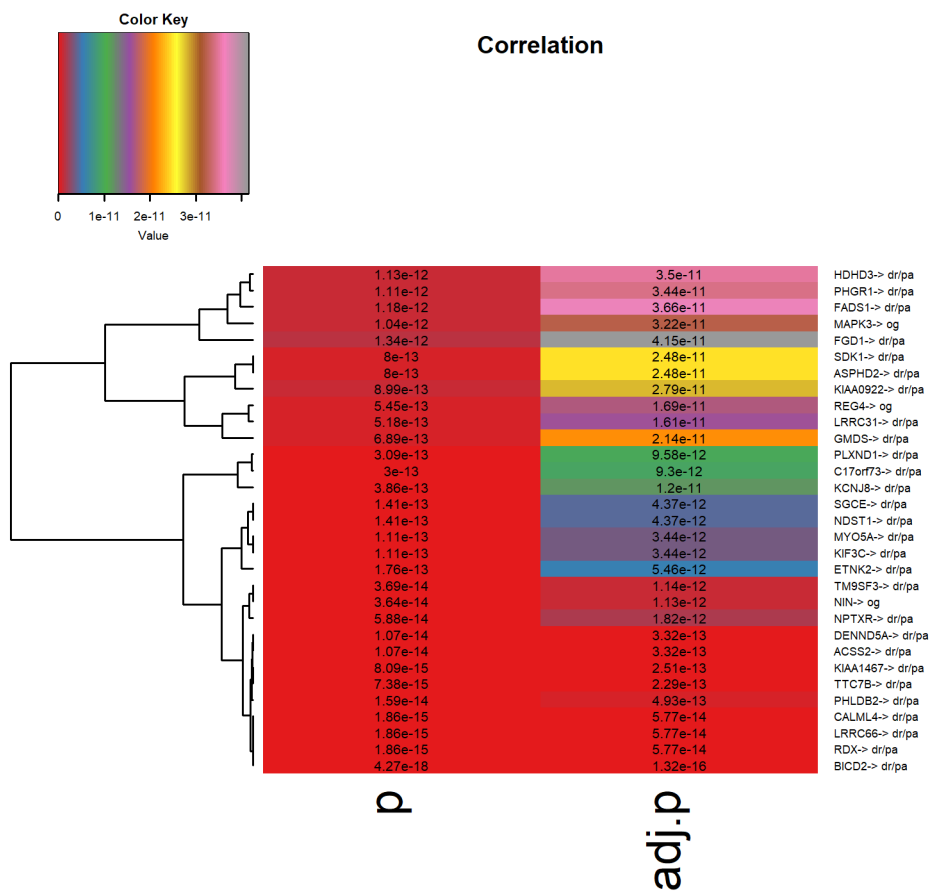


Figure S51: Significant genes heatmap for PACA

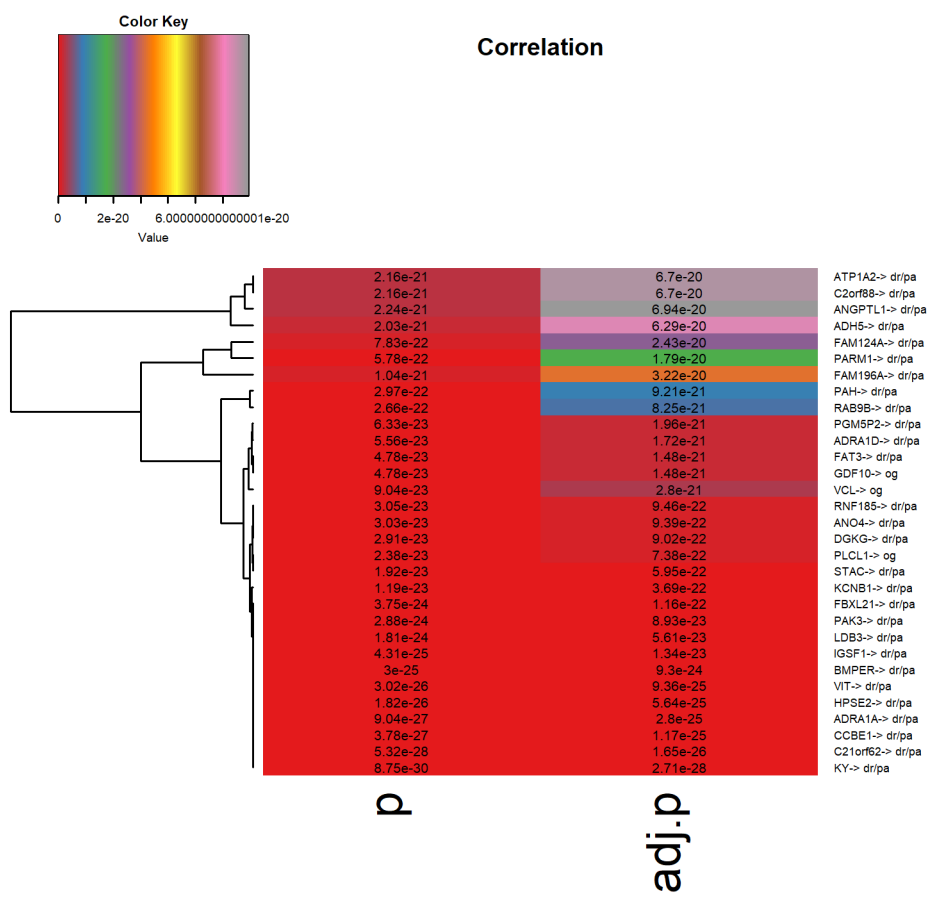


Figure S52: Significant genes heatmap for PRAD

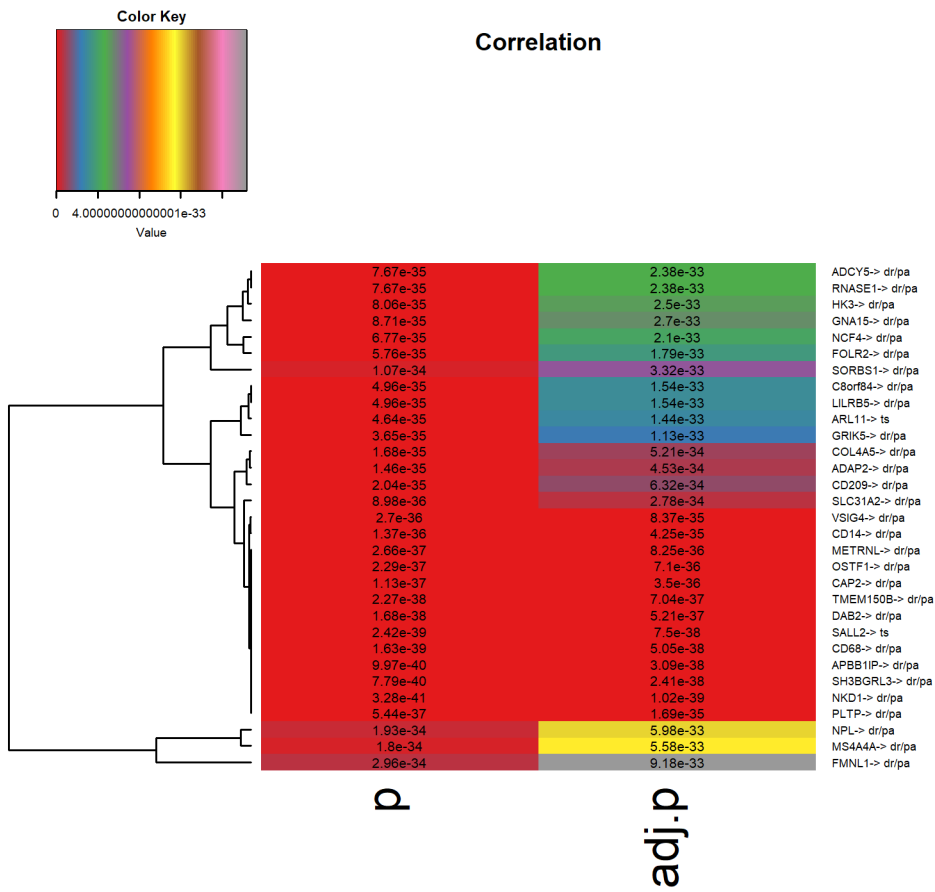


Figure S53: Significant genes heatmap for SARC

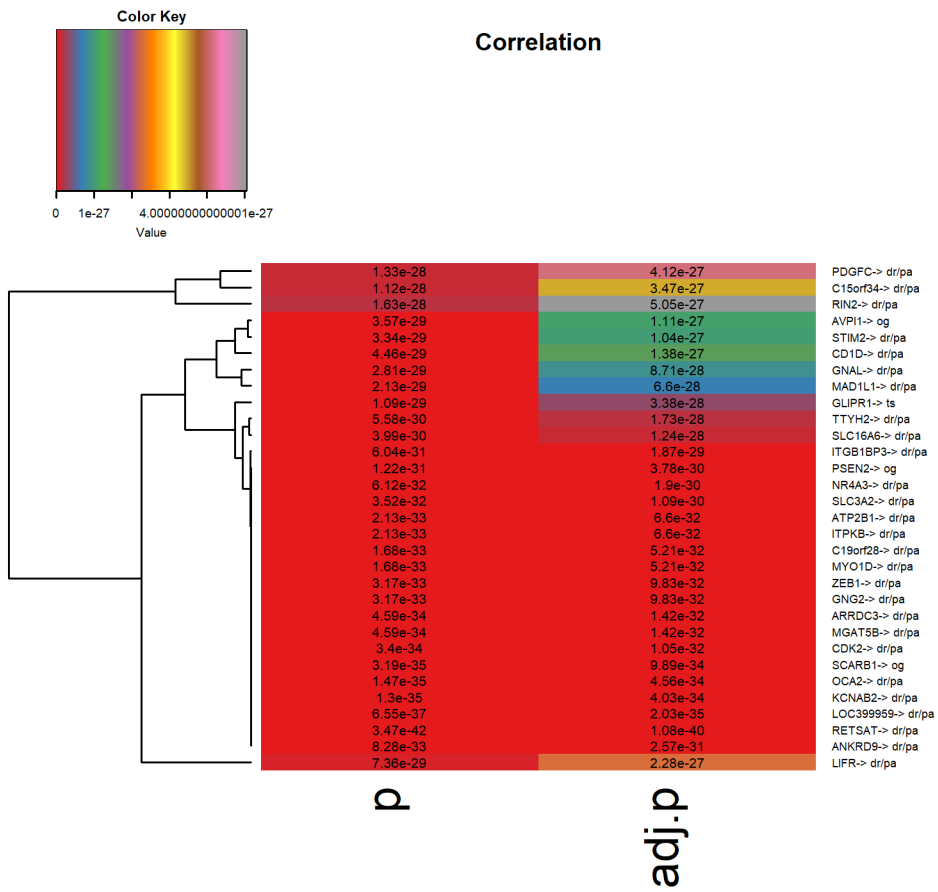


Figure S54: Significant genes heatmap for SKCM

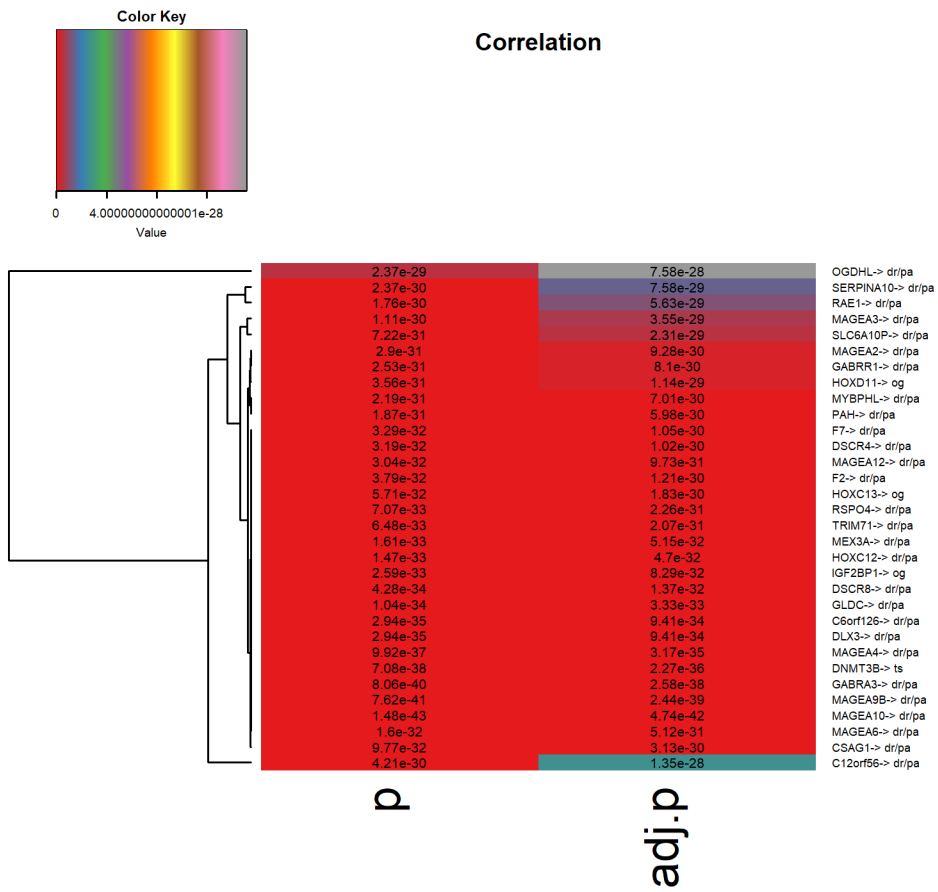


Figure S55: Significant genes heatmap for STAD

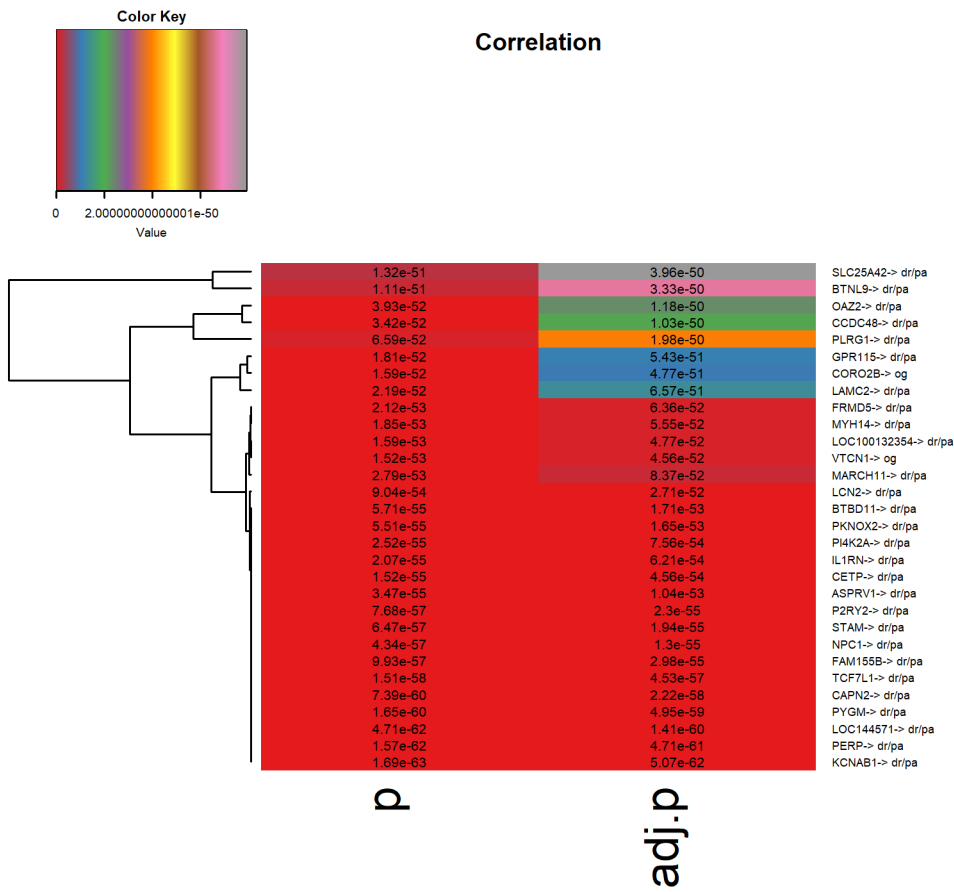


Figure S56: Significant genes heatmap for THCA

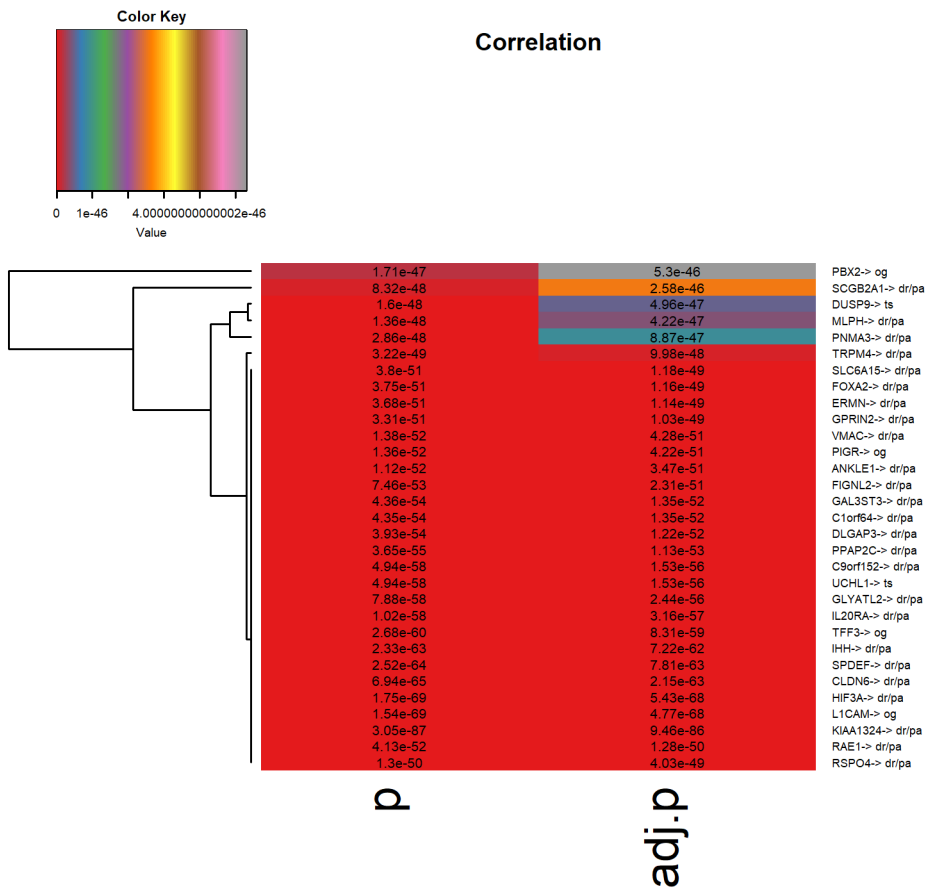


Figure S57: Significant genes heatmap for UCEC

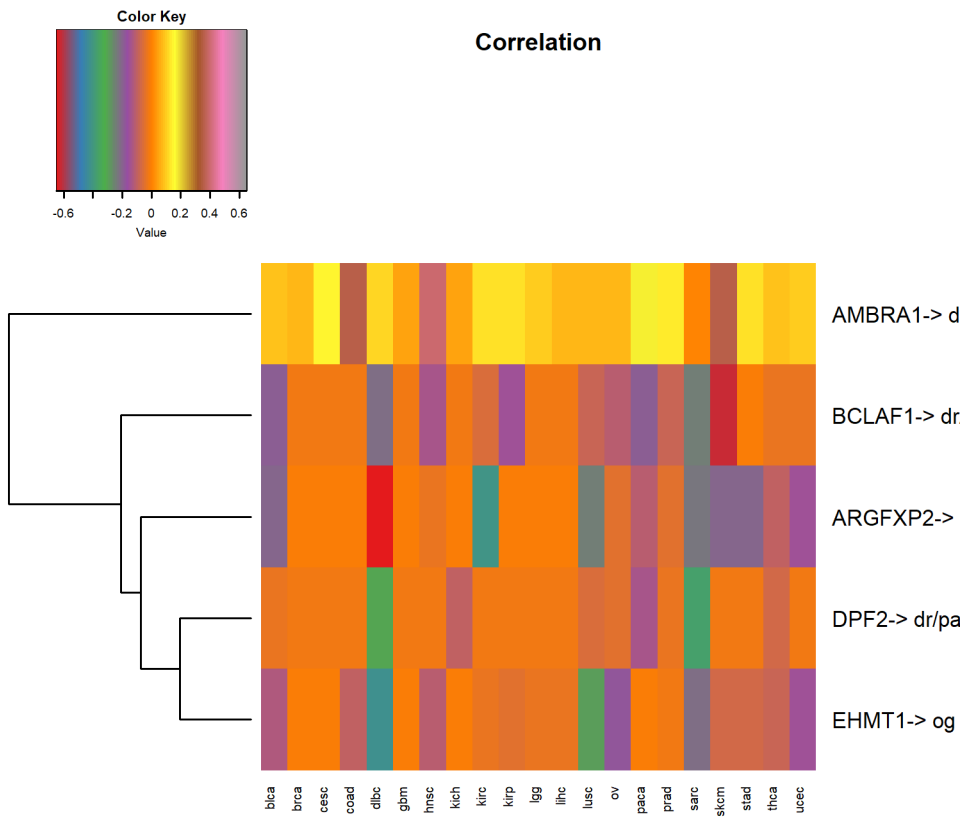


Figure S58: Common up-down regulated genes in all 21 cancer types

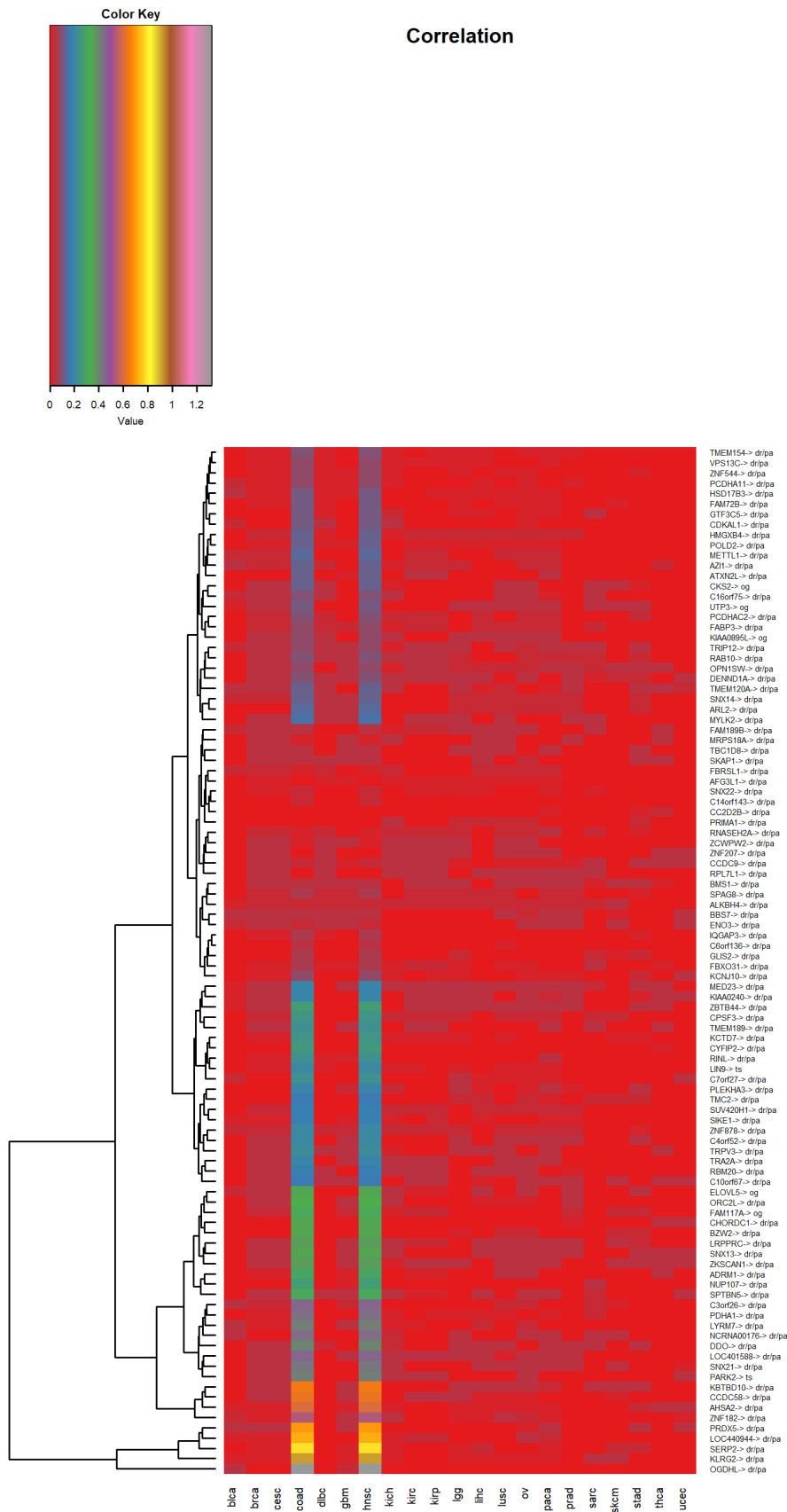


Figure S60: Common significant genes in all 21 cancer types

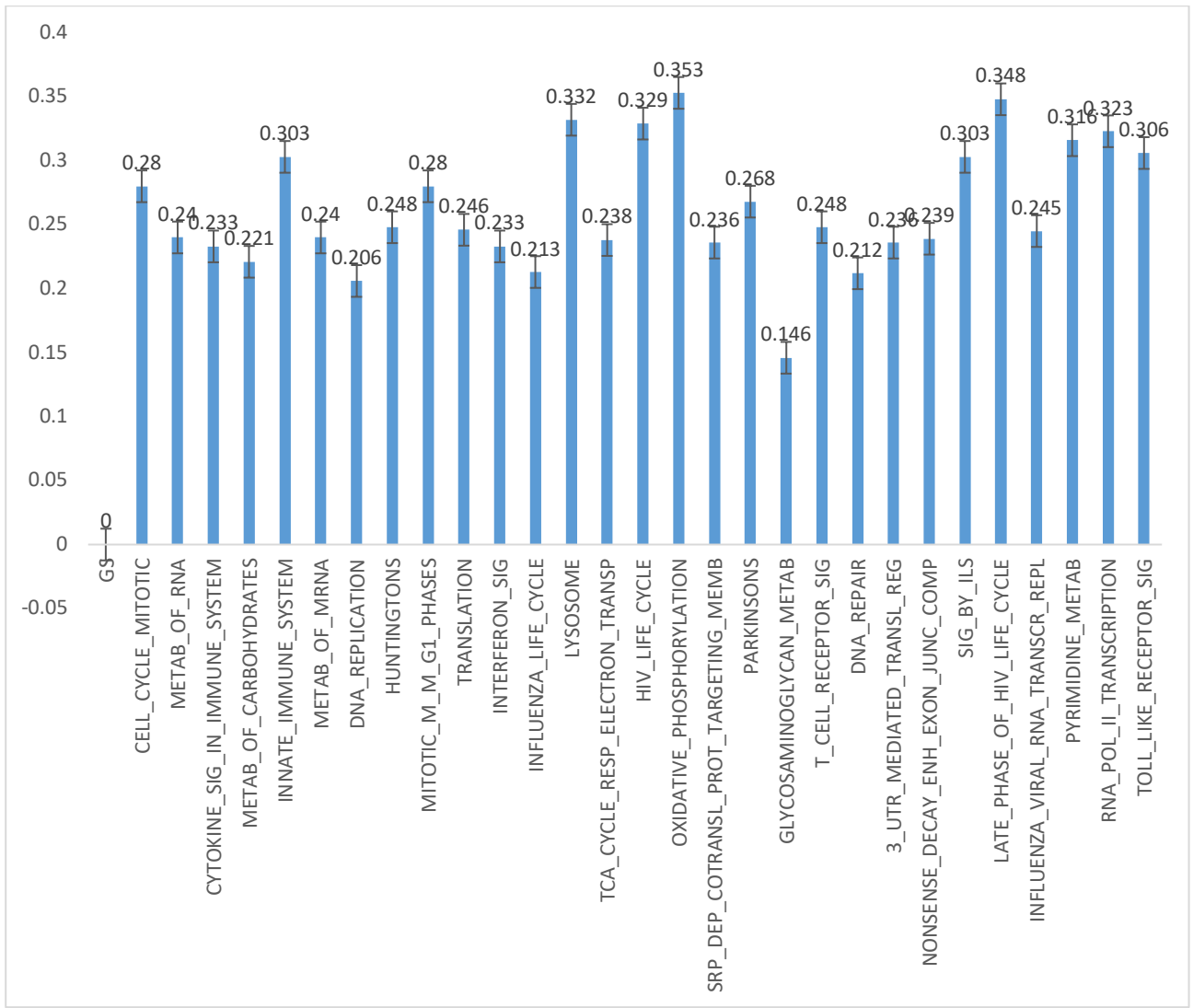


Figure S61: Enriched pathways in DLBC

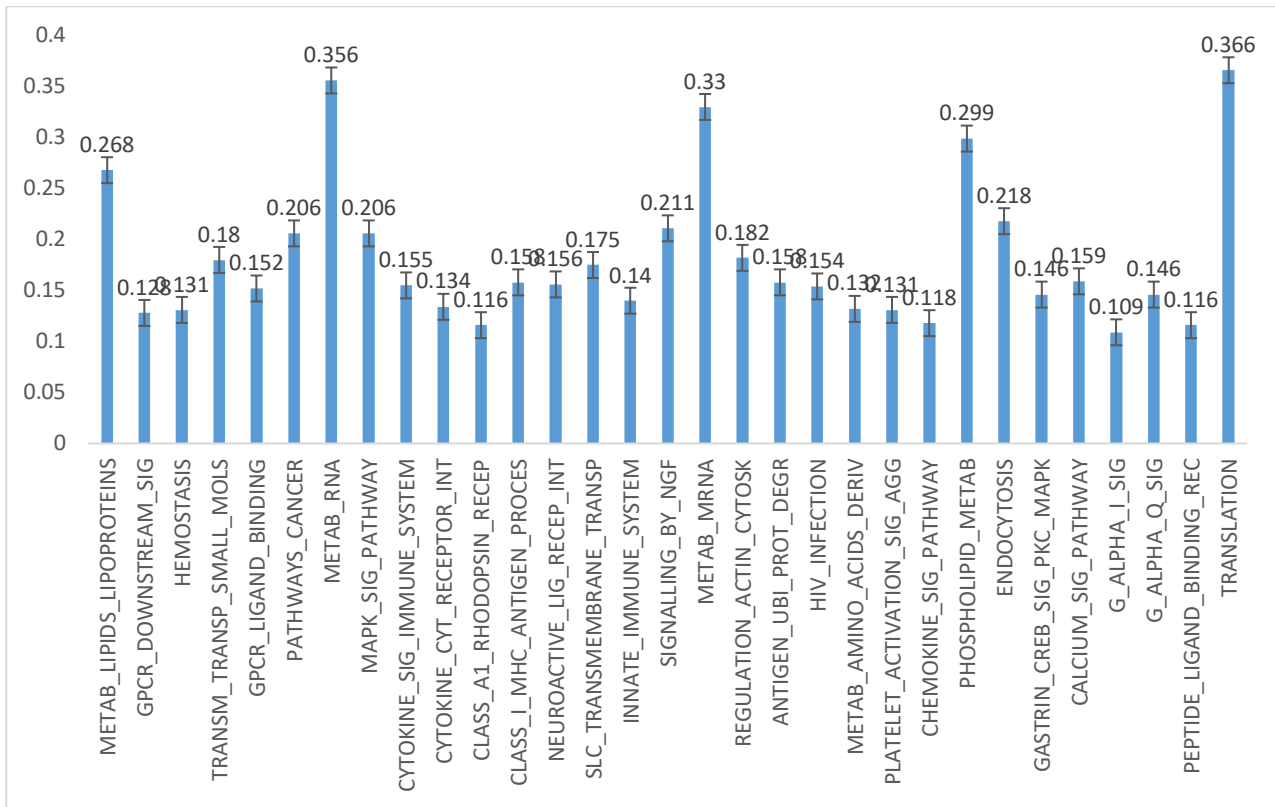


Figure S62: Enriched pathways in SKCM

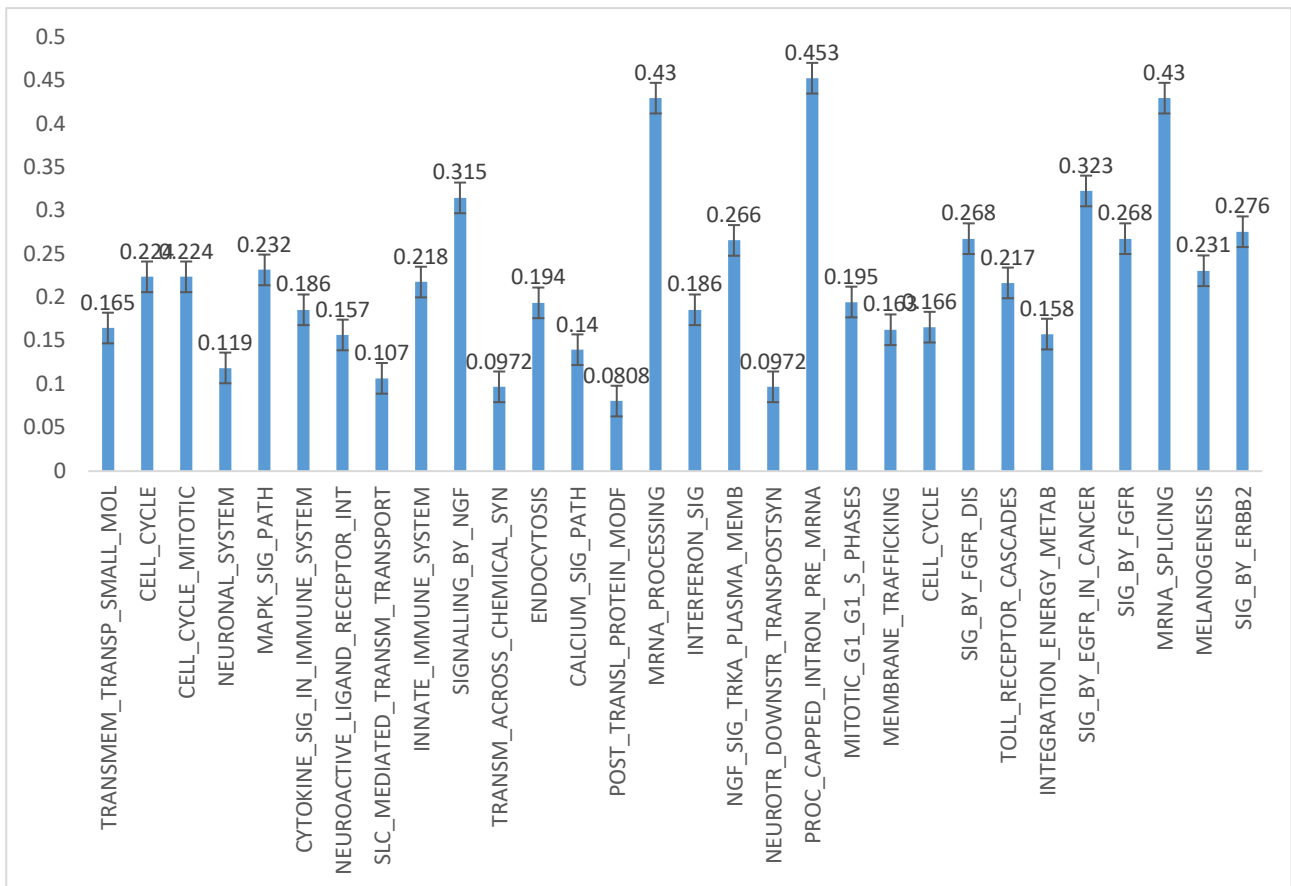


Figure S63: Enriched pathways in GBM

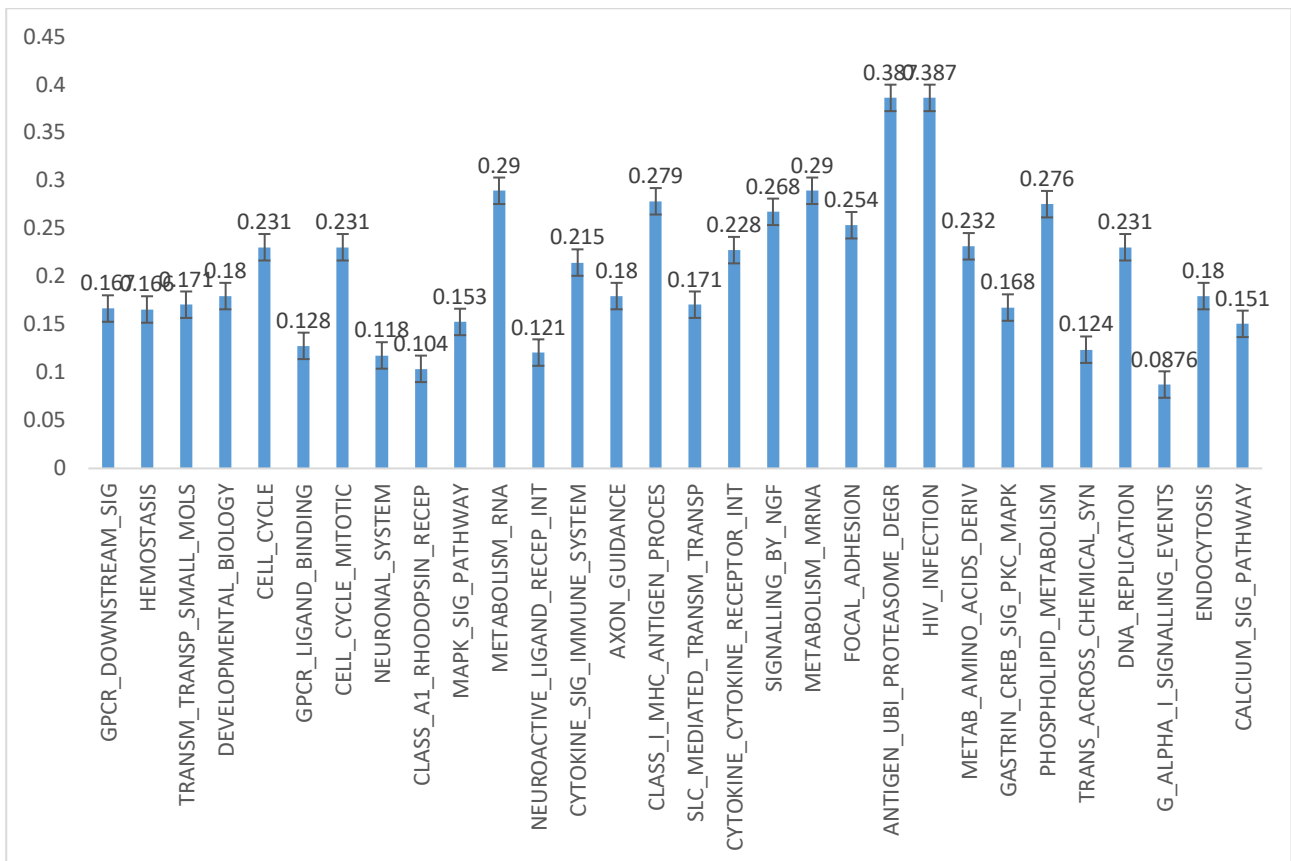


Figure S64: Enriched pathways in LGG

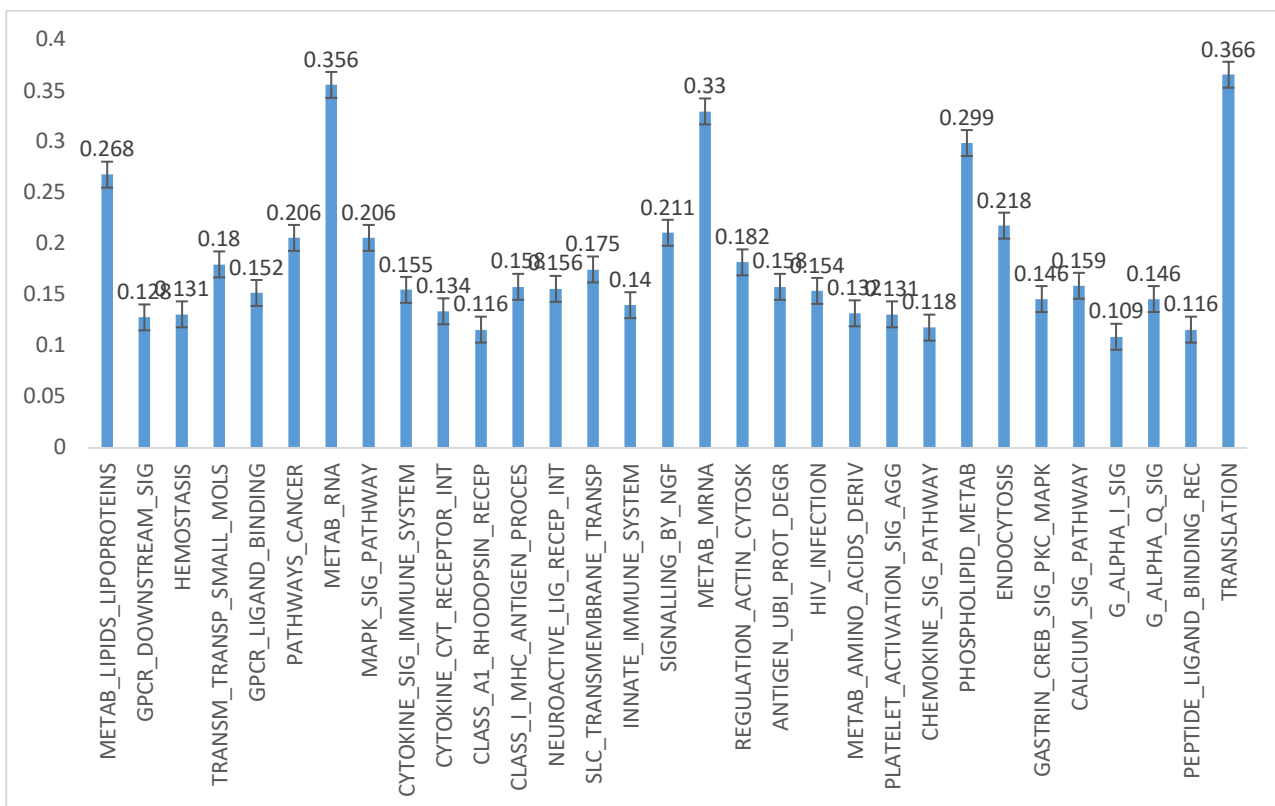


Figure S65: Enriched pathways in SKCM

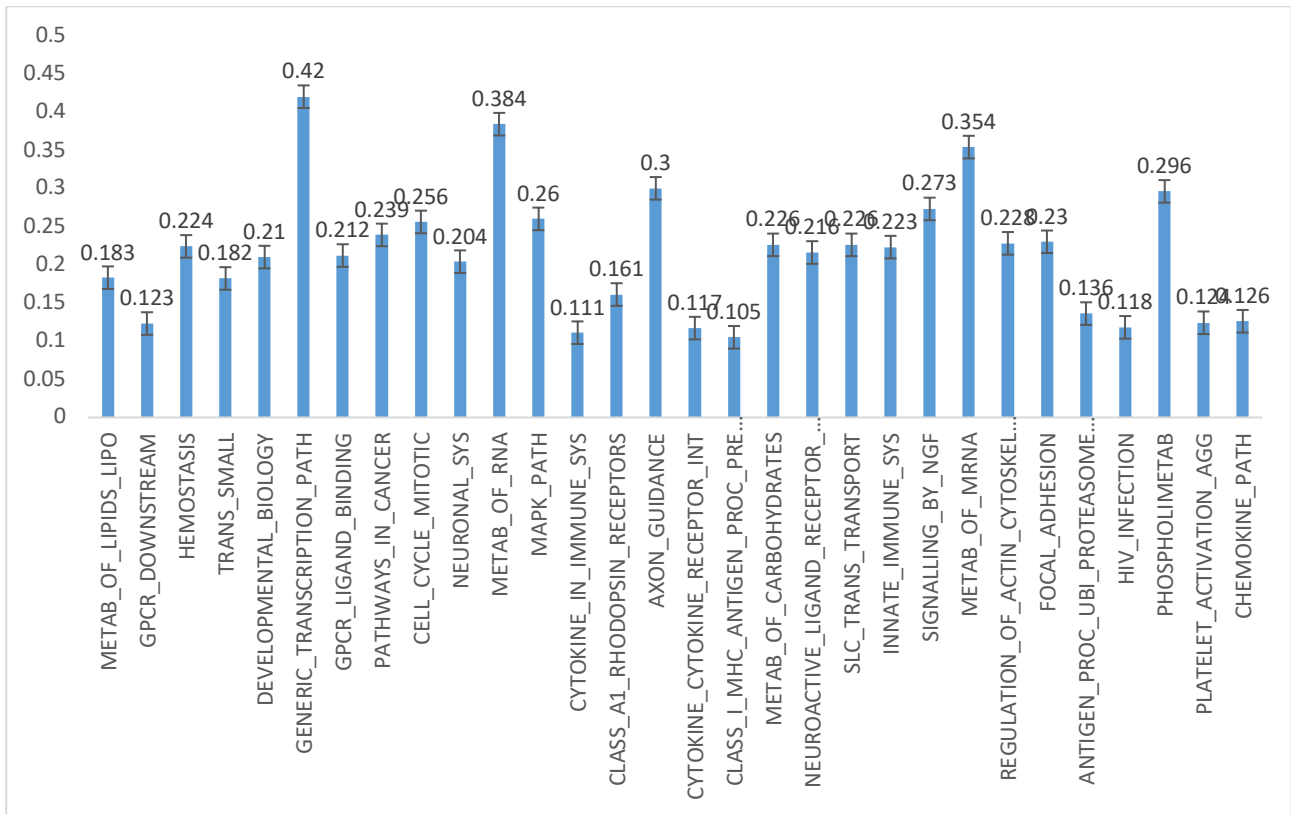


Figure S66: Enriched pathways in BRCA

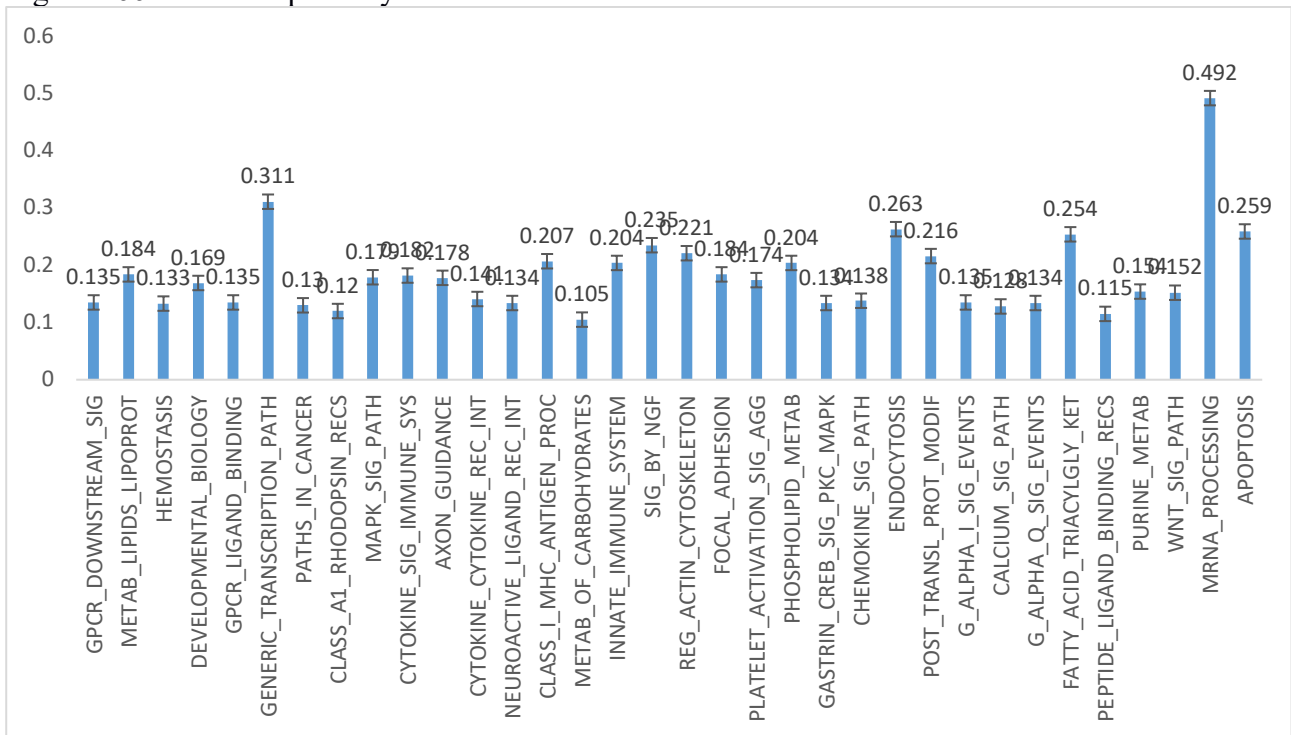


Figure S67: Enriched pathways in OV

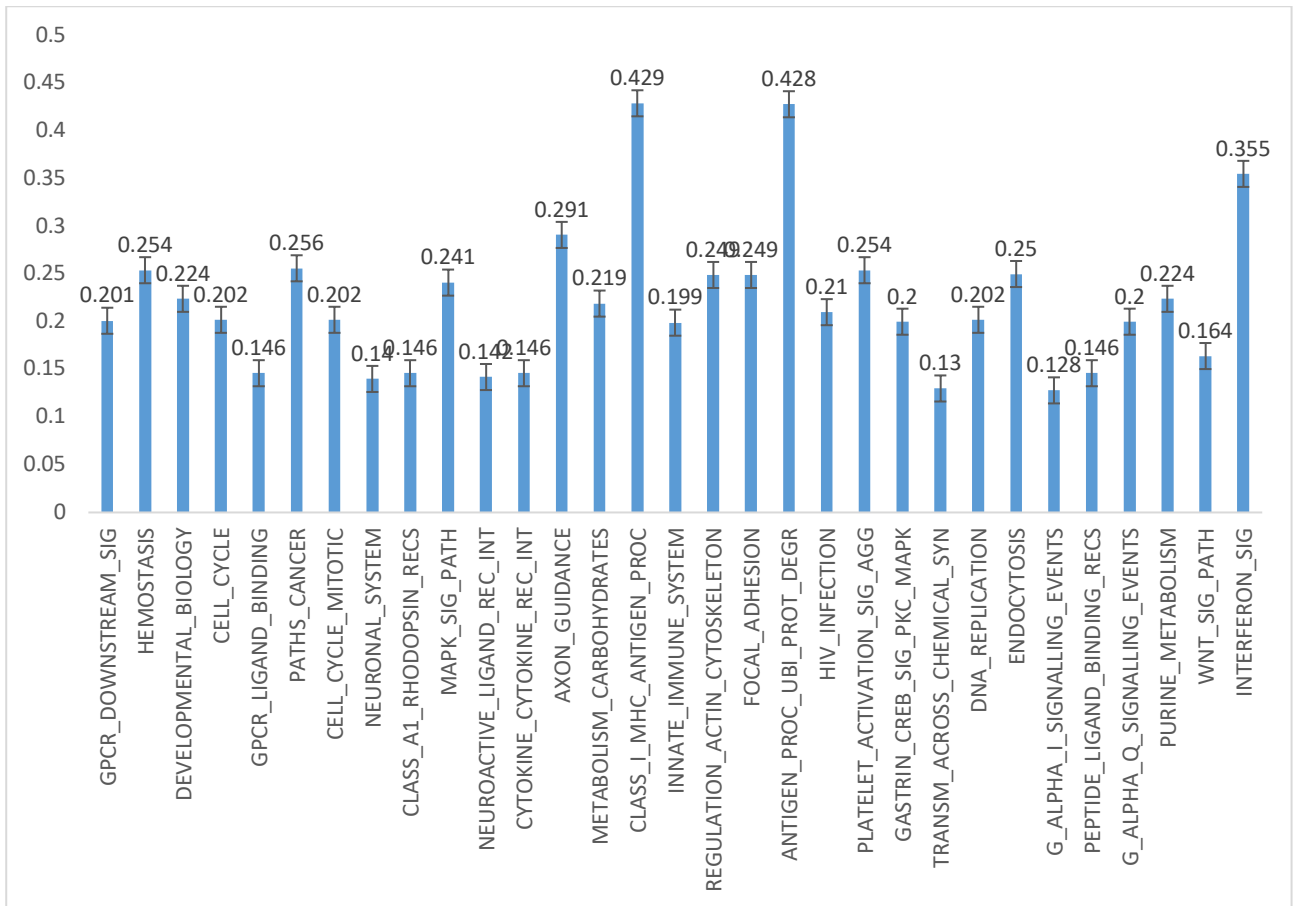


Figure S68: Enriched pathways in PACA

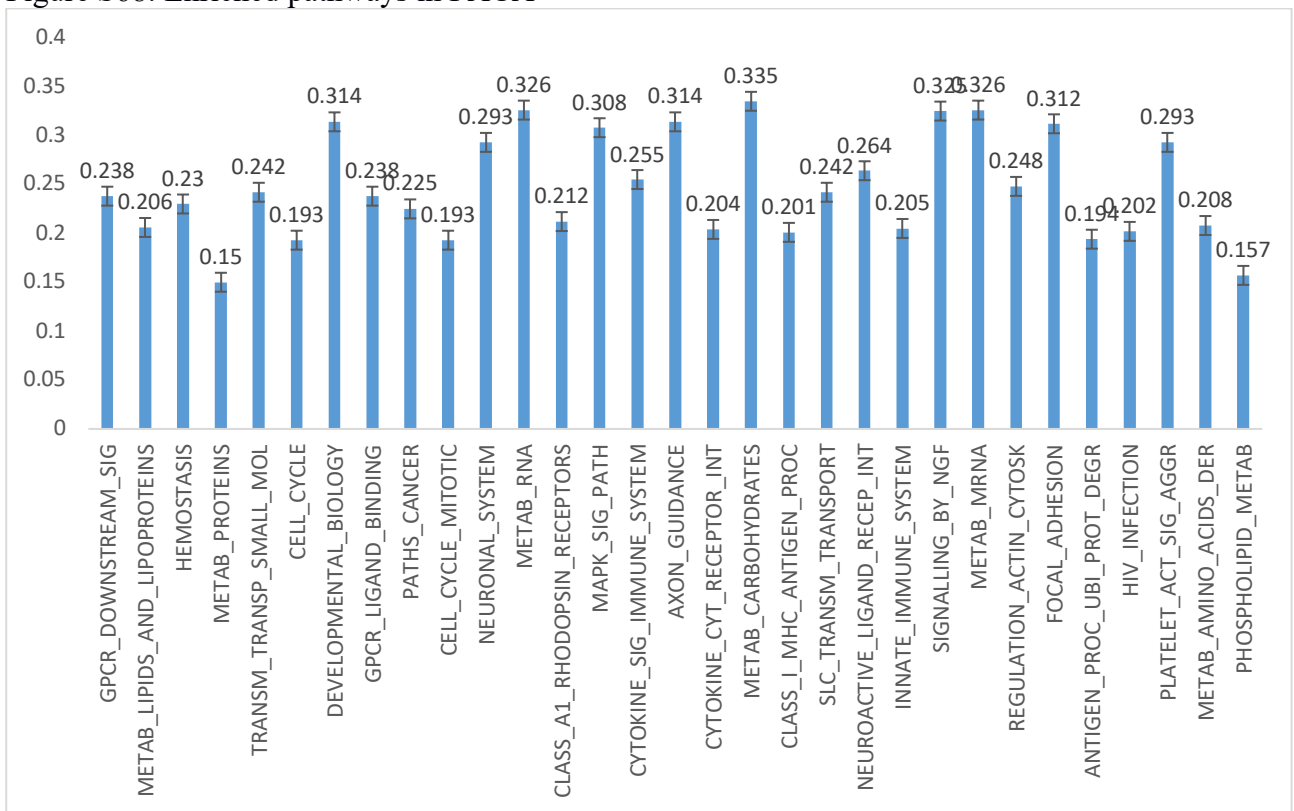


Figure S69: Enriched pathways in PRAD

Table S1: OG list (Known)

symbol	info
NAT1	N-acetyltransferase 1
NAT2	N-acetyltransferase 2
ABCA1	ATP binding cassette subfamily A member 1
ABCA3	ATP binding cassette subfamily A member 3
ABL1	ABL proto-oncogene 1, non-receptor tyrosine kinase
ABL2	ABL proto-oncogene 2, non-receptor tyrosine kinase
ABO	ABO blood group (transferase A, alpha 1-3-N-acetylgalactosaminyltransferase; transferase B, alpha 1-3-galactosyltransferase)
ABR	active BCR-related
ACADM	acyl-CoA dehydrogenase, C-4 to C-12 straight chain
ACTB	actin beta
ACVR1B	activin A receptor type 1B
ACVR2A	activin A receptor type 2A
ADAM10	ADAM metallopeptidase domain 10
ADARB2	adenosine deaminase, RNA specific B2 (inactive)
ADCY1	adenylate cyclase 1
ADD3	adducin 3
ADORA2A	adenosine A2a receptor
AGER	advanced glycosylation end-product specific receptor
JAG1	jagged 1
APLNR	apelin receptor
AKT1	AKT serine/threonine kinase 1
AKT2	AKT serine/threonine kinase 2
ALAD	aminolevulinic acid dehydratase
ALDH2	aldehyde dehydrogenase 2 family (mitochondrial)
ALDOB	aldolase, fructose-bisphosphate B
ALK	anaplastic lymphoma receptor tyrosine kinase
ALOX12	arachidonate 12-lipoxygenase, 12S type
ALOX5	arachidonate 5-lipoxygenase
AMFR	autocrine motility factor receptor
AMPH	amphiphysin
ANG	angiogenin
ANXA5	annexin A5
APEH	acylaminoacyl-peptide hydrolase
BIRC2	baculoviral IAP repeat containing 2
BIRC3	baculoviral IAP repeat containing 3
AR	androgen receptor
ARAF	A-Raf proto-oncogene, serine/threonine kinase
AREG	amphiregulin
ARF6	ADP ribosylation factor 6
RHOC	ras homolog family member C
RHOG	ras homolog family member G
ARHGAP4	Rho GTPase activating protein 4
RHOH	ras homolog family member H
ARNT	aryl hydrocarbon receptor nuclear translocator

ASL	argininosuccinate lyase
ASNS	asparagine synthetase (glutamine-hydrolyzing)
ATF1	activating transcription factor 1
ATF4	activating transcription factor 4
ATIC	5-aminoimidazole-4-carboxamide ribonucleotide formyltransferase/IMP cyclohydrolase
RERE	arginine-glutamic acid dipeptide repeats
ATRX	ATRX, chromatin remodeler
AUH	AU RNA binding methylglutaconyl-CoA hydratase
AXL	AXL receptor tyrosine kinase
B2M	beta-2-microglobulin
BAD	BCL2 associated agonist of cell death
BAG1	BCL2 associated athanogene 1
BAK1	BCL2 antagonist/killer 1
CCND1	cyclin D1
BCL2	BCL2, apoptosis regulator
BCL2A1	BCL2 related protein A1
BCL2L1	BCL2 like 1
BCL2L2	BCL2 like 2
BCL3	B-cell CLL/lymphoma 3
BCL5	B-cell CLL/lymphoma 5
BCL6	B-cell CLL/lymphoma 6
NBEAP1	neurobeachin pseudogene 1
BCL9	B-cell CLL/lymphoma 9
TNFRSF17	TNF receptor superfamily member 17
BCRP4	breakpoint cluster region pseudogene 4
BGN	biglycan
BID	BH3 interacting domain death agonist
BLK	BLK proto-oncogene, Src family tyrosine kinase
BMI1	BMI1 proto-oncogene, polycomb ring finger
BNIP3	BCL2 interacting protein 3
BOK	BOK, BCL2 family apoptosis regulator
DST	dystonin
BRAF	B-Raf proto-oncogene, serine/threonine kinase
ZFP36L1	ZFP36 ring finger protein like 1
BST2	bone marrow stromal cell antigen 2
BTG1	BTG anti-proliferation factor 1
BUB1	BUB1 mitotic checkpoint serine/threonine kinase
BUB1B	BUB1 mitotic checkpoint serine/threonine kinase B
C1QA	complement C1q A chain
C3AR1	complement C3a receptor 1
PTTG1IP	pituitary tumor-transforming 1 interacting protein
DDR1	discoidin domain receptor tyrosine kinase 1
CAD	carbamoyl-phosphate synthetase 2, aspartate transcarbamylase, and dihydroorotase
CALCA	calcitonin related polypeptide alpha
CALCR	calcitonin receptor
CALR	calreticulin
CAMK2B	calcium/calmodulin dependent protein kinase II beta
CAMK2D	calcium/calmodulin dependent protein kinase II delta
CAST	calpastatin
CARS	cysteinyl-tRNA synthetase
CASP1	caspase 1
CASP9	caspase 9
RUNX1T1	RUNX1 translocation partner 1
CBLB	Cbl proto-oncogene B

CCNA2	cyclin A2
CCNB1	cyclin B1
CCND2	cyclin D2
CCND3	cyclin D3
CCNE1	cyclin E1
CCNF	cyclin F
CCNG1	cyclin G1
CCNH	cyclin H
CCNT1	cyclin T1
CD6	CD6 molecule
CD9	CD9 molecule
TNFRSF8	TNF receptor superfamily member 8
SCARB1	scavenger receptor class B member 1
CD53	CD53 molecule
CD68	CD68 molecule
CD69	CD69 molecule
CD74	CD74 molecule
CD79A	CD79a molecule
CD79B	CD79b molecule
ADGRE5	adhesion G protein-coupled receptor E5
CD151	CD151 molecule (Raph blood group)
CDA	cytidine deaminase
CDK1	cyclin dependent kinase 1
CDK11B	cyclin dependent kinase 11B
LRBA	LPS responsive beige-like anchor protein
CDC6	cell division cycle 6
CDC20	cell division cycle 20
CDC25A	cell division cycle 25A
CDC25B	cell division cycle 25B
CDC25C	cell division cycle 25C
CDC27	cell division cycle 27
CDC34	cell division cycle 34
CDC42	cell division cycle 42
CDH10	cadherin 10
CDK4	cyclin dependent kinase 4
CDK5	cyclin dependent kinase 5
CDK7	cyclin dependent kinase 7
CDKN2D	cyclin dependent kinase inhibitor 2D
CDKN3	cyclin dependent kinase inhibitor 3
CD52	CD52 molecule
CEBPB	CCAAT/enhancer binding protein beta
CENPF	centromere protein F
CEACAM7	carcinoembryonic antigen related cell adhesion molecule 7
CHD2	chromodomain helicase DNA binding protein 2
CHD3	chromodomain helicase DNA binding protein 3
CHD4	chromodomain helicase DNA binding protein 4
CHGA	chromogranin A
CHKA	choline kinase alpha
CHN1	chimerin 1
CHRNB4	cholinergic receptor nicotinic beta 4 subunit
CIRBP	cold inducible RNA binding protein
ERCC8	ERCC excision repair 8, CSA ubiquitin ligase complex subunit
CKS1B	CDC28 protein kinase regulatory subunit 1B
CKS2	CDC28 protein kinase regulatory subunit 2

CLTC	clathrin heavy chain
CCR1	C-C motif chemokine receptor 1
CCR7	C-C motif chemokine receptor 7
CMM	cutaneous malignant melanoma/dysplastic nevus
CNR2	cannabinoid receptor 2
COL1A1	collagen type I alpha 1 chain
COL1A2	collagen type I alpha 2 chain
COL3A1	collagen type III alpha 1 chain
COL4A3	collagen type IV alpha 3 chain
COL7A1	collagen type VII alpha 1 chain
COL11A1	collagen type XI alpha 1 chain
COL16A1	collagen type XVI alpha 1 chain
COL19A1	collagen type XIX alpha 1 chain
COX6C	cytochrome c oxidase subunit 6C
CLDN4	claudin 4
CR1L	complement C3b/C4b receptor 1 like
CR2	complement C3d receptor 2
CREB1	cAMP responsive element binding protein 1
ATF2	activating transcription factor 2
CRIP2	cysteine rich protein 2
CRK	CRK proto-oncogene, adaptor protein
CRKL	CRK like proto-oncogene, adaptor protein
HAPLN1	hyaluronan and proteoglycan link protein 1
CRYAA	crystallin alpha A
CRYAB	crystallin alpha B
MAPK14	mitogen-activated protein kinase 14
CSE1L	chromosome segregation 1 like
CSF1	colony stimulating factor 1
CSF1R	colony stimulating factor 1 receptor
CSF3R	colony stimulating factor 3 receptor
CSNK2A1	casein kinase 2 alpha 1
VCAN	versican
CSPG4	chondroitin sulfate proteoglycan 4
CSTA	cystatin A
CSTB	cystatin B
NKX2-5	NK2 homeobox 5
CTNNA1	catenin alpha 1
CTNNB1	catenin beta 1
CTNND2	catenin delta 2
CTSB	cathepsin B
CTSH	cathepsin H
CTSL	cathepsin L
CYP1A1	cytochrome P450 family 1 subfamily A member 1
CYP2A6	cytochrome P450 family 2 subfamily A member 6
CYP2D6	cytochrome P450 family 2 subfamily D member 6
CYP7A1	cytochrome P450 family 7 subfamily A member 1
CYP19A1	cytochrome P450 family 19 subfamily A member 1
CD55	CD55 molecule (Cromer blood group)
DAXX	death domain associated protein
DBN1	drebrin 1
DDIT3	DNA damage inducible transcript 3
DDX1	DEAD/H-box helicase 1
DDX5	DEAD-box helicase 5
DDX6	DEAD-box helicase 6

DHX9	DEAH-box helicase 9
DDX10	DEAD-box helicase 10
NQO1	NAD(P)H quinone dehydrogenase 1
DIO2	deiodinase, iodothyronine type II
DKC1	dyskerin pseudouridine synthase 1
DLST	dihydrolipoamide S-succinyltransferase
DLX4	distal-less homeobox 4
DNAH9	dynein axonemal heavy chain 9
DNASE1L3	deoxyribonuclease 1 like 3
DOCK2	dedicator of cytokinesis 2
DPT	dermatopontin
DSG2	desmoglein 2
DUSP2	dual specificity phosphatase 2
DYRK1A	dual specificity tyrosine phosphorylation regulated kinase 1A
E2F6	E2F transcription factor 6
EBF1	early B-cell factor 1
EBVS1	Epstein Barr virus integration site 1
TYMP	thymidine phosphorylase
ECM1	extracellular matrix protein 1
LPAR1	lysophosphatidic acid receptor 1
EEF1A2	eukaryotic translation elongation factor 1 alpha 2
EGF	epidermal growth factor
EGFR	epidermal growth factor receptor
EGR3	early growth response 3
EIF1AX	eukaryotic translation initiation factor 1A, X-linked
EIF4A2	eukaryotic translation initiation factor 4A2
EIF4E	eukaryotic translation initiation factor 4E
EIF4EBP1	eukaryotic translation initiation factor 4E binding protein 1
EIF4G1	eukaryotic translation initiation factor 4 gamma 1
CELA1	chymotrypsin like elastase family member 1
SERPINB1	serpin family B member 1
ELAVL1	ELAV like RNA binding protein 1
ELF3	E74 like ETS transcription factor 3
ELF4	E74 like ETS transcription factor 4
ELK1	ELK1, ETS transcription factor
ELK2AP	ELK2A, member of ETS oncogene family, pseudogene
ELK3	ELK3, ETS transcription factor
ELK4	ELK4, ETS transcription factor
ELN	elastin
CTTN	cortactin
ENO1	enolase 1
SLC29A1	solute carrier family 29 member 1 (Augustine blood group)
EP300	E1A binding protein p300
EPHA7	EPH receptor A7
EPO	erythropoietin
EPOR	erythropoietin receptor
EPS8	epidermal growth factor receptor pathway substrate 8
EPS15	epidermal growth factor receptor pathway substrate 15
NR2F6	nuclear receptor subfamily 2 group F member 6
ERBB2	erb-b2 receptor tyrosine kinase 2
ERBB3	erb-b2 receptor tyrosine kinase 3
ERCC1	ERCC excision repair 1, endonuclease non-catalytic subunit
ERCC2	ERCC excision repair 2, TFIIH core complex helicase subunit
ERCC3	ERCC excision repair 3, TFIIH core complex helicase subunit

ERCC4	ERCC excision repair 4, endonuclease catalytic subunit
ERCC5	ERCC excision repair 5, endonuclease
ERCC6	ERCC excision repair 6, chromatin remodeling factor
ERG	ERG, ETS transcription factor
ESRRA	estrogen related receptor alpha
ESRRG	estrogen related receptor gamma
ETS1	ETS proto-oncogene 1, transcription factor
ETV1	ETS variant 1
ETV3	ETS variant 3
ETV4	ETS variant 4
ETV5	ETS variant 5
MECOM	MDS1 and EVI1 complex locus
EWSR1	EWS RNA binding protein 1
FANCA	Fanconi anemia complementation group A
FANCC	Fanconi anemia complementation group C
FANCD2	Fanconi anemia complementation group D2
FANCE	Fanconi anemia complementation group E
ACSL3	acyl-CoA synthetase long-chain family member 3
FANCF	Fanconi anemia complementation group F
FAT2	FAT atypical cadherin 2
FBN2	fibrillin 2
FCGR2B	Fc fragment of IgG receptor IIb
FEN1	flap structure-specific endonuclease 1
FES	FES proto-oncogene, tyrosine kinase
FGF1	fibroblast growth factor 1
FGF2	fibroblast growth factor 2
FGF3	fibroblast growth factor 3
FGF4	fibroblast growth factor 4
FGF5	fibroblast growth factor 5
FGF6	fibroblast growth factor 6
FGF7	fibroblast growth factor 7
FGF8	fibroblast growth factor 8
FGF9	fibroblast growth factor 9
FGF10	fibroblast growth factor 10
FGF11	fibroblast growth factor 11
FGF12	fibroblast growth factor 12
FGF13	fibroblast growth factor 13
FGF14	fibroblast growth factor 14
FGFR1	fibroblast growth factor receptor 1
FGFR3	fibroblast growth factor receptor 3
FGFR2	fibroblast growth factor receptor 2
FGFR4	fibroblast growth factor receptor 4
FGR	FGR proto-oncogene, Src family tyrosine kinase
FHL2	four and a half LIM domains 2
FOXP1	forkhead box G1
FOXL1	forkhead box L1
FOXC2	forkhead box C2
FOXE1	forkhead box E1
FOXM1	forkhead box M1
FLI1	Fli-1 proto-oncogene, ETS transcription factor
FLII	FLII, actin remodeling protein
FLNB	filamin B
FLT1	fms related tyrosine kinase 1
FMOD	fibromodulin

FN1	fibronectin 1
FOS	Fos proto-oncogene, AP-1 transcription factor subunit
FOSB	FosB proto-oncogene, AP-1 transcription factor subunit
FOSL2	FOS like 2, AP-1 transcription factor subunit
FRA16A	fragile site, folic acid type, rare, fra(16)(p13.11)
MTOR	mechanistic target of rapamycin
FUT8	fucosyltransferase 8
KDSR	3-ketodihydrosphingosine reductase
FYN	FYN proto-oncogene, Src family tyrosine kinase
XRCC6	X-ray repair cross complementing 6
GAB1	GRB2 associated binding protein 1
GABPB1	GA binding protein transcription factor beta subunit 1
GAK	cyclin G associated kinase
GALNS	galactosamine (N-acetyl)-6-sulfatase
GAPDH	glyceraldehyde-3-phosphate dehydrogenase
GAS6	growth arrest specific 6
GATA1	GATA binding protein 1
GATA2	GATA binding protein 2
GATA3	GATA binding protein 3
GATA6	GATA binding protein 6
GDF10	growth differentiation factor 10
GF11	growth factor independent 1 transcriptional repressor
GGTA1P	glycoprotein, alpha-galactosyltransferase 1 pseudogene
GHR	growth hormone receptor
GHRH	growth hormone releasing hormone
GIP	gastric inhibitory polypeptide
GLB1	galactosidase beta 1
GLI2	GLI family zinc finger 2
GLI3	GLI family zinc finger 3
GLI4	GLI family zinc finger 4
GMFB	glia maturation factor beta
GML	glycosylphosphatidylinositol anchored molecule like
GNA11	G protein subunit alpha 11
GNA12	G protein subunit alpha 12
GNAI1	G protein subunit alpha i1
GNAI2	G protein subunit alpha i2
GNAQ	G protein subunit alpha q
GNAS	GNAS complex locus
GOT2	glutamic-oxaloacetic transaminase 2
CXCR3	C-X-C motif chemokine receptor 3
GP1B	G protein-coupled estrogen receptor 1
GPS2	G protein pathway suppressor 2
GPX1	glutathione peroxidase 1
GRB2	growth factor receptor bound protein 2
GRB10	growth factor receptor bound protein 10
RAPGEF1	Rap guanine nucleotide exchange factor 1
GRN	granulin
GRIN2D	glutamate ionotropic receptor NMDA type subunit 2D
ARHGAP35	Rho GTPase activating protein 35
CXCL1	C-X-C motif chemokine ligand 1
CXCL2	C-X-C motif chemokine ligand 2
CXCL3	C-X-C motif chemokine ligand 3
GRP	gastrin releasing peptide
GRPR	gastrin releasing peptide receptor

GSPT1	G1 to S phase transition 1
GSTM1	glutathione S-transferase mu 1
MSH6	mutS homolog 6
GTF2A1	general transcription factor IIA subunit 1
GTF2H1	general transcription factor IIH subunit 1
GUCY1A2	guanylate cyclase 1 soluble subunit alpha 2
HIST1H1C	histone cluster 1 H1 family member c
HIST1H1B	histone cluster 1 H1 family member b
H3F3A	H3 histone family member 3A
HAS2	hyaluronan synthase 2
HCK	HCK proto-oncogene, Src family tyrosine kinase
HDLBP	high density lipoprotein binding protein
CFH	complement factor H
HFE	hemochromatosis
HGF	hepatocyte growth factor
HHEX	hematopoietically expressed homeobox
HIP1	huntingtin interacting protein 1
HLA-A	major histocompatibility complex, class I, A
HLA-B	major histocompatibility complex, class I, B
MNX1	motor neuron and pancreas homeobox 1
HLF	HLF, PAR bZIP transcription factor
HMGB1	high mobility group box 1
HMGCR	3-hydroxy-3-methylglutaryl-CoA reductase
HMGA1	high mobility group AT-hook 1
HNRNPA2B1	heterogeneous nuclear ribonucleoprotein A2/B1
HNRNPD	heterogeneous nuclear ribonucleoprotein D
HNRNPH1	heterogeneous nuclear ribonucleoprotein H1 (H)
HNRNPK	heterogeneous nuclear ribonucleoprotein K
TLX1	T-cell leukemia homeobox 1
HOXA3	homeobox A3
HOXA7	homeobox A7
HOXA9	homeobox A9
HOXA11	homeobox A11
HOXA13	homeobox A13
HOXB8	homeobox B8
HOXC11	homeobox C11
HOXC13	homeobox C13
HOXD11	homeobox D11
HOXD13	homeobox D13
HPR	haptoglobin-related protein
HPV18I2	human papillomavirus (type 18) integration site 2
HRAS	HRas proto-oncogene, GTPase
ERAS	ES cell expressed Ras
HES1	hes family bHLH transcription factor 1
HSPA5	heat shock protein family A (Hsp70) member 5
HSPA8	heat shock protein family A (Hsp70) member 8
HSPA9	heat shock protein family A (Hsp70) member 9
HSPB1	heat shock protein family B (small) member 1
HSP90AA1	heat shock protein 90 alpha family class A member 1
HSP90AA2P	heat shock protein 90 alpha family class A member 2, pseudogene
HSP90AB1	heat shock protein 90 alpha family class B member 1
HSPG2	heparan sulfate proteoglycan 2
HUS1	HUS1 checkpoint clamp component
HVBS7	hepatitis B virus integration site 7

TNC	tenascin C
HYAL1	hyaluronoglucosaminidase 1
ICAM1	intercellular adhesion molecule 1
ID2	inhibitor of DNA binding 2, HLH protein
ID3	inhibitor of DNA binding 3, HLH protein
IDH2	isocitrate dehydrogenase (NADP(+)) 2, mitochondrial
IFI27	interferon alpha inducible protein 27
SP110	SP110 nuclear body protein
IFNAR1	interferon alpha and beta receptor subunit 1
IFNGR2	interferon gamma receptor 2 (interferon gamma transducer 1)
IGF1R	insulin like growth factor 1 receptor
IGF2	insulin like growth factor 2
IGFBP1	insulin like growth factor binding protein 1
IGFBP2	insulin like growth factor binding protein 2
IGFBP6	insulin like growth factor binding protein 6
CYR61	cysteine rich angiogenic inducer 61
IGH	immunoglobulin heavy locus
IGHG1	immunoglobulin heavy constant gamma 1 (G1m marker)
IGHG2	immunoglobulin heavy constant gamma 2 (G2m marker)
IGHG3	immunoglobulin heavy constant gamma 3 (G3m marker)
IGHG4	immunoglobulin heavy constant gamma 4 (G4m marker)
IGHGP	immunoglobulin heavy constant gamma P (non-functional)
IGKC	immunoglobulin kappa constant
IGL	immunoglobulin lambda locus
IL1B	interleukin 1 beta
IL2	interleukin 2
IL2RA	interleukin 2 receptor subunit alpha
IL2RB	interleukin 2 receptor subunit beta
IL2RG	interleukin 2 receptor subunit gamma
IL3	interleukin 3
IL3RA	interleukin 3 receptor subunit alpha
IL3RA	interleukin 3 receptor subunit alpha
IL4R	interleukin 4 receptor
IL5	interleukin 5
IL6	interleukin 6
IL6ST	interleukin 6 signal transducer
IL7	interleukin 7
IL9	interleukin 9
IL16	interleukin 16
ILF3	interleukin enhancer binding factor 3
IDO1	indoleamine 2,3-dioxygenase 1
INHA	inhibin alpha subunit
INPPL1	inositol polyphosphate phosphatase like 1
EIF3E	eukaryotic translation initiation factor 3 subunit E
ITGA6	integrin subunit alpha 6
IRAK2	interleukin 1 receptor associated kinase 2
ITGA9	integrin subunit alpha 9
ITGAX	integrin subunit alpha X
ITGB4	integrin subunit beta 4
ITK	IL2 inducible T-cell kinase
JAG2	jagged 2
JAK1	Janus kinase 1
JAK2	Janus kinase 2
JAK3	Janus kinase 3

JUN	Jun proto-oncogene, AP-1 transcription factor subunit
JUNB	JunB proto-oncogene, AP-1 transcription factor subunit
JUND	JunD proto-oncogene, AP-1 transcription factor subunit
KCNH1	potassium voltage-gated channel subfamily H member 1
KDR	kinase insert domain receptor
KIFC3	kinesin family member C3
KIT	KIT proto-oncogene receptor tyrosine kinase
KLK2	kallikrein related peptidase 2
KLRB1	killer cell lectin like receptor B1
KPNA5	karyopherin subunit alpha 5
KRAS	KRAS proto-oncogene, GTPase
KRASP1	KRAS proto-oncogene, GTPase pseudogene 1
KTN1	kinectin 1
L1CAM	L1 cell adhesion molecule
AFF3	AF4/FMR2 family member 3
LASP1	LIM and SH3 protein 1
LCK	LCK proto-oncogene, Src family tyrosine kinase
LCP1	lymphocyte cytosolic protein 1
LEPR	leptin receptor
LFNG	LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase
LGALS3	galectin 3
LGALS3BP	galectin 3 binding protein
LHCGR	luteinizing hormone/choriogonadotropin receptor
LIMK1	LIM domain kinase 1
LMO1	LIM domain only 1
LMO2	LIM domain only 2
LMO7	LIM domain 7
LNPEP	leucyl and cystinyl aminopeptidase
LOXL2	lysyl oxidase like 2
LPP	LIM domain containing preferred translocation partner in lipoma
LRP2	LDL receptor related protein 2
LRP5	LDL receptor related protein 5
LTA	lymphotoxin alpha
LTB	lymphotoxin beta
LTBP3	latent transforming growth factor beta binding protein 3
LTBR	lymphotoxin beta receptor
LUM	lumican
LY6E	lymphocyte antigen 6 complex, locus E
LYL1	LYL1, basic helix-loop-helix family member
LYN	LYN proto-oncogene, Src family tyrosine kinase
TACSTD2	tumor-associated calcium signal transducer 2
TM4SF1	transmembrane 4 L six family member 1
EPCAM	epithelial cell adhesion molecule
NBR1	NBR1, autophagy cargo receptor
MXD1	MAX dimerization protein 1
MAD2L1	MAD2 mitotic arrest deficient-like 1 (yeast)
SMAD3	SMAD family member 3
MAF	MAF bZIP transcription factor
MAFG	MAF bZIP transcription factor G
MAP2	microtubule associated protein 2
MAP4	microtubule associated protein 4
MARS	methionyl-tRNA synthetase
MAS1	MAS1 proto-oncogene, G protein-coupled receptor
MATK	megakaryocyte-associated tyrosine kinase

MC2R	melanocortin 2 receptor
MCF2	MCF.2 cell line derived transforming sequence
MCL1	BCL2 family apoptosis regulator
MCM2	minichromosome maintenance complex component 2
MCM5	minichromosome maintenance complex component 5
CD46	CD46 molecule
MDK	midkine (neurite growth-promoting factor 2)
MDM2	MDM2 proto-oncogene
MDM4	MDM4, p53 regulator
MEF2A	myocyte enhancer factor 2A
BORCS8-MEF2B	BORCS8-MEF2B readthrough
MEF2C	myocyte enhancer factor 2C
MEF2D	myocyte enhancer factor 2D
MEIS1	Meis homeobox 1
MAP3K1	mitogen-activated protein kinase kinase kinase 1
MAP3K3	mitogen-activated protein kinase kinase kinase 3
MAP3K5	mitogen-activated protein kinase kinase kinase 5
RAB8A	RAB8A, member RAS oncogene family
MET	MET proto-oncogene, receptor tyrosine kinase
KITLG	KIT ligand
CIITA	class II major histocompatibility complex transactivator
MID1	midline 1
MIF	macrophage migration inhibitory factor (glycosylation-inhibiting factor)
MITF	melanogenesis associated transcription factor
MLF1	myeloid leukemia factor 1
KMT2A	lysine methyltransferase 2A
MLLT1	MLLT1, super elongation complex subunit
AFF1	AF4/FMR2 family member 1
MLLT3	MLLT3, super elongation complex subunit
AFDN	afadin, adherens junction formation factor
MLLT6	MLLT6, PHD finger domain containing
NR3C2	nuclear receptor subfamily 3 group C member 2
TRPM1	transient receptor potential cation channel subfamily M member 1
MMP2	matrix metalloproteinase 2
MMP9	matrix metalloproteinase 9
MMP11	matrix metalloproteinase 11
MMP14	matrix metalloproteinase 14
MN1	MN1 proto-oncogene, transcriptional regulator
MNAT1	MNAT1, CDK activating kinase assembly factor
MOS	v-mos Moloney murine sarcoma viral oncogene homolog
CD200	CD200 molecule
MPL	MPL proto-oncogene, thrombopoietin receptor
MPP1	membrane palmitoylated protein 1
MRC1	mannose receptor, C type 1
MRE11A	MRE11 homolog A, double strand break repair nuclease
ABCC1	ATP binding cassette subfamily C member 1
MSH3	mutS homolog 3
MSN	moesin
MTCP1	mature T-cell proliferation 1
MTHFR	methylenetetrahydrofolate reductase
MUC1	mucin 1, cell surface associated
MUC2	mucin 2, oligomeric mucus/gel-forming
MUC4	mucin 4, cell surface associated
MUC5AC	mucin 5AC, oligomeric mucus/gel-forming

MUC6	mucin 6, oligomeric mucus/gel-forming
TRIM37	tripartite motif containing 37
MUTYH	mutY DNA glycosylase
MYB	MYB proto-oncogene, transcription factor
MYBL1	MYB proto-oncogene like 1
MYBL2	MYB proto-oncogene like 2
MYC	v-myc avian myelocytomatosis viral oncogene homolog
MYCL	v-myc avian myelocytomatosis viral oncogene lung carcinoma derived homolog
MYCLP1	MYCL pseudogene 1
MYCLK1	v-myc avian myelocytomatosis viral oncogene homolog-like 1
MYCN	v-myc avian myelocytomatosis viral oncogene neuroblastoma derived homolog
MYD88	myeloid differentiation primary response 88
MYH1	myosin heavy chain 1
MYH11	myosin heavy chain 11
MYOD1	myogenic differentiation 1
NAB2	NGFI-A binding protein 2
NACA	nascent polypeptide-associated complex alpha subunit
NBL1	neuroblastoma 1, DAN family BMP antagonist
NCK1	NCK adaptor protein 1
NEB	nebulin
SEPT2	septin 2
NFATC1	nuclear factor of activated T-cells 1
NFATC3	nuclear factor of activated T-cells 3
NFE2L2	nuclear factor, erythroid 2 like 2
NFIB	nuclear factor I B
NFIC	nuclear factor I C
NFIX	nuclear factor I X
NFKB2	nuclear factor kappa B subunit 2
NFKBIA	NFKB inhibitor alpha
NFKBIE	NFKB inhibitor epsilon
NKX2-2	NK2 homeobox 2
NME3	NME/NM23 nucleoside diphosphate kinase 3
NMT1	N-myristoyltransferase 1
NNMT	nicotinamide N-methyltransferase
NONO	non-POU domain containing, octamer-binding
NPY	neuropeptide Y
NOTCH4	notch 4
NPY1R	neuropeptide Y receptor Y1
NRAS	neuroblastoma RAS viral oncogene homolog
YBX1	Y-box binding protein 1
NTRK1	neurotrophic receptor tyrosine kinase 1
NTRK2	neurotrophic receptor tyrosine kinase 2
NUMA1	nuclear mitotic apparatus protein 1
NR4A2	nuclear receptor subfamily 4 group A member 2
OMD	osteomodulin
TNFRSF11B	TNF receptor superfamily member 11b
SLC22A18	solute carrier family 22 member 18
OTX2	orthodenticle homeobox 2
P2RX7	purinergic receptor P2X 7
PAFAH1B2	platelet activating factor acetylhydrolase 1b catalytic subunit 2
PRDX1	peroxiredoxin 1
PAK1	p21 (RAC1) activated kinase 1
PAM	peptidylglycine alpha-amidating monooxygenase
REG3A	regenerating family member 3 alpha

PAX2	paired box 2
PAX3	paired box 3
PAX7	paired box 7
PAX9	paired box 9
PBX1	PBX homeobox 1
PBX2	PBX homeobox 2
PCBP1	poly(rC) binding protein 1
PCM1	pericentriolar material 1
PCNA	proliferating cell nuclear antigen
CDK16	cyclin dependent kinase 16
CDK18	cyclin dependent kinase 18
PDE4A	phosphodiesterase 4A
PDE4D	phosphodiesterase 4D
PDGFA	platelet derived growth factor subunit A
PDGFB	platelet derived growth factor subunit B
PDGFRA	platelet derived growth factor receptor alpha
PDGFRB	platelet derived growth factor receptor beta
ENPP2	ectonucleotide pyrophosphatase/phosphodiesterase 2
PECAM1	platelet and endothelial cell adhesion molecule 1
SERPINF1	serpin family F member 1
PER1	period circadian clock 1
CFP	complement factor properdin
ATP8B1	ATPase phospholipid transporting 8B1
PFKFB3	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3
PGD	phosphogluconate dehydrogenase
PGF	placental growth factor
ABCB1	ATP binding cassette subfamily B member 1
ABCB4	ATP binding cassette subfamily B member 4
SERPINA1	serpin family A member 1
PIGR	polymeric immunoglobulin receptor
PIK3CA	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha
PIK3CB	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit beta
PIM1	Pim-1 proto-oncogene, serine/threonine kinase
PIK3CD	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit delta
PIK3CG	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma
PIK3R1	phosphoinositide-3-kinase regulatory subunit 1
PIK3R2	phosphoinositide-3-kinase regulatory subunit 2
PITPNA	phosphatidylinositol transfer protein alpha
PITX1	paired like homeodomain 1
PKHD1	polycystic kidney and hepatic disease 1 (autosomal recessive)
PKM	pyruvate kinase, muscle
PLA2G4A	phospholipase A2 group IVA
PLAG1	PLAG1 zinc finger
PLAGL2	PLAG1 like zinc finger 2
PLAUR	plasminogen activator, urokinase receptor
PLCB2	phospholipase C beta 2
PLCL1	phospholipase C like 1
PLCG1	phospholipase C gamma 1
PLEC	plectin
PLXNB1	plexin B1
PMS1	PMS1 homolog 1, mismatch repair system component
PMS2	PMS1 homolog 2, mismatch repair system component
PRRX1	paired related homeobox 1
UBL3	ubiquitin like 3

SEPT5	septin 5
POLH	DNA polymerase eta
POU2AF1	POU class 2 associating factor 1
POU2F2	POU class 2 homeobox 2
POU4F1	POU class 4 homeobox 1
POU5F1	POU class 5 homeobox 1
PPARD	peroxisome proliferator activated receptor delta
PPP1CC	protein phosphatase 1 catalytic subunit gamma
PPP1R1A	protein phosphatase 1 regulatory inhibitor subunit 1A
PPP2R1A	protein phosphatase 2 scaffold subunit Aalpha
PRCC	papillary renal cell carcinoma (translocation-associated)
PRF1	perforin 1
PRKAB1	protein kinase AMP-activated non-catalytic subunit beta 1
PRKD1	protein kinase D1
MAPK1	mitogen-activated protein kinase 1
MAPK3	mitogen-activated protein kinase 3
MAPK4	mitogen-activated protein kinase 4
MAPK6	mitogen-activated protein kinase 6
MAPK7	mitogen-activated protein kinase 7
MAPK8	mitogen-activated protein kinase 8
MAPK13	mitogen-activated protein kinase 13
MAP2K1	mitogen-activated protein kinase kinase 1
MAP2K5	mitogen-activated protein kinase kinase 5
EIF2AK2	eukaryotic translation initiation factor 2 alpha kinase 2
PRLR	prolactin receptor
PROS1	protein S (alpha)
PRPS1	phosphoribosyl pyrophosphate synthetase 1
KLK7	kallikrein related peptidase 7
PSAP	prosaposin
PSEN1	presenilin 1
PSEN2	presenilin 2
PSMA5	proteasome subunit alpha 5
PYY	peptide YY
PSMD2	proteasome 26S subunit, non-ATPase 2
PSPH	phosphoserine phosphatase
PTBP1	polypyrimidine tract binding protein 1
PTGIS	prostaglandin I2 synthase
PTH	parathyroid hormone
PTGS2	prostaglandin-endoperoxide synthase 2
PTHLH	parathyroid hormone like hormone
PTK7	protein tyrosine kinase 7 (inactive)
PTMA	prothymosin, alpha
PTN	pleiotrophin
PTPN7	protein tyrosine phosphatase, non-receptor type 7
PTPN14	protein tyrosine phosphatase, non-receptor type 14
PTPRE	protein tyrosine phosphatase, receptor type E
PTPRG	protein tyrosine phosphatase, receptor type G
PTPRH	protein tyrosine phosphatase, receptor type H
PVT1	Pvt1 oncogene (non-protein coding)
PXN	paxillin
RAB1A	RAB1A, member RAS oncogene family
RAB2A	RAB2A, member RAS oncogene family
RAB3A	RAB3A, member RAS oncogene family
RAB3B	RAB3B, member RAS oncogene family

RAB4A	RAB4A, member RAS oncogene family
RAB5A	RAB5A, member RAS oncogene family
RAB5B	RAB5B, member RAS oncogene family
RAB6A	RAB6A, member RAS oncogene family
MAP4K2	mitogen-activated protein kinase kinase kinase kinase 2
RAB13	RAB13, member RAS oncogene family
RAB27A	RAB27A, member RAS oncogene family
RAB27B	RAB27B, member RAS oncogene family
RABGGTB	Rab geranylgeranyltransferase beta subunit
RAB5C	RAB5C, member RAS oncogene family
RAC1	ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)
RAC2	ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2)
RAC3	ras-related C3 botulinum toxin substrate 3 (rho family, small GTP binding protein Rac3)
RAD9A	RAD9 checkpoint clamp component A
RAD21	RAD21 cohesin complex component
RAD23A	RAD23 homolog A, nucleotide excision repair protein
RAD51B	RAD51 paralogs B
RAD51D	RAD51 paralogs D
RAD52	RAD52 homolog, DNA repair protein
RAF1	Raf-1 proto-oncogene, serine/threonine kinase
RALA	RAS like proto-oncogene A
RALB	RAS like proto-oncogene B
RALGDS	ral guanine nucleotide dissociation stimulator
RAN	RAN, member RAS oncogene family
RANBP2	RAN binding protein 2
RAP1AP	RAP1A, member of RAS oncogene family pseudogene
RAP1B	RAP1B, member of RAS oncogene family
RAP1GDS1	Rap1 GTPase-GDP dissociation stimulator 1
RAP2A	RAP2A, member of RAS oncogene family
RAP2B	RAP2B, member of RAS oncogene family
RARA	retinoic acid receptor alpha
RARG	retinoic acid receptor gamma
RARRES1	retinoic acid receptor responder 1
RASA1	RAS p21 protein activator 1
RASGRF1	Ras protein specific guanine nucleotide releasing factor 1
RASGRF2	Ras protein specific guanine nucleotide releasing factor 2
ARID4A	AT-rich interaction domain 4A
RBBP4	RB binding protein 4, chromatin remodeling factor
RBBP5	RB binding protein 5, histone lysine methyltransferase complex subunit
RBBP6	RB binding protein 6, ubiquitin ligase
RECQL	RecQ like helicase
REL	REL proto-oncogene, NF-kB subunit
RELA	RELA proto-oncogene, NF-kB subunit
RELB	RELB proto-oncogene, NF-kB subunit
REST	RE1 silencing transcription factor
RET	ret proto-oncogene
TRIM27	tripartite motif containing 27
RFX2	regulatory factor X2
RFX5	regulatory factor X5
RGS1	regulator of G-protein signaling 1
RGS2	regulator of G-protein signaling 2
RGS3	regulator of G-protein signaling 3

RHEB	Ras homolog enriched in brain
RLF	rearranged L-myc fusion
RLN2	relaxin 2
RMRP	RNA component of mitochondrial RNA processing endoribonuclease
BRD2	bromodomain containing 2
RORC	RAR related orphan receptor C
ROS1	ROS proto-oncogene 1, receptor tyrosine kinase
RPGR	retinitis pigmentosa GTPase regulator
RPA2	replication protein A2
RPL22	ribosomal protein L22
RPL26	ribosomal protein L26
RPN1	ribophorin I
RPS6KA1	ribosomal protein S6 kinase A1
RRAS	related RAS viral (r-ras) oncogene homolog
RREB1	ras responsive element binding protein 1
RRM1	ribonucleotide reductase catalytic subunit M1
CLIP1	CAP-Gly domain containing linker protein 1
RXRA	retinoid X receptor alpha
RYK	receptor-like tyrosine kinase
S100A7	S100 calcium binding protein A7
S100A8	S100 calcium binding protein A8
S100A9	S100 calcium binding protein A9
S100A10	S100 calcium binding protein A10
S100A13	S100 calcium binding protein A13
S100B	S100 calcium binding protein B
S100P	S100 calcium binding protein P
SAG	S-antigen visual arrestin
SAI1	suppression of anchorage independence 1
MAPK12	mitogen-activated protein kinase 12
SATB1	SATB homeobox 1
SERPINB3	serpin family B member 3
SERPINB4	serpin family B member 4
SCNN1B	sodium channel epithelial 1 beta subunit
CCL7	C-C motif chemokine ligand 7
SDC1	syndecan 1
SDC4	syndecan 4
SDHC	succinate dehydrogenase complex subunit C
SEA	S13 erythroblastosis (avian) oncogene homolog
SEL1L	SEL1L ERAD E3 ligase adaptor subunit
SELE	selectin E
SET	SET nuclear proto-oncogene
SFPQ	splicing factor proline and glutamine rich
SRSF2	serine and arginine rich splicing factor 2
SRSF3	serine and arginine rich splicing factor 3
SRSF6	serine and arginine rich splicing factor 6
SGK1	serum/glucocorticoid regulated kinase 1
SH3BP2	SH3 domain binding protein 2
SH3GL1	SH3 domain containing GRB2 like 1, endophilin A2
SH3GL2	SH3 domain containing GRB2 like 2, endophilin A1
SHBG	sex hormone binding globulin
SHC1	SHC adaptor protein 1
FBXW4	F-box and WD repeat domain containing 4
SHH	sonic hedgehog
SIAH2	siah E3 ubiquitin protein ligase 2

ST6GAL1	ST6 beta-galactoside alpha-2,6-sialyltransferase 1
ST3GAL1	ST3 beta-galactoside alpha-2,3-sialyltransferase 1
PMEL	premelanosome protein
STIL	SCL/TAL1 interrupting locus
SIPA1	signal-induced proliferation-associated 1
SIX1	SIX homeobox 1
SKI	SKI proto-oncogene
SKP1	S-phase kinase associated protein 1
SLC4A1	solute carrier family 4 member 1 (Diego blood group)
SLC5A5	solute carrier family 5 member 5
SLC6A3	solute carrier family 6 member 3
SLC9A2	solute carrier family 9 member A2
SLC16A1	solute carrier family 16 member 1
SLC19A1	solute carrier family 19 member 1
SNAI2	snail family transcriptional repressor 2
SMO	smoothened, frizzled class receptor
SNAI1	snail family transcriptional repressor 1
SNAPC3	small nuclear RNA activating complex polypeptide 3
SNCG	synuclein gamma
FSCN1	fascin actin-bundling protein 1
SORL1	sortilin related receptor 1
SOS1	SOS Ras/Rac guanine nucleotide exchange factor 1
SOX2	SRY-box 2
SOX3	SRY-box 3
SOX4	SRY-box 4
SOX5	SRY-box 5
SOX9	SRY-box 9
SOX10	SRY-box 10
SPAM1	sperm adhesion molecule 1
SPG7	SPG7, paraplegin matrix AAA peptidase subunit
SPINT1	serine peptidase inhibitor, Kunitz type 1
SPP1	secreted phosphoprotein 1
SPTAN1	spectrin alpha, non-erythrocytic 1
SRC	SRC proto-oncogene, non-receptor tyrosine kinase
SRI	sorcin
SRPK2	SRSF protein kinase 2
SSTR2	somatostatin receptor 2
SSX1	SSX family member 1
SSX2	SSX family member 2
SSX4	SSX family member 4
SS18	SS18, nBAF chromatin remodeling complex subunit
ST3	suppression of tumorigenicity 3
ST8	suppression of tumorigenicity 8 (ovarian)
STAT2	signal transducer and activator of transcription 2
STAT5B	signal transducer and activator of transcription 5B
STAT6	signal transducer and activator of transcription 6
STK4	serine/threonine kinase 4
AURKA	aurora kinase A
STRN	striatin
STX4	syntaxin 4
TAC1	tachykinin precursor 1
TACC1	transforming acidic coiled-coil containing protein 1
TAF1	TATA-box binding protein associated factor 1
MAP3K7	mitogen-activated protein kinase kinase kinase 7

TAL1	TAL bHLH transcription factor 1, erythroid differentiation factor
TAL2	TAL bHLH transcription factor 2
TAP1	transporter 1, ATP binding cassette subfamily B member
TAP2	transporter 2, ATP binding cassette subfamily B member
TBX2	T-box 2
TCEA1	transcription elongation factor A1
TCEB1	transcription elongation factor B subunit 1
TBX3	T-box 3
HNF1A	HNF1 homeobox A
TCF7	transcription factor 7 (T-cell specific, HMG-box)
TCF12	transcription factor 12
TRA	T-cell receptor alpha locus
TRB	T cell receptor beta locus
TRD	T cell receptor delta locus
TRG	T cell receptor gamma locus
TCTA	T-cell leukemia translocation altered
TDGF1P3	teratocarcinoma-derived growth factor 1 pseudogene 3
TECTA	tectorin alpha
TEK	TEK receptor tyrosine kinase
TERT	telomerase reverse transcriptase
TFAP4	transcription factor AP-4
NR2F1	nuclear receptor subfamily 2 group F member 1
TFDP1	transcription factor Dp-1
TFE3	transcription factor binding to IGHM enhancer 3
TFF1	trefoil factor 1
TFF2	trefoil factor 2
TFF3	trefoil factor 3
TFRC	transferrin receptor
TG	thyroglobulin
TGFA	transforming growth factor alpha
TGFB2	transforming growth factor beta 2
TGFB3	transforming growth factor beta 3
TGFBR1	transforming growth factor beta receptor 1
TGIF1	TGFB induced factor homeobox 1
THBS2	thrombospondin 2
THBS3	thrombospondin 3
THPO	thrombopoietin
THRSP	thyroid hormone responsive
TIAM1	T-cell lymphoma invasion and metastasis 1
TIE1	tyrosine kinase with immunoglobulin like and EGF like domains 1
TIMP1	TIMP metalloproteinase inhibitor 1
TIMP2	TIMP metalloproteinase inhibitor 2
NKX2-1	NK2 homeobox 1
TK1	thymidine kinase 1
ICAM5	intercellular adhesion molecule 5
TSPAN8	tetraspanin 8
TMPRSS2	transmembrane protease, serine 2
TNF	tumor necrosis factor
TNFAIP1	TNF alpha induced protein 1
TNFRSF1A	TNF receptor superfamily member 1A
TNFRSF1B	TNF receptor superfamily member 1B
TNR	tenascin R
TOP1	topoisomerase (DNA) I
TOP2A	topoisomerase (DNA) II alpha

TOP2B	topoisomerase (DNA) II beta
TOP3A	topoisomerase (DNA) III alpha
TPD52	tumor protein D52
TPM3	tropomyosin 3
TPM4	tropomyosin 4
TPR	translocated promoter region, nuclear basket protein
TRAF1	TNF receptor associated factor 1
TRAF3	TNF receptor associated factor 3
TRHR	thyrotropin releasing hormone receptor
TRIO	trio Rho guanine nucleotide exchange factor
TRPS1	transcriptional repressor GATA binding 1
TSHR	thyroid stimulating hormone receptor
TWIST1	twist family bHLH transcription factor 1
TXN	thioredoxin
TYRO3	TYRO3 protein tyrosine kinase
TYS	sclerolytosis
U2AF1	U2 small nuclear RNA auxiliary factor 1
UBA7	ubiquitin like modifier activating enzyme 7
UBE2D2	ubiquitin conjugating enzyme E2 D2
UBE3A	ubiquitin protein ligase E3A
USP4	ubiquitin specific peptidase 4
NR1H2	nuclear receptor subfamily 1 group H member 2
UQCRC2	ubiquinol-cytochrome c reductase core protein II
USF1	upstream transcription factor 1
VAV1	vav guanine nucleotide exchange factor 1
VAV2	vav guanine nucleotide exchange factor 2
VCL	vinculin
VGF	VGF nerve growth factor inducible
VIS1	viral integration site 1
TRPV1	transient receptor potential cation channel subfamily V member 1
VRK1	vaccinia related kinase 1
WAS	Wiskott-Aldrich syndrome
CORO2A	coronin 2A
WHSC1	Wolf-Hirschhorn syndrome candidate 1
WNT1	Wnt family member 1
WNT2	Wnt family member 2
WNT3	Wnt family member 3
WNT6	Wnt family member 6
WNT10B	Wnt family member 10B
WRN	Werner syndrome RecQ like helicase
XDH	xanthine dehydrogenase
XPA	XPA, DNA damage recognition and repair factor
XPC	XPC complex subunit, DNA damage recognition and repair factor
XRCC3	X-ray repair cross complementing 3
YES1	YES proto-oncogene 1, Src family tyrosine kinase
YWHAE	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein epsilon
CNBP	CCHC-type zinc finger nucleic acid binding protein
ZNF35	zinc finger protein 35
ZNF91	zinc finger protein 91
MKRN3	makorin ring finger protein 3
ZNF132	zinc finger protein 132
ZNF146	zinc finger protein 146
ZMYM2	zinc finger MYM-type containing 2
ZNF217	zinc finger protein 217

LAPTM5	lysosomal protein transmembrane 5
CSDE1	cold shock domain containing E1
PCAP	predisposing for prostate cancer
TUBA1A	tubulin alpha 1a
PAX8	paired box 8
IFRD2	interferon related developmental regulator 2
MANF	mesencephalic astrocyte derived neurotrophic factor
USP7	ubiquitin specific peptidase 7
DEK	DEK proto-oncogene
TFEB	transcription factor EB
RNF217-AS1	RNF217 antisense RNA 1 (head to head)
MAFK	MAF bZIP transcription factor K
KAT6A	lysine acetyltransferase 6A
PSCA	prostate stem cell antigen
BRD3	bromodomain containing 3
NUP214	nucleoporin 214
MLLT10	myeloid/lymphoid or mixed-lineage leukemia; translocated to, 10
CUBN	cubilin
CCDC6	coiled-coil domain containing 6
ADAM12	ADAM metallopeptidase domain 12
FOSL1	FOS like 1, AP-1 transcription factor subunit
BRCATA	Breast cancer, 11;22 translocation associated
SSPN	sarcospan
KMT2D	lysine methyltransferase 2D
HMGA2	high mobility group AT-hook 2
GPR68	G protein-coupled receptor 68
TCL1A	T-cell leukemia/lymphoma 1A
TAF15	TATA-box binding protein associated factor 15
ELL	elongation factor for RNA polymerase II
ZNF239	zinc finger protein 239
NCOA3	nuclear receptor coactivator 3
NRIP1	nuclear receptor interacting protein 1
LZTR1	leucine zipper like transcription regulator 1
CLTCL1	clathrin heavy chain like 1
KDM5C	lysine demethylase 5C
SMC1A	structural maintenance of chromosomes 1A
NAA10	N(alpha)-acetyltransferase 10, NatA catalytic subunit
HIST1H4I	histone cluster 1 H4 family member i
PICALM	phosphatidylinositol binding clathrin assembly protein
GFI1B	growth factor independent 1B transcriptional repressor
HIST1H2BG	histone cluster 1 H2B family member g
HIST1H3B	histone cluster 1 H3 family member b
PIP5K1A	phosphatidylinositol-4-phosphate 5-kinase type 1 alpha
BCAR3	breast cancer anti-estrogen resistance 3
BFSP2	beaded filament structural protein 2
CUL4B	cullin 4B
SORBS2	sorbin and SH3 domain containing 2
PPM1D	protein phosphatase, Mg ²⁺ /Mn ²⁺ dependent 1D
PPFIBP1	PPFIA binding protein 1
RANBP3	RAN binding protein 3
SLC43A1	solute carrier family 43 member 1
ENC1	ectodermal-neural cortex 1
GAS7	growth arrest specific 7
DGKE	diacylglycerol kinase epsilon

CBX4	chromobox 4
DENR	density regulated re-initiation and release factor
THOC5	THO complex 5
PDXK	pyridoxal (pyridoxine, vitamin B6) kinase
RUVBL1	RuvB like AAA ATPase 1
PLPP3	phospholipid phosphatase 3
AKR1C3	aldo-keto reductase family 1 member C3
KCNK5	potassium two pore domain channel subfamily K member 5
NCOA1	nuclear receptor coactivator 1
IRS2	insulin receptor substrate 2
EIF3A	eukaryotic translation initiation factor 3 subunit A
EIF3C	eukaryotic translation initiation factor 3 subunit C
EIF3I	eukaryotic translation initiation factor 3 subunit I
VAMP8	vesicle associated membrane protein 8
HYAL2	hyaluronoglucosaminidase 2
S1PR4	sphingosine-1-phosphate receptor 4
RNGTT	RNA guanylyltransferase and 5'-phosphatase
TNFSF10	tumor necrosis factor superfamily member 10
ADAM23	ADAM metallopeptidase domain 23
ADAM9	ADAM metallopeptidase domain 9
TNFRSF14	TNF receptor superfamily member 14
RAB11A	RAB11A, member RAS oncogene family
TNFRSF6B	TNF receptor superfamily member 6b
NAPA	NSF attachment protein alpha
TNFRSF11A	TNF receptor superfamily member 11a
TNFRSF10C	TNF receptor superfamily member 10c
GMPS	guanine monophosphate synthase
SOCS2	suppressor of cytokine signaling 2
GGH	gamma-glutamyl hydrolase
CFLAR	CASP8 and FADD like apoptosis regulator
WISP2	WNT1 inducible signaling pathway protein 2
KSR1	kinase suppressor of ras 1
CDK5R1	cyclin dependent kinase 5 regulatory subunit 1
LDB1	LIM domain binding 1
SQSTM1	sequestosome 1
FUBP1	far upstream element binding protein 1
MTMR3	myotubularin related protein 3
PRPF4B	pre-mRNA processing factor 4B
PHOX2B	paired like homeobox 2b
MBD2	methyl-CpG binding domain protein 2
RAB29	RAB29, member RAS oncogene family
BTRC	beta-transducin repeat containing E3 ubiquitin protein ligase
TNFSF18	tumor necrosis factor superfamily member 18
NOL3	nucleolar protein 3
KALRN	kalirin, RhoGEF kinase
MAP3K6	mitogen-activated protein kinase kinase kinase 6
USP6	ubiquitin specific peptidase 6
MTA1	metastasis associated 1
SLC16A3	solute carrier family 16 member 3
SMC3	structural maintenance of chromosomes 3
AIFM1	apoptosis inducing factor, mitochondria associated 1
RABEP1	rabaptin, RAB GTPase binding effector protein 1
RRP9	ribosomal RNA processing 9, small subunit (SSU) processome component, homolog (yeast)
DYRK1B	dual specificity tyrosine phosphorylation regulated kinase 1B

PCSK7	proprotein convertase subtilisin/kexin type 7
EBAG9	estrogen receptor binding site associated, antigen, 9
TMSB10	thymosin beta 10
ARHGEF2	Rho/Rac guanine nucleotide exchange factor 2
REPS2	RALBP1 associated Eps domain containing 2
LRRFIP1	LRR binding FLII interacting protein 1
LGI1	leucine rich glioma inactivated 1
DLGAP1	DLG associated protein 1
RAB11B	RAB11B, member RAS oncogene family
PTTG1	pituitary tumor-transforming 1
PNMA1	paraneoplastic Ma antigen 1
GCNT3	glucosaminyl (N-acetyl) transferase 3, mucin type
DHRS3	dehydrogenase/reductase 3
TSPOAP1	TSPO associated protein 1
MFHAS1	malignant fibrous histiocytoma amplified sequence 1
MAPKAPK2	mitogen-activated protein kinase-activated protein kinase 2
TRIP11	thyroid hormone receptor interactor 11
B4GALT5	beta-1,4-galactosyltransferase 5
RAB33A	RAB33A, member RAS oncogene family
RAB28	RAB28, member RAS oncogene family
RAB9BP1	RAB9B, member RAS oncogene family pseudogene 1
RAB9A	RAB9A, member RAS oncogene family
NRXN2	neurexin 2
OTOF	otoferlin
RECQL5	RecQ like helicase 5
RECQL4	RecQ like helicase 4
TJP2	tight junction protein 2
CYP7B1	cytochrome P450 family 7 subfamily B member 1
MED17	mediator complex subunit 17
ARHGEF6	Rac/Cdc42 guanine nucleotide exchange factor 6
PICK1	protein interacting with PRKCA 1
MAPK8IP1	mitogen-activated protein kinase 8 interacting protein 1
ADAMTS1	ADAM metallopeptidase with thrombospondin type 1 motif 1
GDF15	growth differentiation factor 15
BAG3	BCL2 associated athanogene 3
RAB3D	RAB3D, member RAS oncogene family
BCAR1	BCAR1, Cas family scaffolding protein
BRE	brain and reproductive organ-expressed (TNFRSF1A modulator)
RBM39	RNA binding motif protein 39
WTAP	Wilms tumor 1 associated protein
IER2	immediate early response 2
RAB36	RAB36, member RAS oncogene family
NCOR1	nuclear receptor corepressor 1
NCOR2	nuclear receptor corepressor 2
RNF7	ring finger protein 7
TRAF4	TNF receptor associated factor 4
KLK4	kallikrein related peptidase 4
TCL1B	T-cell leukemia/lymphoma 1B
PLCH2	phospholipase C eta 2
PDE4DIP	phosphodiesterase 4D interacting protein
SDC3	syndecan 3
NUP93	nucleoporin 93
HERPUD1	homocysteine inducible ER protein with ubiquitin like domain 1
ARHGAP32	Rho GTPase activating protein 32

ACAP1	ArfGAP with coiled-coil, ankyrin repeat and PH domains 1
STARD8	StAR related lipid transfer domain containing 8
KMT2B	lysine methyltransferase 2B
HDAC4	histone deacetylase 4
BCLAF1	BCL2 associated transcription factor 1
ATG13	autophagy related 13
CTIF	cap binding complex dependent translation initiation factor
KEAP1	kelch like ECH associated protein 1
ARMCX2	armadillo repeat containing, X-linked 2
DNAJC6	DnaJ heat shock protein family (Hsp40) member C6
ZEB2	zinc finger E-box binding homeobox 2
ELMO1	engulfment and cell motility 1
GAB2	GRB2 associated binding protein 2
C2CD5	C2 calcium dependent domain containing 5
RHOBTB1	Rho related BTB domain containing 1
RABGAP1L	RAB GTPase activating protein 1 like
NCAPD2	non-SMC condensin I complex subunit D2
KIF14	kinesin family member 14
P2RY14	purinergic receptor P2Y14
MAFB	MAF bZIP transcription factor B
ARHGAP25	Rho GTPase activating protein 25
GOLGA5	golgin A5
USP15	ubiquitin specific peptidase 15
USP3	ubiquitin specific peptidase 3
MVP	major vault protein
TNFSF15	tumor necrosis factor superfamily member 15
THRAP3	thyroid hormone receptor associated protein 3
MED12	mediator complex subunit 12
MED13	mediator complex subunit 13
RBX1	ring-box 1
DOPEY2	dopey family member 2
ELK2BP	ELK2B, member of ETS oncogene family, pseudogene
AKT3	AKT serine/threonine kinase 3
ABI1	abl interactor 1
ZBTB33	zinc finger and BTB domain containing 33
HDAC6	histone deacetylase 6
PDCD6	programmed cell death 6
FRAT1	frequently rearranged in advanced T-cell lymphomas 1
HMGXB4	HMG-box containing 4
TOM1	target of myb1 membrane trafficking protein
HUWE1	HECT, UBA and WWE domain containing 1, E3 ubiquitin protein ligase
PTPRU	protein tyrosine phosphatase, receptor type U
TSPAN1	tetraspanin 1
RASGRP1	RAS guanyl releasing protein 1
DNAL4	dynein axonemal light chain 4
TRAP1	TNF receptor associated protein 1
AKAP9	A-kinase anchoring protein 9
WASF2	WAS protein family member 2
LHFP	lipoma HMGIC fusion partner
PATJ	PATJ, crumbs cell polarity complex component
OLIG2	oligodendrocyte lineage transcription factor 2
PRG4	proteoglycan 4
GPA33	glycoprotein A33
RASGRP2	RAS guanyl releasing protein 2

GPHN	gephyrin
RAMP1	receptor activity modifying protein 1
FSTL3	follistatin like 3
STAG1	stromal antigen 1
NET1	neuroepithelial cell transforming 1
RGS19	regulator of G-protein signaling 19
EIF1B	eukaryotic translation initiation factor 1B
APC2	APC2, WNT signaling pathway regulator
TCIRG1	T-cell immune regulator 1, ATPase H ⁺ transporting V0 subunit a3
TFG	TRK-fused gene
PKDREJ	polycystin (PKD) family receptor for egg jelly
CORO2B	coronin 2B
NOD1	nucleotide binding oligomerization domain containing 1
PIAS3	protein inhibitor of activated STAT 3
NSA2	NSA2, ribosome biogenesis homolog
IFI30	IFI30, lysosomal thiol reductase
VAV3	vav guanine nucleotide exchange factor 3
GPNMB	glycoprotein nmb
TACC3	transforming acidic coiled-coil containing protein 3
MERTK	MER proto-oncogene, tyrosine kinase
FST	follistatin
CARM1	coactivator associated arginine methyltransferase 1
NCOA2	nuclear receptor coactivator 2
SEMA4D	semaphorin 4D
SEMA4B	semaphorin 4B
BATF	basic leucine zipper ATF-like transcription factor
ANP32B	acidic nuclear phosphoprotein 32 family member B
SLC34A2	solute carrier family 34 member 2
PRPF8	pre-mRNA processing factor 8
SH2B2	SH2B adaptor protein 2
HEXIM1	hexamethylene bisacetamide inducible 1
IGF2BP1	insulin like growth factor 2 mRNA binding protein 1
CAMKK2	calcium/calmodulin dependent protein kinase kinase 2
TNFSF13B	tumor necrosis factor superfamily member 13b
USP39	ubiquitin specific peptidase 39
MGEA5	meningioma expressed antigen 5 (hyaluronidase)
NFAT5	nuclear factor of activated T-cells 5
STAG2	stromal antigen 2
CHL1	cell adhesion molecule L1 like
TOB2	transducer of ERBB2, 2
SEPT9	septin 9
CCR9	C-C motif chemokine receptor 9
SDCCAG8	serologically defined colon cancer antigen 8
HSPH1	heat shock protein family H (Hsp110) member 1
CPLX2	complexin 2
NEU3	neuraminidase 3
PPP1R13L	protein phosphatase 1 regulatory subunit 13 like
HPSE	heparanase
RUVBL2	RuvB like AAA ATPase 2
ARID5A	AT-rich interaction domain 5A
ME3	malic enzyme 3
RAB10	RAB10, member RAS oncogene family
MALT1	MALT1 paracaspase
APOBEC2	apolipoprotein B mRNA editing enzyme catalytic subunit 2

AP3M2	adaptor related protein complex 3 mu 2 subunit
STARD3	StAR related lipid transfer domain containing 3
SERINC3	serine incorporator 3
MLLT11	myeloid/lymphoid or mixed-lineage leukemia; translocated to, 11
RAB40B	RAB40B, member RAS oncogene family
CLP1	cleavage and polyadenylation factor I subunit 1
RAB32	RAB32, member RAS oncogene family
METAP2	methionyl aminopeptidase 2
KLK11	kallikrein related peptidase 11
RAB35	RAB35, member RAS oncogene family
RAB31	RAB31, member RAS oncogene family
PIM2	Pim-2 proto-oncogene, serine/threonine kinase
ABHD2	abhydrolase domain containing 2
WWP1	WW domain containing E3 ubiquitin protein ligase 1
CNTRL	centriolin
UBE2C	ubiquitin conjugating enzyme E2 C
ADAM29	ADAM metallopeptidase domain 29
PTPN21	protein tyrosine phosphatase, non-receptor type 21
FGFR1OP	FGFR1 oncogene partner
CDC42EP1	CDC42 effector protein 1
PKIG	protein kinase (cAMP-dependent, catalytic) inhibitor gamma
GLMN	glomulin, FKBP associated protein
CORO1A	coronin 1A
PTP4A3	protein tyrosine phosphatase type IVA, member 3
RABL2B	RAB, member of RAS oncogene family-like 2B
RABL2A	RAB, member of RAS oncogene family-like 2A
NUDT6	nudix hydrolase 6
PSIP1	PC4 and SFRS1 interacting protein 1
ABCB8	ATP binding cassette subfamily B member 8
AKAP13	A-kinase anchoring protein 13
DUSP10	dual specificity phosphatase 10
GALNT5	polypeptide N-acetylgalactosaminyltransferase 5
RNF139	ring finger protein 139
PADI2	peptidyl arginine deiminase 2
PACSIN2	protein kinase C and casein kinase substrate in neurons 2
CASC3	cancer susceptibility candidate 3
RRAS2	related RAS viral (r-ras) oncogene homolog 2
ITGA11	integrin subunit alpha 11
MRAS	muscle RAS oncogene homolog
ATF5	activating transcription factor 5
RASA3	RAS p21 protein activator 3
PHLDA1	pleckstrin homology like domain family A member 1
PPM1E	protein phosphatase, Mg ²⁺ /Mn ²⁺ dependent 1E
CARD8	caspase recruitment domain family member 8
KLRK1	killer cell lectin like receptor K1
MAPRE1	microtubule associated protein RP/EB family member 1
RAB18	RAB18, member RAS oncogene family
DIP2C	disco interacting protein 2 homolog C
RAB21	RAB21, member RAS oncogene family
STK38L	serine/threonine kinase 38 like
SPEN	spen family transcriptional repressor
RBM34	RNA binding motif protein 34
FNBP1	formin binding protein 1
NCOA6	nuclear receptor coactivator 6

UHRF1BP1L	UHRF1 binding protein 1 like
SWAP70	SWAP switching B-cell complex 70kDa subunit
KDM4C	lysine demethylase 4C
ERC1	ELKS/RAB6-interacting/CAST family member 1
PEG10	paternally expressed 10
ZNF423	zinc finger protein 423
ARHGAP26	Rho GTPase activating protein 26
TAB2	TGF-beta activated kinase 1/MAP3K7 binding protein 2
N4BP3	NEDD4 binding protein 3
MAST2	microtubule associated serine/threonine kinase 2
SEPT6	septin 6
RGL1	ral guanine nucleotide dissociation stimulator like 1
FBXL7	F-box and leucine rich repeat protein 7
GSE1	Gse1 coiled-coil protein
SYNE2	spectrin repeat containing nuclear envelope protein 2
DNAJC9	DnaJ heat shock protein family (Hsp40) member C9
PLCB1	phospholipase C beta 1
ASTN2	astrotactin 2
BOP1	block of proliferation 1
ANKRD12	ankyrin repeat domain 12
ADGRL2	adhesion G protein-coupled receptor L2
IQCE	IQ motif containing E
SMG6	SMG6, nonsense mediated mRNA decay factor
ACSL6	acyl-CoA synthetase long-chain family member 6
SYNE1	spectrin repeat containing nuclear envelope protein 1
USP24	ubiquitin specific peptidase 24
FNBP4	formin binding protein 4
CRTC1	CREB regulated transcription coactivator 1
SIK3	SIK family kinase 3
COTL1	coactosin like F-actin binding protein 1
GPR161	G protein-coupled receptor 161
SF3B1	splicing factor 3b subunit 1
ABCB10	ATP binding cassette subfamily B member 10
HEY1	hes related family bHLH transcription factor with YRPW motif 1
BRD4	bromodomain containing 4
TNFRSF13B	TNF receptor superfamily member 13B
MACF1	microtubule-actin crosslinking factor 1
ZFYVE26	zinc finger FYVE-type containing 26
KCTD2	potassium channel tetramerization domain containing 2
KAT6B	lysine acetyltransferase 6B
ZNF281	zinc finger protein 281
PIK3R5	phosphoinositide-3-kinase regulatory subunit 5
CDK20	cyclin dependent kinase 20
PATZ1	POZ/BTB and AT hook containing zinc finger 1
CORO1C	coronin 1C
ZMYND8	zinc finger MYND-type containing 8
CBLC	Cbl proto-oncogene C
LDOC1	leucine zipper down-regulated in cancer 1
SSBP3	single stranded DNA binding protein 3
RAB38	RAB38, member RAS oncogene family
NPAP1	nuclear pore associated protein 1
ZNF318	zinc finger protein 318
SLC39A6	solute carrier family 39 member 6
KLK5	kallikrein related peptidase 5

NIPBL	NIPBL, cohesin loading factor
RAB26	RAB26, member RAS oncogene family
ABTB2	ankyrin repeat and BTB domain containing 2
ZNF521	zinc finger protein 521
CLIC4	chloride intracellular channel 4
SIN3A	SIN3 transcription regulator family member A
EGFL6	EGF like domain multiple 6
OSBPL3	oxysterol binding protein like 3
SS18L1	SS18L1, nBAF chromatin remodeling complex subunit
SETBP1	SET binding protein 1
PPP1R16B	protein phosphatase 1 regulatory subunit 16B
ERC2	ELKS/RAB6-interacting/CAST family member 2
GGA1	golgi associated, gamma adaptin ear containing, ARF binding protein 1
EDRF1	erythroid differentiation regulatory factor 1
FGFR1OP2	FGFR1 oncogene partner 2
TTLL3	tubulin tyrosine ligase like 3
FBXO5	F-box protein 5
PPP1R14B	protein phosphatase 1 regulatory inhibitor subunit 14B
PLEK2	pleckstrin 2
CNNM4	cyclin and CBS domain divalent metal cation transport mediator 4
CHIC2	cysteine rich hydrophobic domain 2
AATF	apoptosis antagonizing transcription factor
MYEOV	myeloma overexpressed
STEAP1	STEAP family member 1
PABPC1	poly(A) binding protein cytoplasmic 1
TCL6	T-cell leukemia/lymphoma 6 (non-protein coding)
TPK1	thiamin pyrophosphokinase 1
LYPD3	LY6/PLAUR domain containing 3
AFF4	AF4/FMR2 family member 4
SNX5	sorting nexin 5
CNTN6	contactin 6
RAB30	RAB30, member RAS oncogene family
EML4	echinoderm microtubule associated protein like 4
CECR5	cat eye syndrome chromosome region, candidate 5
CDH20	cadherin 20
MACROD1	MACRO domain containing 1
CFAP20	cilia and flagella associated protein 20
CD274	CD274 molecule
PARVB	parvin beta
TFPT	TCF3 fusion partner
TBX21	T-box 21
TLX3	T-cell leukemia homeobox 3
SOX8	SRY-box 8
ERVW-1	endogenous retrovirus group W member 1
STOML2	stomatin like 2
IL21R	interleukin 21 receptor
IL22	interleukin 22
ARHGEF4	Rho guanine nucleotide exchange factor 4
IGK	immunoglobulin kappa locus
CDON	cell adhesion associated, oncogene regulated
PDE11A	phosphodiesterase 11A
TBX22	T-box 22
BHD	Beukes familial hip dysplasia
ADIPOR1	adiponectin receptor 1

APH1A	aph-1 homolog A, gamma-secretase subunit
SBDS	SBDS ribosome assembly guanine nucleotide exchange factor
CYB5R4	cytochrome b5 reductase 4
LEF1	lymphoid enhancer binding factor 1
NIN	ninein
RAB9B	RAB9B, member RAS oncogene family
PHF20	PHD finger protein 20
KLF3	Kruppel like factor 3
ZDHHC3	zinc finger DHHC-type containing 3
ARMCX1	armadillo repeat containing, X-linked 1
UCHL5	ubiquitin C-terminal hydrolase L5
PRRX2	paired related homeobox 2
RHCG	Rh family C glycoprotein
EVL	Enah/Vasp-like
NELFCD	negative elongation factor complex member C/D
TRIAP1	TP53 regulated inhibitor of apoptosis 1
NCKIPSD	NCK interacting protein with SH3 domain
RAB14	RAB14, member RAS oncogene family
RAB6B	RAB6B, member RAS oncogene family
IL23A	interleukin 23 subunit alpha
ARMCX3	armadillo repeat containing, X-linked 3
TRIM33	tripartite motif containing 33
ERGIC3	ERGIC and golgi 3
ACSL5	acyl-CoA synthetase long-chain family member 5
RAB23	RAB23, member RAS oncogene family
CMPK1	cytidine/uridine monophosphate kinase 1
GHRL	ghrelin and obestatin prepropeptide
RTEL1	regulator of telomere elongation helicase 1
CDK12	cyclin dependent kinase 12
RAB8B	RAB8B, member RAS oncogene family
INPP5K	inositol polyphosphate-5-phosphatase K
RSF1	remodeling and spacing factor 1
SIX4	SIX homeobox 4
BCL11A	B-cell CLL/lymphoma 11A
SPA17	sperm autoantigenic protein 17
FXVD5	FXVD domain containing ion transport regulator 5
RAB4B	RAB4B, member RAS oncogene family
RAB24	RAB24, member RAS oncogene family
SLC38A2	solute carrier family 38 member 2
SEMA5B	semaphorin 5B
ANLN	anillin actin binding protein
NLE1	notchless homolog 1
RNF216	ring finger protein 216
RHOF	ras homolog family member F, filopodia associated
SPATA6	spermatogenesis associated 6
PAF1	PAF1 homolog, Paf1/RNA polymerase II complex component
RAB39A	RAB39A, member RAS oncogene family
FEV	FEV, ETS transcription factor
AHI1	Abelson helper integration site 1
DYM	dymeclin
BCAS3	BCAS3, microtubule associated cell migration factor
BSPRY	B-box and SPRY domain containing
TMEM104	transmembrane protein 104
BCOR	BCL6 corepressor

RNF43	ring finger protein 43
CYP2W1	cytochrome P450 family 2 subfamily W member 1
SDHAF2	succinate dehydrogenase complex assembly factor 2
PHIP	pleckstrin homology domain interacting protein
RALGPS2	Ral GEF with PH domain and SH3 binding motif 2
WRAP53	WD repeat containing antisense to TP53
FAIM	Fas apoptotic inhibitory molecule
RNF220	ring finger protein 220
SBNO1	strawberry notch homolog 1
DRAM1	DNA damage regulated autophagy modulator 1
ZNF331	zinc finger protein 331
TRPV6	transient receptor potential cation channel subfamily V member 6
DDX43	DEAD-box helicase 43
IL17RB	interleukin 17 receptor B
FERMT1	fermitin family member 1
ZDHHC7	zinc finger DHHC-type containing 7
RAB20	RAB20, member RAS oncogene family
BCAS4	breast carcinoma amplified sequence 4
NLRP2	NLR family pyrin domain containing 2
RABL6	RAB, member RAS oncogene family-like 6
VAC14	Vac14, PIKFYVE complex component
ATF7IP	activating transcription factor 7 interacting protein
ZFP64	ZFP64 zinc finger protein
ENAH	enabled homolog (Drosophila)
PARVA	parvin alpha
NUP133	nucleoporin 133
SCN3B	sodium voltage-gated channel beta subunit 3
ST6GALNAC1	ST6 N-acetylgalactosaminide alpha-2,6-sialyltransferase 1
KIZ	kizuna centrosomal protein
LMO3	LIM domain only 3
ERBIN	erbB2 interacting protein
RCC2	regulator of chromosome condensation 2
FAM212B	family with sequence similarity 212 member B
SULF2	sulfatase 2
PCDHB15	protocadherin beta 15
KCNQ5	potassium voltage-gated channel subfamily Q member 5
TMPRSS4	transmembrane protease, serine 4
MUC13	mucin 13, cell surface associated
KCMF1	potassium channel modulatory factor 1
SPPL2B	signal peptide peptidase like 2B
PMEPA1	prostate transmembrane protein, androgen induced 1
EMSY	EMSY, BRCA2 interacting transcriptional repressor
ACKR3	atypical chemokine receptor 3
RSRP1	arginine and serine rich protein 1
UTP3	UTP3, small subunit processome component homolog (S. cerevisiae)
KNL1	kinetochore scaffold 1
GOPC	golgi associated PDZ and coiled-coil motif containing
CD248	CD248 molecule
RHBG	Rh family B glycoprotein (gene/pseudogene)
ZMIZ1	zinc finger MIZ-type containing 1
ADAMTSL3	ADAMTS like 3
KIAA1147	KIAA1147
KAT14	lysine acetyltransferase 14
S100A14	S100 calcium binding protein A14

RAB22A	RAB22A, member RAS oncogene family
BIRC6	baculoviral IAP repeat containing 6
ARID1B	AT-rich interaction domain 1B
MTA3	metastasis associated 1 family member 3
AARS2	alanyl-tRNA synthetase 2, mitochondrial
ZNF608	zinc finger protein 608
ARHGAP20	Rho GTPase activating protein 20
UNC79	unc-79 homolog (C. elegans)
PREX1	phosphatidylinositol-3,4,5-trisphosphate dependent Rac exchange factor 1
MKL1	megakaryoblastic leukemia (translocation) 1
EP400	E1A binding protein p400
KIAA1524	KIAA1524
KIAA1549	KIAA1549
RNF213	ring finger protein 213
CHD8	chromodomain helicase DNA binding protein 8
MAGEE1	MAGE family member E1
MIER1	MIER1 transcriptional regulator
SFMBT2	Scm-like with four mbt domains 2
METTL14	methyltransferase like 14
EPG5	ectopic P-granules autophagy protein 5 homolog
MARK4	microtubule affinity regulating kinase 4
RAB40C	RAB40C, member RAS oncogene family
CCNB1IP1	cyclin B1 interacting protein 1
RAP2C	RAP2C, member of RAS oncogene family
PLEKHB1	pleckstrin homology domain containing B1
NLRC4	NLR family CARD domain containing 4
SCAF1	SR-related CTD associated factor 1
EPS15L1	epidermal growth factor receptor pathway substrate 15 like 1
IL22RA1	interleukin 22 receptor subunit alpha 1
PLEKHA2	pleckstrin homology domain containing A2
LGR6	leucine rich repeat containing G protein-coupled receptor 6
AVP11	arginine vasopressin induced 1
EXOC4	exocyst complex component 4
BACH2	BTB domain and CNC homolog 2
ELOVL5	ELOVL fatty acid elongase 5
SAV1	salvador family WW domain containing protein 1
ELAC2	elaC ribonuclease Z 2
PAPPA2	pappalysin 2
SMAP1	small ArfGAP 1
SLC22A23	solute carrier family 22 member 23
THADA	THADA, armadillo repeat containing
TNN	tenascin N
PRDM16	PR/SET domain 16
PBLD	phenazine biosynthesis like protein domain containing
CRLF2	cytokine receptor-like factor 2
CRLF2	cytokine receptor-like factor 2
RAB17	RAB17, member RAS oncogene family
SOX17	SRY-box 17
NSD1	nuclear receptor binding SET domain protein 1
ARHGAP9	Rho GTPase activating protein 9
TMPRSS3	transmembrane protease, serine 3
SMYD3	SET and MYND domain containing 3
CREB3L2	cAMP responsive element binding protein 3 like 2
RMND5B	required for meiotic nuclear division 5 homolog B

RBM15	RNA binding motif protein 15
CRTC3	CREB regulated transcription coactivator 3
LMF1	lipase maturation factor 1
PLEKHG2	pleckstrin homology and RhoGEF domain containing G2
RANBP17	RAN binding protein 17
BCL11B	B-cell CLL/lymphoma 11B
SLC30A5	solute carrier family 30 member 5
RAPH1	Ras association (RalGDS/AF-6) and pleckstrin homology domains 1
MARCKSL1	MARCKS like 1
MPPE1	metallophosphoesterase 1
RASL11B	RAS like family 11 member B
ASPSCR1	ASPSCR1, UBX domain containing tether for SLC2A4
WDR77	WD repeat domain 77
CHCHD7	coiled-coil-helix-coiled-coil-helix domain containing 7
RHBDF2	rhomboid 5 homolog 2
NEIL1	nei like DNA glycosylase 1
HSPBAP1	HSPB1 associated protein 1
VEPH1	ventricular zone expressed PH domain containing 1
VTCN1	V-set domain containing T cell activation inhibitor 1
ZDHHC14	zinc finger DHHC-type containing 14
TBL1XR1	transducin beta like 1 X-linked receptor 1
EHMT1	euchromatic histone lysine methyltransferase 1
FAM57A	family with sequence similarity 57 member A
BAALC	brain and acute leukemia, cytoplasmic
CBLL1	Cbl proto-oncogene like 1
ZNF442	zinc finger protein 442
PGGHG	protein-glucosylgalactosylhydroxylysine glucosidase
FBXO11	F-box protein 11
CHD9	chromodomain helicase DNA binding protein 9
ORAI2	ORAI calcium release-activated calcium modulator 2
TET1	tet methylcytosine dioxygenase 1
WDR82	WD repeat domain 82
PDCD1LG2	programmed cell death 1 ligand 2
SLC44A4	solute carrier family 44 member 4
COL18A1	collagen type XVIII alpha 1 chain
SLC38A1	solute carrier family 38 member 1
FAM49A	family with sequence similarity 49 member A
FAM117A	family with sequence similarity 117 member A
NECTIN4	nectin cell adhesion molecule 4
FIP1L1	factor interacting with PAPOLA and CPSF1
CDT1	chromatin licensing and DNA replication factor 1
TRIM7	tripartite motif containing 7
RAB1B	RAB1B, member RAS oncogene family
FCRL5	Fc receptor like 5
FCRL4	Fc receptor like 4
RAB33B	RAB33B, member RAS oncogene family
BCL2L12	BCL2 like 12
SH3BGRL2	SH3 domain binding glutamate rich protein like 2
INHBE	inhibin beta E subunit
FRMD8	FERM domain containing 8
RAB34	RAB34, member RAS oncogene family
MIXL1	Mix paired-like homeobox
BRIP1	BRCA1 interacting protein C-terminal helicase 1
REG4	regenerating family member 4

OBSCN	obscurin, cytoskeletal calmodulin and titin-interacting RhoGEF
FSCB	fibrous sheath CABYR binding protein
RAB6C	RAB6C, member RAS oncogene family
ARID5B	AT-rich interaction domain 5B
KIAA1109	KIAA1109
LOXL4	lysyl oxidase like 4
TRAF7	TNF receptor associated factor 7
ZDHHC18	zinc finger DHHC-type containing 18
SARNP	SAP domain containing ribonucleoprotein
HOOK3	hook microtubule tethering protein 3
CARD11	caspase recruitment domain family member 11
MAML2	mastermind like transcriptional coactivator 2
DOT1L	DOT1 like histone lysine methyltransferase
ZC3H8	zinc finger CCCH-type containing 8
USP38	ubiquitin specific peptidase 38
USP32	ubiquitin specific peptidase 32
KDM2B	lysine demethylase 2B
ACCS	1-aminocyclopropane-1-carboxylate synthase homolog (inactive)
LOXL3	lysyl oxidase like 3
PLEKHA8	pleckstrin homology domain containing A8
MINA	MYC induced nuclear antigen
RSPO3	R-spondin 3
AIFM2	apoptosis inducing factor, mitochondria associated 2
DIRC2	disrupted in renal carcinoma 2
RAB2B	RAB2B, member RAS oncogene family
AJUBA	ajuba LIM protein
UBL7	ubiquitin like 7
SYDE1	synapse defective Rho GTPase homolog 1
SLC45A3	solute carrier family 45 member 3
RSPH1	radial spoke head 1 homolog
WNT3A	Wnt family member 3A
NAV3	neuron navigator 3
NAV1	neuron navigator 1
COX19	COX19, cytochrome c oxidase assembly factor
FMNL3	formin like 3
PCED1B	PC-esterase domain containing 1B
ANKRD44	ankyrin repeat domain 44
BOC	BOC cell adhesion associated, oncogene regulated
ZNF300	zinc finger protein 300
SNX29	sorting nexin 29
SPECC1	sperm antigen with calponin homology and coiled-coil domains 1
NEURL3	neuralized E3 ubiquitin protein ligase 3
IGSF8	immunoglobulin superfamily member 8
TRMT10A	tRNA methyltransferase 10A
CADPS2	calcium dependent secretion activator 2
C12orf9	chromosome 12 open reading frame 9
MUC16	mucin 16, cell surface associated
FNIP1	folliculin interacting protein 1
CMTM7	CKLF like MARVEL transmembrane domain containing 7
TP53RK	TP53 regulating kinase
AHNAK2	AHNAK nucleoprotein 2
SCAMP4	secretory carrier membrane protein 4
DTX2	deltex E3 ubiquitin ligase 2
LACTB	lactamase beta

NLRP3	NLR family pyrin domain containing 3
CSMD3	CUB and Sushi multiple domains 3
RNF157	ring finger protein 157
SLAMF6	SLAM family member 6
MARCH3	membrane associated ring-CH-type finger 3
RAB42	RAB42, member RAS oncogene family
RAB3C	RAB3C, member RAS oncogene family
CTHRC1	collagen triple helix repeat containing 1
RMI2	RecQ mediated genome instability 2
DIRC1	disrupted in renal carcinoma 1
RAB39B	RAB39B, member RAS oncogene family
MAS1L	MAS1 proto-oncogene like, G protein-coupled receptor
ARAP2	ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 2
AGAP2	ArfGAP with GTPase domain, ankyrin repeat and PH domain 2
DACH2	dachshund family transcription factor 2
DNAJC24	DnaJ heat shock protein family (Hsp40) member C24
LRRK2	leucine rich repeat kinase 2
SPPL3	signal peptide peptidase like 3
MSI2	musashi RNA binding protein 2
CANT1	calcium activated nucleotidase 1
NLRP8	NLR family pyrin domain containing 8
TNFAIP8L1	TNF alpha induced protein 8 like 1
LRRC25	leucine rich repeat containing 25
M1AP	meiosis 1 associated protein
SCLT1	sodium channel and clathrin linker 1
RAB5CP2	RAB5C, member RAS oncogene family pseudogene 2
CD109	CD109 molecule
LRGUK	leucine rich repeats and guanylate kinase domain containing
CKS1BP7	CDC28 protein kinase regulatory subunit 1B pseudogene 7
MUC17	mucin 17, cell surface associated
MIB2	mindbomb E3 ubiquitin protein ligase 2
RAB40A	RAB40A, member RAS oncogene family
VTI1A	vesicle transport through interaction with t-SNAREs 1A
TMEM86A	transmembrane protein 86A
PTGR2	prostaglandin reductase 2
ZNF569	zinc finger protein 569
BTBD19	BTB domain containing 19
C1orf64	chromosome 1 open reading frame 64
TTL	tubulin tyrosine ligase
PUS10	pseudouridylate synthase 10
METTL21A	methyltransferase like 21A
XXYL1	xyloside xylosyltransferase 1
CNTN4	contactin 4
JAKMIP1	janus kinase and microtubule interacting protein 1
NKAIN2	Na ⁺ /K ⁺ transporting ATPase interacting 2
AMOT	angiomin
ERICH1	glutamate rich 1
TMEM74	transmembrane protein 74
MAMDC4	MAM domain containing 4
TTC39B	tetratricopeptide repeat domain 39B
PPTC7	PTC7 protein phosphatase homolog
SYNE3	spectrin repeat containing nuclear envelope family member 3
CITED4	Cbp/p300 interacting transactivator with Glu/Asp rich carboxy-terminal domain 4
SDE2	SDE2 telomere maintenance homolog

XIRP1	xin actin binding repeat containing 1
RASSF6	Ras association domain family member 6
GIMAP7	GTPase, IMAP family member 7
IDO2	indoleamine 2,3-dioxygenase 2
SSBP4	single stranded DNA binding protein 4
ADAMTS15	ADAM metalloproteinase with thrombospondin type 1 motif 15
ZNF384	zinc finger protein 384
PTCRA	pre T-cell antigen receptor alpha
B3GNT6	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 6
DTX3	deltex E3 ubiquitin ligase 3
ALG14	ALG14, UDP-N-acetylglucosaminyltransferase subunit
CRTC2	CREB regulated transcription coactivator 2
RAB12	RAB12, member RAS oncogene family
SUSD3	sushi domain containing 3
ORAOV1	oral cancer overexpressed 1
HNRNPA3	heterogeneous nuclear ribonucleoprotein A3
AK9	adenylate kinase 9
RANP1	RAN, member RAS oncogene family pseudogene 1
JAZF1	JAZF zinc finger 1
BRAT1	BRCA1 associated ATM activator 1
BRWD3	bromodomain and WD repeat domain containing 3
NUTM1	NUT midline carcinoma family member 1
TAB3	TGF-beta activated kinase 1/MAP3K7 binding protein 3
ALS2CL	ALS2 C-terminal like
ASPM	abnormal spindle microtubule assembly
MDS2	myelodysplastic syndrome 2 translocation associated
STEAP2	STEAP2 metalloreductase
RAB40AL	RAB40A, member RAS oncogene family-like
HMG2P46	high mobility group nucleosomal binding domain 2 pseudogene 46
GSDMA	gasdermin A
SLC26A11	solute carrier family 26 member 11
ACTL9	actin like 9
ZNF844	zinc finger protein 844
HKR1	HKR1, GLI-Kruppel zinc finger family member
RSPO1	R-spondin 1
FRG1BP	FSDH region gene 1 family member B, pseudogene
SLC9A9	solute carrier family 9 member A9
RABL3	RAB, member of RAS oncogene family like 3
FRYL	FRY like transcription coactivator
CAGE1	cancer antigen 1
CRB2	crumbs 2, cell polarity complex component
P2RY8	purinergic receptor P2Y8
P2RY8	purinergic receptor P2Y8
KLHL10	kelch like family member 10
KRT73	keratin 73
RAB37	RAB37, member RAS oncogene family
RAB7B	RAB7B, member RAS oncogene family
C1QTNF9	C1q and tumor necrosis factor related protein 9
RNASE10	ribonuclease A family member 10 (inactive)
RAB43	RAB43, member RAS oncogene family
ENPP7	ectonucleotide pyrophosphatase/phosphodiesterase 7
COL28A1	collagen type XXVIII alpha 1 chain
ABCB5	ATP binding cassette subfamily B member 5
RSPO2	R-spondin 2

ZSCAN22	zinc finger and SCAN domain containing 22
RAB41	RAB41, member RAS oncogene family
GEN1	GEN1, Holliday junction 5' flap endonuclease
KRT26	keratin 26
IRF2BP2	interferon regulatory factor 2 binding protein 2
PEAR1	platelet endothelial aggregation receptor 1
RAB15	RAB15, member RAS oncogene family
SLC27A1	solute carrier family 27 member 1
MALAT1	metastasis associated lung adenocarcinoma transcript 1 (non-protein coding)
RPSAP58	ribosomal protein SA pseudogene 58
MAFA	MAF bZIP transcription factor A
SHC4	SHC adaptor protein 4
BCAR4	breast cancer anti-estrogen resistance 4 (non-protein coding)
BCRP2	breakpoint cluster region pseudogene 2
RAB44	RAB44, member RAS oncogene family
RAB19	RAB19, member RAS oncogene family
LOC402641	v-ral simian leukemia viral oncogene homolog A (ras related) pseudogene
CUEDC1	CUE domain containing 1
MIR10B	microRNA 10b
MIR21	microRNA 21
MIR221	microRNA 221
IDNK	IDNK, gluconokinase
PIM3	Pim-3 proto-oncogene, serine/threonine kinase
LOC440059	cell adhesion associated, oncogene regulated pseudogene
H3F3C	H3 histone family member 3C
RAB1C	RAB1C, member RAS oncogene family pseudogene
LOC441768	RAB31, member RAS oncogene family pseudogene
LOC642550	v-ral simian leukemia viral oncogene homolog A (ras related) pseudogene
RAP1BL	RAP1B, member of RAS oncogene family pseudogene
LOC643916	RAB1A, member RAS oncogene family pseudogene
ARAF2	ARAF pseudogene 2
BCRP3	breakpoint cluster region pseudogene 3
RAB42P1	RAB42, member RAS oncogene family, pseudogene 1
ELK1P1	ELK1, member of ETS oncogene family pseudogene 1
KIAA0895L	KIAA0895 like
TLCD2	TLC domain containing 2
POTEF	POTE ankyrin domain family member F
SKP1P2	S-phase kinase associated protein 1 pseudogene 2
CDK11A	cyclin dependent kinase 11A
NUTM2B	NUT family member 2B
DIRC3	disrupted in renal carcinoma 3
ZNF814	zinc finger protein 814
BMI1P1	BMI1 proto-oncogene, polycomb ring finger pseudogene 1
LOC100128122	Cbl proto-oncogene like 1 pseudogene
RAP1BP2	RAP1B, member of RAS oncogene family pseudogene 2
RANP6	RAN, member RAS oncogene family pseudogene 6
RAB28P5	RAB28, member RAS oncogene family pseudogene 5
LOC100128800	cell adhesion associated, oncogene regulated pseudogene
RAB28P2	RAB28, member RAS oncogene family pseudogene 2
RANP5	RAN, member RAS oncogene family pseudogene 5
LOC100129672	cell adhesion associated, oncogene regulated pseudogene
RAB11AP1	RAB11A, member RAS oncogene family pseudogene 1
LOC100130203	cell adhesion associated, oncogene regulated pseudogene
RANP4	RAN, member RAS oncogene family pseudogene 4

LOC100130841	MDM2 oncogene, E3 ubiquitin protein ligase pseudogene
LOC100131294	RAB13, member RAS oncogene family pseudogene
LOC100131617	v-ets avian erythroblastosis virus E26 oncogene homolog 2 pseudogene
NBPF10	neuroblastoma breakpoint family member 10
RAB28P3	RAB28, member RAS oncogene family pseudogene 3
RAB28P4	RAB28, member RAS oncogene family pseudogene 4
RAP1BP3	RAP1B, member of RAS oncogene family pseudogene 3
RAB28P1	RAB28, member RAS oncogene family pseudogene 1
LOC100133211	related RAS viral (r-ras) oncogene homolog 2 pseudogene
MEF2B	myocyte enhancer factor 2B
CMC4	C-X9-C motif containing 4
RAB9AP1	RAB9A, member RAS oncogene family pseudogene 1
RAB9AP5	RAB9A, member RAS oncogene family pseudogene 5
RAB9AP2	RAB9A, member RAS oncogene family pseudogene 2
RAB9AP3	RAB9A, member RAS oncogene family pseudogene 3
RAB9AP4	RAB9A, member RAS oncogene family pseudogene 4
DUX4	double homeobox 4
LOC100335030	FGFR1 oncogene partner 2 pseudogene
LOC100384885	related RAS viral (r-ras) oncogene homolog 2 pseudogene
LOC100418497	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418498	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418499	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418500	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418501	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418502	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418503	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418504	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418505	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418506	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418507	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418508	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418509	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418510	MAS1 proto-oncogene like, G protein-coupled receptor pseudogene
LOC100418578	RAN, member RAS oncogene family pseudogene
LOC100418579	RAN, member RAS oncogene family pseudogene
LOC100418580	RAN, member RAS oncogene family pseudogene
LOC100418581	RAN, member RAS oncogene family pseudogene
LOC100418582	RAN, member RAS oncogene family pseudogene
LOC100419932	FGFR1 oncogene partner 2 pseudogene
RANP8	RAN, member RAS oncogene family pseudogene 8
LOC100420571	RAB1A, member RAS oncogene family pseudogene
LOC100420673	RAB5A, member RAS oncogene family pseudogene
RAB5CP1	RAB5C, member RAS oncogene family pseudogene 1
LOC100421737	ubiquitin specific peptidase 4 (proto-oncogene) pseudogene
LOC100422456	v-rel avian reticuloendotheliosis viral oncogene homolog A pseudogene
RAP1BP1	RAP1B, member of RAS oncogene family pseudogene 1
SEPT2P1	septin 2 pseudogene 1
FGFR1OP2P1	FGFR1 oncogene partner 2 pseudogene 1
RANP2	RAN, member RAS oncogene family pseudogene 2
RANP7	RAN, member RAS oncogene family pseudogene 7
RANP9	RAN, member RAS oncogene family pseudogene 9
RANP3	RAN, member RAS oncogene family pseudogene 3
LOC101060112	RAP1A, member of RAS oncogene family pseudogene
BLACAT1	bladder cancer associated transcript 1 (non-protein coding)

RAB11AP2	RAB11A, member RAS oncogene family pseudogene 2
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Table S2: TS list (Known)

symbol	info
ACHE	acetylcholinesterase (Cartwright blood group)
ACY1	aminoacylase 1
ADARB1	adenosine deaminase, RNA specific B1
ADPRH	ADP-ribosylarginine hydrolase
PARP1	poly(ADP-ribose) polymerase 1
AGTR1	angiotensin II receptor type 1
AHR	aryl hydrocarbon receptor
AIF1	allograft inflammatory factor 1
AKR1B1	aldo-keto reductase family 1 member B
ALOX15	arachidonate 15-lipoxygenase
ALOX15B	arachidonate 15-lipoxygenase, type B
ALPL	alkaline phosphatase, liver/bone/kidney
AMH	anti-Mullerian hormone
BIN1	bridging integrator 1
ANXA1	annexin A1
ANXA7	annexin A7
APAF1	apoptotic peptidase activating factor 1
APC	APC, WNT signaling pathway regulator
FAS	Fas cell surface death receptor
ARF1	ADP ribosylation factor 1
ARG1	arginase 1
RHOA	ras homolog family member A
RHOB	ras homolog family member B
RND3	Rho family GTPase 3
PHOX2A	paired like homeobox 2a
ARNTL	aryl hydrocarbon receptor nuclear translocator like
ASCL1	achaete-scute family bHLH transcription factor 1
ASS1	argininosuccinate synthase 1
ZFX3	zinc finger homeobox 3
ATF3	activating transcription factor 3
ATM	ATM serine/threonine kinase
ATR	ATR serine/threonine kinase
AZGP1	alpha-2-glycoprotein 1, zinc-binding
BARD1	BRCA1 associated RING domain 1
BAX	BCL2 associated X, apoptosis regulator
BCL7A	BCL tumor suppressor 7A
BCR	BCR, RhoGEF and GTPase activating protein
CEACAM1	carcinoembryonic antigen related cell adhesion molecule 1
BIK	BCL2 interacting killer
PRDM1	PR/SET domain 1
BLM	Bloom syndrome RecQ like helicase
BMP2	bone morphogenetic protein 2
BMP4	bone morphogenetic protein 4
BMPR1A	bone morphogenetic protein receptor type 1A
BMPR2	bone morphogenetic protein receptor type 2
BNIP3L	BCL2 interacting protein 3 like
FOXL2	forkhead box L2
BRCA1	BRCA1, DNA repair associated
BRCA2	BRCA2, DNA repair associated

ZFP36L2	ZFP36 ring finger protein like 2
KLF5	Kruppel like factor 5
BTK	Bruton tyrosine kinase
CAPG	capping actin protein, gelsolin like
CASP2	caspase 2
CASP5	caspase 5
CASP8	caspase 8
CAT	catalase
CAV1	caveolin 1
RUNX2	runt related transcription factor 2
RUNX1	runt related transcription factor 1
CBFA2T3	CBFA2/RUNX1 translocation partner 3
RUNX3	runt related transcription factor 3
CBFB	core-binding factor beta subunit
CBL	Cbl proto-oncogene
KRIT1	KRIT1, ankyrin repeat containing
CCNC	cyclin C
CD4	CD4 molecule
CD44	CD44 molecule (Indian blood group)
CDH1	cadherin 1
CDH4	cadherin 4
CDH5	cadherin 5
CDH11	cadherin 11
CDH13	cadherin 13
CDH17	cadherin 17
CDK2	cyclin dependent kinase 2
CDK6	cyclin dependent kinase 6
CDKN1A	cyclin dependent kinase inhibitor 1A
CDKN1B	cyclin dependent kinase inhibitor 1B
CDKN1C	cyclin dependent kinase inhibitor 1C
CDKN2A	cyclin dependent kinase inhibitor 2A
CDKN2B	cyclin dependent kinase inhibitor 2B
CDKN2C	cyclin dependent kinase inhibitor 2C
CDO1	cysteine dioxygenase type 1
CDX2	caudal type homeobox 2
CEBPA	CCAAT/enhancer binding protein alpha
CEBPD	CCAAT/enhancer binding protein delta
CFTR	cystic fibrosis transmembrane conductance regulator
CHD1	chromodomain helicase DNA binding protein 1
CHEK1	checkpoint kinase 1
CHUK	conserved helix-loop-helix ubiquitous kinase
CLU	clusterin
CNN1	calponin 1
KLF6	Kruppel like factor 6
MAP3K8	mitogen-activated protein kinase kinase kinase 8
CREBBP	CREB binding protein
CREM	cAMP responsive element modulator
CSF2	colony stimulating factor 2
CSNK1A1	casein kinase 1 alpha 1
CST5	cystatin D
CST6	cystatin E/M
CTGF	connective tissue growth factor
CTNNA2	catenin alpha 2
CTNND1	catenin delta 1

CUX1	cut like homeobox 1
CYB5A	cytochrome b5 type A
CYLD	CYLD lysine 63 deubiquitinase
DAB2	DAB2, clathrin adaptor protein
DACH1	dachshund family transcription factor 1
DAPK1	death associated protein kinase 1
DAPK3	death associated protein kinase 3
BRINP1	BMP/retinoic acid inducible neural specific 1
DCC	DCC netrin 1 receptor
DCN	decorin
DDB2	damage specific DNA binding protein 2
GADD45A	growth arrest and DNA damage inducible alpha
DDX3X	DEAD-box helicase 3, X-linked
DEFB1	defensin beta 1
DFFA	DNA fragmentation factor subunit alpha
DFNA5	DFNA5, deafness associated tumor suppressor
DLG1	discs large MAGUK scaffold protein 1
DMBT1	deleted in malignant brain tumors 1
DMD	dystrophin
DNMT1	DNA methyltransferase 1
DNMT3A	DNA methyltransferase 3 alpha
DNMT3B	DNA methyltransferase 3 beta
DOK1	docking protein 1
DPH1	diphthamide biosynthesis 1
DPP4	dipeptidyl peptidase 4
DSC3	desmocollin 3
DSP	desmoplakin
DUSP1	dual specificity phosphatase 1
DUSP5	dual specificity phosphatase 5
DUSP6	dual specificity phosphatase 6
DUSP9	dual specificity phosphatase 9
E2F1	E2F transcription factor 1
E2F2	E2F transcription factor 2
E2F3	E2F transcription factor 3
E2F4	E2F transcription factor 4
ECT2	epithelial cell transforming 2
EDNRB	endothelin receptor type B
EEF1A1	eukaryotic translation elongation factor 1 alpha 1
EFNA5	ephrin A5
EGR1	early growth response 1
EGR2	early growth response 2
EPHA2	EPH receptor A2
EMP1	epithelial membrane protein 1
EMP2	epithelial membrane protein 2
EPAS1	endothelial PAS domain protein 1
EPB41	erythrocyte membrane protein band 4.1
EPHA1	EPH receptor A1
EPHA3	EPH receptor A3
EPHB2	EPH receptor B2
EPHB3	EPH receptor B3
EPHB4	EPH receptor B4
EPHB6	EPH receptor B6
ERBB4	erb-b2 receptor tyrosine kinase 4
EYA4	EYA transcriptional coactivator and phosphatase 4

ERF	ETS2 repressor factor
ESR1	estrogen receptor 1
ESR2	estrogen receptor 2
ESRRB	estrogen related receptor beta
ETS2	ETS proto-oncogene 2, transcription factor
ETV6	ETS variant 6
EXT1	exostosin glycosyltransferase 1
EXT2	exostosin glycosyltransferase 2
EXTL1	exostosin like glycosyltransferase 1
EXTL2	exostosin like glycosyltransferase 2
EXTL3	exostosin like glycosyltransferase 3
EZH1	enhancer of zeste 1 polycomb repressive complex 2 subunit
EZH2	enhancer of zeste 2 polycomb repressive complex 2 subunit
FABP3	fatty acid binding protein 3
FANCG	Fanconi anemia complementation group G
FBLN1	fibulin 1
FAT1	FAT atypical cadherin 1
FBP1	fructose-bisphosphatase 1
GPC5	glypican 5
FH	fumarate hydratase
FHIT	fragile histidine triad
FHL1	four and a half LIM domains 1
FOXC1	forkhead box C1
FOXO1	forkhead box O1
FOXO3	forkhead box O3
FLNA	filamin A
FLT3	fms related tyrosine kinase 3
FXN	frataxin
FRK	fyn related Src family tyrosine kinase
FUS	FUS RNA binding protein
GALR1	galanin receptor 1
GAS1	growth arrest specific 1
GATA4	GATA binding protein 4
GBP1	guanylate binding protein 1
GJA1	gap junction protein alpha 1
GJB2	gap junction protein beta 2
GPC3	glypican 3
GLI1	GLI family zinc finger 1
GNAT1	G protein subunit alpha transducin 1
SFN	stratifin
GPX3	glutathione peroxidase 3
GRIN2A	glutamate ionotropic receptor NMDA type subunit 2A
GSK3B	glycogen synthase kinase 3 beta
GSN	gelsolin
GSTP1	glutathione S-transferase pi 1
GSTT1	glutathione S-transferase theta 1
BRF1	BRF1, RNA polymerase III transcription initiation factor 90 kDa subunit
GUCY2C	guanylate cyclase 2C
H2AFX	H2A histone family member X
HDAC1	histone deacetylase 1
HDAC2	histone deacetylase 2
HIC1	hypermethylated in cancer 1
HIF1A	hypoxia inducible factor 1 alpha subunit
HINT1	histidine triad nucleotide binding protein 1

HIVEP1	human immunodeficiency virus type I enhancer binding protein 1
ZBTB48	zinc finger and BTB domain containing 48
NR4A1	nuclear receptor subfamily 4 group A member 1
FOXA1	forkhead box A1
FOXA2	forkhead box A2
HNF4A	hepatocyte nuclear factor 4 alpha
ONECUT1	one cut homeobox 1
HPGD	hydroxyprostaglandin dehydrogenase 15-(NAD)
HRG	histidine rich glycoprotein
HSPD1	heat shock protein family D (Hsp60) member 1
DNAJB1	DnaJ heat shock protein family (Hsp40) member B1
IRF8	interferon regulatory factor 8
ID4	inhibitor of DNA binding 4, HLH protein
IDH1	isocitrate dehydrogenase (NADP(+)) 1, cytosolic
IFI16	interferon gamma inducible protein 16
IGF1	insulin like growth factor 1
IGF2R	insulin like growth factor 2 receptor
IGFALS	insulin like growth factor binding protein acid labile subunit
IGFBP3	insulin like growth factor binding protein 3
IGFBP4	insulin like growth factor binding protein 4
IGFBP5	insulin like growth factor binding protein 5
IGFBP7	insulin like growth factor binding protein 7
CXCR2	C-X-C motif chemokine receptor 2
IL17A	interleukin 17A
ILK	integrin linked kinase
ING1	inhibitor of growth family member 1
ING2	inhibitor of growth family member 2
CXCL10	C-X-C motif chemokine ligand 10
PDX1	pancreatic and duodenal homeobox 1
IRF1	interferon regulatory factor 1
IRF3	interferon regulatory factor 3
IRF4	interferon regulatory factor 4
IRF5	interferon regulatory factor 5
ITGA5	integrin subunit alpha 5
ITGA7	integrin subunit alpha 7
ITGAV	integrin subunit alpha V
ITGB1	integrin subunit beta 1
ITGB3	integrin subunit beta 3
JUP	junction plakoglobin
CD82	CD82 molecule
KISS1	KiSS-1 metastasis-suppressor
KRT19	keratin 19
LGALS7	galectin 7
LIFR	leukemia inhibitory factor receptor alpha
LLGL1	LLGL1, scribble cell polarity complex component
VWA5A	von Willebrand factor A domain containing 5A
LOX	lysyl oxidase
LRMP	lymphoid restricted membrane protein
LSAMP	limbic system-associated membrane protein
LTF	lactotransferrin
MARCKS	myristoylated alanine rich protein kinase C substrate
SMAD2	SMAD family member 2
SMAD4	SMAD family member 4
MAL	mal, T-cell differentiation protein

MAT2A	methionine adenosyltransferase 2A
MAX	MYC associated factor X
MCC	mutated in colorectal cancers
MAP3K4	mitogen-activated protein kinase kinase kinase 4
MEN1	menin 1
MIA2	melanoma inhibitory activity 2
MLH1	mutL homolog 1
FOXO4	forkhead box O4
MME	membrane metalloendopeptidase
MNT	MAX network transcriptional repressor
MSH2	mutS homolog 2
MSMB	microseminoprotein beta
MST1	macrophage stimulating 1
MST1R	macrophage stimulating 1 receptor
MT1F	metallothionein 1F
MT1G	metallothionein 1G
MT1M	metallothionein 1M
MT2A	metallothionein 2A
MTAP	methylthioadenosine phosphorylase
MXI1	MAX interactor 1, dimerization protein
GADD45B	growth arrest and DNA damage inducible beta
MYH9	myosin heavy chain 9
MYO1A	myosin IA
NBN	nibrin
NDN	neccdin, MAGE family member
NEDD4	neural precursor cell expressed, developmentally down-regulated 4, E3 ubiquitin protein ligase
NF1	neurofibromin 1
NF2	neurofibromin 2
NFATC2	nuclear factor of activated T-cells 2
NFKB1	nuclear factor kappa B subunit 1
NGFR	nerve growth factor receptor
NINJ1	ninjurin 1
NKX3-1	NK3 homeobox 1
NNAT	neuronatin
NME1	NME/NM23 nucleoside diphosphate kinase 1
CNOT3	CCR4-NOT transcription complex subunit 3
NOTCH1	notch 1
NOTCH2	notch 2
NOTCH3	notch 3
NOV	nephroblastoma overexpressed
NPAS2	neuronal PAS domain protein 2
NPM1	nucleophosmin
NRCAM	neuronal cell adhesion molecule
NRF1	nuclear respiratory factor 1
NTRK3	neurotrophic receptor tyrosine kinase 3
ROR2	receptor tyrosine kinase like orphan receptor 2
DDR2	discoidin domain receptor tyrosine kinase 2
NUP98	nucleoporin 98
OPCML	opioid binding protein/cell adhesion molecule like
PEBP1	phosphatidylethanolamine binding protein 1
PAEP	progesterone associated endometrial protein
PAFAH1B1	platelet activating factor acetylhydrolase 1b regulatory subunit 1
PARK2	parkin RBR E3 ubiquitin protein ligase
PAWR	pro-apoptotic WT1 regulator

PAX4	paired box 4
PAX5	paired box 5
PAX6	paired box 6
PCDHGC3	protocadherin gamma subfamily C, 3
PCDH8	protocadherin 8
PCDH9	protocadherin 9
PDGFRL	platelet derived growth factor receptor like
PEG3	paternally expressed 3
PF4	platelet factor 4
PFN1	profilin 1
PGR	progesterone receptor
PHB	prohibitin
SERPINB5	serpin family B member 5
SERPINI2	serpin family I member 2
PIN1	peptidylprolyl cis/trans isomerase, NIMA-interacting 1
PKD1	polycystin 1, transient receptor potential channel interacting
PKNOX1	PBX/knotted 1 homeobox 1
PLA2G2A	phospholipase A2 group IIA
PLAGL1	PLAG1 like zinc finger 1
PLCB3	phospholipase C beta 3
PLCD1	phospholipase C delta 1
PLD1	phospholipase D1
PLK1	polo like kinase 1
PML	promyelocytic leukemia
PNN	pinin, desmosome associated protein
SEPT4	septin 4
PPARA	peroxisome proliferator activated receptor alpha
PPARG	peroxisome proliferator activated receptor gamma
PPM1A	protein phosphatase, Mg ²⁺ /Mn ²⁺ dependent 1A
PPP1CA	protein phosphatase 1 catalytic subunit alpha
PPP2CA	protein phosphatase 2 catalytic subunit alpha
PPP2CB	protein phosphatase 2 catalytic subunit beta
PPP2R1B	protein phosphatase 2 scaffold subunit Abeta
PPP2R2C	protein phosphatase 2 regulatory subunit Bgamma
PTPA	protein phosphatase 2 phosphatase activator
PPP2R5C	protein phosphatase 2 regulatory subunit B'gamma
PPP3CC	protein phosphatase 3 catalytic subunit gamma
PRKAA1	protein kinase AMP-activated catalytic subunit alpha 1
PRKAA2	protein kinase AMP-activated catalytic subunit alpha 2
PRKAR1A	protein kinase cAMP-dependent type I regulatory subunit alpha
PRKCB	protein kinase C beta
PRKCD	protein kinase C delta
PRKCE	protein kinase C epsilon
MAPK9	mitogen-activated protein kinase 9
MAPK10	mitogen-activated protein kinase 10
PRODH	proline dehydrogenase 1
PROX1	prospero homeobox 1
KLK6	kallikrein related peptidase 6
HTRA1	HtrA serine peptidase 1
KLK10	kallikrein related peptidase 10
PTCH1	patched 1
PTEN	phosphatase and tensin homolog
PTGDR	prostaglandin D2 receptor
PTPN1	protein tyrosine phosphatase, non-receptor type 1

PTPN2	protein tyrosine phosphatase, non-receptor type 2
PTPN6	protein tyrosine phosphatase, non-receptor type 6
PTPN11	protein tyrosine phosphatase, non-receptor type 11
PTPN12	protein tyrosine phosphatase, non-receptor type 12
PTPN13	protein tyrosine phosphatase, non-receptor type 13
PTPRC	protein tyrosine phosphatase, receptor type C
PTPRD	protein tyrosine phosphatase, receptor type D
PTPRJ	protein tyrosine phosphatase, receptor type J
PTPRK	protein tyrosine phosphatase, receptor type K
RAD23B	RAD23 homolog B, nucleotide excision repair protein
RAD51C	RAD51 paralog C
RAP1A	RAP1A, member of RAS oncogene family
RAP1GAP	RAP1 GTPase activating protein
RARB	retinoic acid receptor beta
RARRES3	retinoic acid receptor responder 3
RB1	RB transcriptional corepressor 1
KDM5A	lysine demethylase 5A
RBBP7	RB binding protein 7, chromatin remodeling factor
RBBP8	RB binding protein 8, endonuclease
RBL1	RB transcriptional corepressor like 1
RBL2	RB transcriptional corepressor like 2
RBM4	RNA binding motif protein 4
RBP1	retinol binding protein 1
RNASEL	ribonuclease L
RNH1	ribonuclease/angiogenin inhibitor 1
ROBO1	roundabout guidance receptor 1
RPA1	replication protein A1
RPL5	ribosomal protein L5
RPL10	ribosomal protein L10
RPL11	ribosomal protein L11
RPS6KA2	ribosomal protein S6 kinase A2
S100A2	S100 calcium binding protein A2
S100A11	S100 calcium binding protein A11
SAA1	serum amyloid A1
SAFB	scaffold attachment factor B
SALL2	spalt like transcription factor 2
CXCL12	C-X-C motif chemokine ligand 12
SDHA	succinate dehydrogenase complex flavoprotein subunit A
SDHB	succinate dehydrogenase complex iron sulfur subunit B
SDHD	succinate dehydrogenase complex subunit D
SEMA3F	semaphorin 3F
MAP2K4	mitogen-activated protein kinase kinase 4
SFRP1	secreted frizzled related protein 1
SFRP2	secreted frizzled related protein 2
SFRP4	secreted frizzled related protein 4
SFRP5	secreted frizzled related protein 5
SIAH1	siah E3 ubiquitin protein ligase 1
SKIL	SKI like proto-oncogene
SKP2	S-phase kinase associated protein 2
SMARCA2	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 2
HLTF	helicase like transcription factor
SMARCA4	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4
SMARCB1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin,

	subfamily b, member 1
SMARCC1	SWI/SNF related, matrix associated, actin dependent regulator of chromatin subfamily c member 1
SOD2	superoxide dismutase 2, mitochondrial
SOX1	SRY-box 1
SOX11	SRY-box 11
SOX15	SRY-box 15
SP100	SP100 nuclear antigen
SPARC	secreted protein acidic and cysteine rich
SPI1	Spi-1 proto-oncogene
SPTBN1	spectrin beta, non-erythrocytic 1
ST2	suppression of tumorigenicity 2
ST5	suppression of tumorigenicity 5
ST13	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein)
STAT1	signal transducer and activator of transcription 1
STAT3	signal transducer and activator of transcription 3
STAT5A	signal transducer and activator of transcription 5A
STK10	serine/threonine kinase 10
STK11	serine/threonine kinase 11
SYK	spleen associated tyrosine kinase
TAGLN	transgelin
TAT	tyrosine aminotransferase
TBX5	T-box 5
TCEB3	transcription elongation factor B subunit 3
TCF4	transcription factor 4
TCF3	transcription factor 3
TCF7L2	transcription factor 7 like 2
TDGF1	teratocarcinoma-derived growth factor 1
TFAP2A	transcription factor AP-2 alpha
TGFB1	transforming growth factor beta 1
LEFTY2	left-right determination factor 2
TGFBI	transforming growth factor beta induced
TGFBR2	transforming growth factor beta receptor 2
TGFBR3	transforming growth factor beta receptor 3
TGM3	transglutaminase 3
THBD	thrombomodulin
THBS1	thrombospondin 1
THRA	thyroid hormone receptor, alpha
THRB	thyroid hormone receptor beta
THY1	Thy-1 cell surface antigen
KLF10	Kruppel like factor 10
TIMP3	TIMP metalloproteinase inhibitor 3
TNFAIP3	TNF alpha induced protein 3
TP53	tumor protein p53
TP53BP1	tumor protein p53 binding protein 1
TP53BP2	tumor protein p53 binding protein 2
TP73	tumor protein p73
NR2C2	nuclear receptor subfamily 2 group C member 2
HSP90B1	heat shock protein 90 beta family member 1
TSC1	tuberous sclerosis 1
TSC2	tuberous sclerosis 2
TSG101	tumor susceptibility 101
TSSC1	tumor suppressing subtransferable candidate 1
PHLDA2	pleckstrin homology like domain family A member 2
TTC4	tetratricopeptide repeat domain 4

TTF1	transcription termination factor 1
HIRA	histone cell cycle regulator
UCHL1	ubiquitin C-terminal hydrolase L1
KDM6A	lysine demethylase 6A
UVRAG	UV radiation resistance associated
VDR	vitamin D (1,25- dihydroxyvitamin D3) receptor
VEGFA	vascular endothelial growth factor A
VHL	von Hippel-Lindau tumor suppressor
VIL1	villin 1
VIM	vimentin
VSNL1	visinin like 1
LAT2	linker for activation of T-cells family member 2
WNT5A	Wnt family member 5A
WNT7A	Wnt family member 7A
WNT11	Wnt family member 11
WT1	Wilms tumor 1
XIST	X inactive specific transcript (non-protein coding)
XRCC5	X-ray repair cross complementing 5
ZFP36	ZFP36 ring finger protein
ZIC1	Zic family member 1
PCGF2	polycomb group ring finger 2
ZBTB16	zinc finger and BTB domain containing 16
ZNF185	zinc finger protein 185 (LIM domain)
ZYX	zyxin
PRDM2	PR/SET domain 2
BTG2	BTG anti-proliferation factor 2
SEMA3B	semaphorin 3B
RAB7A	RAB7A, member RAS oncogene family
PLA2G7	phospholipase A2 group VII
AIMP2	aminoacyl tRNA synthetase complex interacting multifunctional protein 2
TFPI2	tissue factor pathway inhibitor 2
ST7	suppression of tumorigenicity 7
TUSC3	tumor suppressor candidate 3
NR4A3	nuclear receptor subfamily 4 group A member 3
NCOA4	nuclear receptor coactivator 4
CUL5	cullin 5
CDK2AP1	cyclin dependent kinase 2 associated protein 1
IFT88	intraflagellar transport 88
ANP32A	acidic nuclear phosphoprotein 32 family member A
MIA	melanoma inhibitory activity
MLRL	Myeloid leukemia-related gene (myeloid tumor suppressor)
ARID1A	AT-rich interaction domain 1A
AXIN1	axin 1
AXIN2	axin 2
BAP1	BRCA1 associated protein 1
MAD1L1	MAD1 mitotic arrest deficient like 1
SPARCL1	SPARC like 1
SPOP	speckle type BTB/POZ protein
SRPX	sushi repeat containing protein, X-linked
NR0B2	nuclear receptor subfamily 0 group B member 2
RECK	reversion inducing cysteine rich protein with kazal motifs
RASAL1	RAS protein activator like 1
CUL2	cullin 2
CUL1	cullin 1

ST11	suppression of tumorigenicity 11 (pancreas)
PIAS1	protein inhibitor of activated STAT 1
MADD	MAP kinase activating death domain
PDLIM4	PDZ and LIM domain 4
TMEFF1	transmembrane protein with EGF like and two follistatin like domains 1
TP63	tumor protein p63
UNC5C	unc-5 netrin receptor C
RNASET2	ribonuclease T2
PTCH2	patched 2
NUMB	NUMB, endocytic adaptor protein
SOCS1	suppressor of cytokine signaling 1
EIF3F	eukaryotic translation initiation factor 3 subunit F
BECN1	beclin 1
PEA15	phosphoprotein enriched in astrocytes 15
TNK1	tyrosine kinase non receptor 1
EED	embryonic ectoderm development
TNFSF12	tumor necrosis factor superfamily member 12
TNFSF9	tumor necrosis factor superfamily member 9
FADD	Fas associated via death domain
TNFRSF18	TNF receptor superfamily member 18
DLK1	delta like non-canonical Notch ligand 1
TNFRSF10B	TNF receptor superfamily member 10b
TNFRSF10A	TNF receptor superfamily member 10a
TRIM24	tripartite motif containing 24
INPP4B	inositol polyphosphate-4-phosphatase type II B
WISP3	WNT1 inducible signaling pathway protein 3
HDAC3	histone deacetylase 3
DLEU2	deleted in lymphocytic leukemia 2 (non-protein coding)
TSC22D1	TSC22 domain family member 1
ALDH1A2	aldehyde dehydrogenase 1 family member A2
NR1H2	nuclear receptor subfamily 1 group I member 2
PER2	period circadian clock 2
IER3	immediate early response 3
BCL10	B-cell CLL/lymphoma 10
MBD4	methyl-CpG binding domain 4, DNA glycosylase
SELENBP1	selenium binding protein 1
LIMD1	LIM domains containing 1
SOCS3	suppressor of cytokine signaling 3
RNF8	ring finger protein 8
DOK2	docking protein 2
AIP	aryl hydrocarbon receptor interacting protein
GPRC5A	G protein-coupled receptor class C group 5 member A
CLDN1	claudin 1
DIRAS3	DIRAS family GTPase 3
DNAJA3	DnaJ heat shock protein family (Hsp40) member A3
LATS1	large tumor suppressor kinase 1
PDCD5	programmed cell death 5
NEURL1	neuralized E3 ubiquitin protein ligase 1
AIMP1	aminoacyl tRNA synthetase complex interacting multifunctional protein 1
BCL7C	BCL tumor suppressor 7C
BCL7B	BCL tumor suppressor 7B
KLF4	Kruppel like factor 4
COPS2	COP9 signalosome subunit 2
SLIT2	slit guidance ligand 2

KL	klotho
SLC9A3R1	SLC9A3 regulator 1
ARHGAP29	Rho GTPase activating protein 29
ABCG2	ATP binding cassette subfamily G member 2 (Junior blood group)
AIM2	absent in melanoma 2
HOMER2	homer scaffolding protein 2
RASAL2	RAS protein activator like 2
CHST10	carbohydrate sulfotransferase 10
LITAF	lipopolysaccharide induced TNF factor
EEF1E1	eukaryotic translation elongation factor 1 epsilon 1
EI24	EI24, autophagy associated transmembrane protein
CXCL14	C-X-C motif chemokine ligand 14
AKAP12	A-kinase anchoring protein 12
ISG15	ISG15 ubiquitin-like modifier
MDC1	mediator of DNA damage checkpoint 1
SAFB2	scaffold attachment factor B2
LZTS3	leucine zipper tumor suppressor family member 3
RASSF2	Ras association domain family member 2
RNF144A	ring finger protein 144A
MTSS1	MTSS1, I-BAR domain containing
RB1CC1	RB1 inducible coiled-coil 1
NUAK1	NUAK family kinase 1
SRGAP3	SLIT-ROBO Rho GTPase activating protein 3
DCLRE1A	DNA cross-link repair 1A
DLEC1	deleted in lung and esophageal cancer 1
DMTF1	cyclin D binding myb like transcription factor 1
TANK	TRAF family member associated NFKB activator
BCL2L11	BCL2 like 11
SH2B3	SH2B adaptor protein 3
RANBP9	RAN binding protein 9
TSPAN32	tetraspanin 32
TSSC4	tumor suppressing subtransferable candidate 4
ABI2	abl interactor 2
PLXNC1	plexin C1
RBM6	RNA binding motif protein 6
RBM5	RNA binding motif protein 5
TRIM13	tripartite motif containing 13
TOPORS	TOP1 binding arginine/serine rich protein
CTDSPL	CTD small phosphatase like
SPRY2	sprouty RTK signaling antagonist 2
STUB1	STIP1 homology and U-box containing protein 1
UBE4B	ubiquitination factor E4B
DLEU1	deleted in lymphocytic leukemia 1
IKZF1	IKAROS family zinc finger 1
MRV1	murine retrovirus integration site 1 homolog
CITED2	Cbp/p300 interacting transactivator with Glu/Asp rich carboxy-terminal domain 2
DLC1	DLC1 Rho GTPase activating protein
NDRG1	N-myc downstream regulated 1
RACK1	receptor for activated C kinase 1
BASP1	brain abundant membrane attached signal protein 1
YAP1	Yes associated protein 1
PGRMC2	progesterone receptor membrane component 2
RBM14	RNA binding motif protein 14
ZBTB18	zinc finger and BTB domain containing 18

HOXB13	homeobox B13
MYBBP1A	MYB binding protein 1a
KAT5	lysine acetyltransferase 5
ARL6IP5	ADP ribosylation factor like GTPase 6 interacting protein 5
HTATIP2	HIV-1 Tat interactive protein 2
OLFM4	olfactomedin 4
TRIM3	tripartite motif containing 3
TXNIP	thioredoxin interacting protein
RASL10A	RAS like family 10 member A
LEFTY1	left-right determination factor 1
NPRL2	NPR2-like, GATOR1 complex subunit
SPINT2	serine peptidase inhibitor, Kunitz type 2
CTCF	CCCTC-binding factor
AHCYL1	adenosylhomocysteinase like 1
PLK2	polo like kinase 2
ZMYND11	zinc finger MYND-type containing 11
IQGAP2	IQ motif containing GTPase activating protein 2
FRS3	fibroblast growth factor receptor substrate 3
BLCAP	bladder cancer associated protein
GADD45G	growth arrest and DNA damage inducible gamma
BTG3	BTG anti-proliferation factor 3
IL24	interleukin 24
GLIPR1	GLI pathogenesis related 1
CYB561D2	cytochrome b561 family member D2
TRIM31	tripartite motif containing 31
DNAJB4	DnaJ heat shock protein family (Hsp40) member B4
DIDO1	death inducer-obliterator 1
ADAMTS8	ADAM metallopeptidase with thrombospondin type 1 motif 8
PRDM5	PR/SET domain 5
PRDM4	PR/SET domain 4
PTPRT	protein tyrosine phosphatase, receptor type T
PLA2G16	phospholipase A2 group XVI
LZTS1	leucine zipper tumor suppressor 1
MAP4K1	mitogen-activated protein kinase kinase kinase kinase 1
RASSF1	Ras association domain family member 1
PTENP1	phosphatase and tensin homolog pseudogene 1
WIF1	WNT inhibitory factor 1
CHEK2	checkpoint kinase 2
TREX2	three prime repair exonuclease 2
RASSF8	Ras association domain family member 8
POU6F2	POU class 6 homeobox 2
PARK7	Parkinsonism associated deglycase
TUSC2	tumor suppressor candidate 2
GABARAP	GABA type A receptor-associated protein
IKZF3	IKAROS family zinc finger 3
IKZF2	IKAROS family zinc finger 2
ZHX2	zinc fingers and homeoboxes 2
PLA2R1	phospholipase A2 receptor 1
SIRT2	sirtuin 2
DKK1	dickkopf WNT signaling pathway inhibitor 1
TRIM32	tripartite motif containing 32
USP33	ubiquitin specific peptidase 33
PHLPP2	PH domain and leucine rich repeat protein phosphatase 2
ZNF292	zinc finger protein 292

PDS5B	PDS5 cohesin associated factor B
TRIM35	tripartite motif containing 35
KIF1B	kinesin family member 1B
EPB41L3	erythrocyte membrane protein band 4.1 like 3
CIC	capicua transcriptional repressor
KANK1	KN motif and ankyrin repeat domains 1
GANAB	glucosidase II alpha subunit
RHOBTB2	Rho related BTB domain containing 2
PHLPP1	PH domain and leucine rich repeat protein phosphatase 1
CAMTA1	calmodulin binding transcription activator 1
MTUS2	microtubule associated tumor suppressor candidate 2
ATMIN	ATM interactor
NEDD4L	neural precursor cell expressed, developmentally down-regulated 4-like, E3 ubiquitin protein ligase
SASH1	SAM and SH3 domain containing 1
SYNM	synemin
SMCHD1	structural maintenance of chromosomes flexible hinge domain containing 1
ARHGEF12	Rho guanine nucleotide exchange factor 12
UFL1	UFM1 specific ligase 1
DICER1	dicer 1, ribonuclease III
SIRT4	sirtuin 4
SIRT3	sirtuin 3
SIRT1	sirtuin 1
CBX5	chromobox 5
SUZ12	SUZ12 polycomb repressive complex 2 subunit
SCRIB	scribbled planar cell polarity protein
SEC14L2	SEC14 like lipid binding 2
GTPBP4	GTP binding protein 4
CCNDBP1	cyclin D1 binding protein 1
DDX58	DEXD/H-box helicase 58
DAPK2	death associated protein kinase 2
PHLDA3	pleckstrin homology like domain family A member 3
SSBP2	single stranded DNA binding protein 2
TMEFF2	transmembrane protein with EGF like and two follistatin like domains 2
CADM1	cell adhesion molecule 1
CIZ1	CDKN1A interacting zinc finger protein 1
POU2F3	POU class 2 homeobox 3
BRMS1	breast cancer metastasis suppressor 1
RCHY1	ring finger and CHY zinc finger domain containing 1
PTPN23	protein tyrosine phosphatase, non-receptor type 23
LRIG1	leucine rich repeats and immunoglobulin like domains 1
CHD5	chromodomain helicase DNA binding protein 5
CNTNAP2	contactin associated protein-like 2
TES	testin LIM domain protein
NKX2-8	NK2 homeobox 8
FBXO25	F-box protein 25
EHF	ETS homologous factor
LHX6	LIM homeobox 6
NUPR1	nuclear protein 1, transcriptional regulator
INTS6	integrator complex subunit 6
LATS2	large tumor suppressor kinase 2
GREM1	gremlin 1, DAN family BMP antagonist
TBL2	transducin beta like 2
SNORD50A	small nucleolar RNA, C/D box 50A
HBP1	HMG-box transcription factor 1

FOXD3	forkhead box D3
MLH3	mutL homolog 3
TSPAN13	tetraspanin 13
FOXP1	forkhead box P1
BBC3	BCL2 binding component 3
DKK3	dickkopf WNT signaling pathway inhibitor 3
HSPB7	heat shock protein family B (small) member 7
CPNE7	copine 7
GLS2	glutaminase 2
SLC39A1	solute carrier family 39 member 1
GNMT	glycine N-methyltransferase
PDCD4	programmed cell death 4 (neoplastic transformation inhibitor)
PCDH17	protocadherin 17
BMP10	bone morphogenetic protein 10
RBMS3	RNA binding motif single stranded interacting protein 3
RBMX	RNA binding motif protein, X-linked
RPS6KA6	ribosomal protein S6 kinase A6
HTRA2	HtrA serine peptidase 2
HIPK2	homeodomain interacting protein kinase 2
SETD2	SET domain containing 2
PYCARD	PYD and CARD domain containing
BRD7	bromodomain containing 7
CTNNA3	catenin alpha 3
BLNK	B-cell linker
UBIAD1	UbiA prenyltransferase domain containing 1
OSGIN1	oxidative stress induced growth inhibitor 1
NRBP1	nuclear receptor binding protein 1
GLTSCR2	glioma tumor suppressor candidate region gene 2
GLTSCR1	glioma tumor suppressor candidate region gene 1
EHD3	EH domain containing 3
CRNN	cornulin
G0S2	G0/G1 switch 2
DEC1	deleted in esophageal cancer 1
FOXP3	forkhead box P3
TSG11	Tumor suppressor gene on chromosome 11
SH3GLB1	SH3 domain containing GRB2 like endophilin B1
ANGPTL4	angiopoietin like 4
ING4	inhibitor of growth family member 4
PLEKHO1	pleckstrin homology domain containing O1
PLCE1	phospholipase C epsilon 1
ZDHHC2	zinc finger DHHC-type containing 2
MZB1	marginal zone B and B1 cell specific protein
PAIP2	poly(A) binding protein interacting protein 2
TNFRSF12A	TNF receptor superfamily member 12A
DACT1	dishevelled binding antagonist of beta catenin 1
FZR1	fizzy/cell division cycle 20 related 1
ZMYND10	zinc finger MYND-type containing 10
NOL7	nucleolar protein 7
DCDC2	doublecortin domain containing 2
LIMA1	LIM domain and actin binding 1
CXXC5	CXXC finger protein 5
SIRT6	sirtuin 6
SUFU	SUFU negative regulator of hedgehog signaling
HECA	hdc homolog, cell cycle regulator

CYB5R2	cytochrome b5 reductase 2
UIMC1	ubiquitin interaction motif containing 1
WWOX	WW domain containing oxidoreductase
KDM3B	lysine demethylase 3B
LRP1B	LDL receptor related protein 1B
ERRFI1	ERBB receptor feedback inhibitor 1
ING3	inhibitor of growth family member 3
EGLN1	egl-9 family hypoxia inducible factor 1
XAF1	XIAP associated factor 1
IL17RD	interleukin 17 receptor D
BTG4	BTG anti-proliferation factor 4
RNF111	ring finger protein 111
TET2	tet methylcytosine dioxygenase 2
TRIT1	tRNA isopentenyltransferase 1
ESRP1	epithelial splicing regulatory protein 1
WHSC1L1	Wolf-Hirschhorn syndrome candidate 1-like 1
BANP	BTG3 associated nuclear protein
HRASLS2	HRAS like suppressor 2
PINX1	PIN2/TERF1 interacting, telomerase inhibitor 1
PIWIL2	piwi like RNA-mediated gene silencing 2
SHQ1	SHQ1, H/ACA ribonucleoprotein assembly factor
PBRM1	polybromo 1
TRIM62	tripartite motif containing 62
MOB1A	MOB kinase activator 1A
CASC1	cancer susceptibility candidate 1
VPS53	VPS53, GARP complex subunit
FBXW7	F-box and WD repeat domain containing 7
MEG3	maternally expressed 3 (non-protein coding)
CAMK2N1	calcium/calmodulin dependent protein kinase II inhibitor 1
RBM38	RNA binding motif protein 38
VEZT	vezatin, adherens junctions transmembrane protein
PRR5	proline rich 5
SLC39A4	solute carrier family 39 member 4
TMEM127	transmembrane protein 127
WDR11	WD repeat domain 11
DNAJC11	DnaJ heat shock protein family (Hsp40) member C11
CHFR	checkpoint with forkhead and ring finger domains
CNDP2	CNDP dipeptidase 2 (metallopeptidase M20 family)
CCAR1	cell division cycle and apoptosis regulator 1
CACNA2D3	calcium voltage-gated channel auxiliary subunit alpha2delta 3
KDM3A	lysine demethylase 3A
EAF2	ELL associated factor 2
THSD1	thrombospondin type 1 domain containing 1
AJAP1	adherens junctions associated protein 1
GKN1	gastrokine 1
RPRM	reprimo, TP53 dependent G2 arrest mediator candidate
DIABLO	diablo IAP-binding mitochondrial protein
PANX2	pannexin 2
TCEAL7	transcription elongation factor A like 7
LXN	latexin
DUSP22	dual specificity phosphatase 22
NIT2	nitrilase family member 2
PRDM11	PR/SET domain 11
CTNNBIP1	catenin beta interacting protein 1

ADAMTS9	ADAM metallopeptidase with thrombospondin type 1 motif 9
PDSS2	prenyl (decaprenyl) diphosphate synthase, subunit 2
RAB25	RAB25, member RAS oncogene family
RTN4	reticulon 4
SALL4	spalt like transcription factor 4
SCYL1	SCY1 like pseudokinase 1
NDRG2	NDRG family member 2
AHRR	aryl-hydrocarbon receptor repressor
MTUS1	microtubule associated tumor suppressor 1
XPO5	exportin 5
HACE1	HECT domain and ankyrin repeat containing E3 ubiquitin protein ligase 1
PCDH10	protocadherin 10
SYT13	synaptotagmin 13
WDR48	WD repeat domain 48
ZBTB4	zinc finger and BTB domain containing 4
NCOA5	nuclear receptor coactivator 5
SCUBE2	signal peptide, CUB domain and EGF like domain containing 2
CCAR2	cell cycle and apoptosis regulator 2
CADM3	cell adhesion molecule 3
WFDC1	WAP four-disulfide core domain 1
KMT2C	lysine methyltransferase 2C
HIVEP3	human immunodeficiency virus type I enhancer binding protein 3
EDA2R	ectodysplasin A2 receptor
RINT1	RAD50 interactor 1
GAS5	growth arrest specific 5 (non-protein coding)
BCORL1	BCL6 corepressor-like 1
LRRC4	leucine rich repeat containing 4
RFWD2	ring finger and WD repeat domain 2
CSMD1	CUB and Sushi multiple domains 1
NDST4	N-deacetylase and N-sulfotransferase 4
CSRNP1	cysteine and serine rich nuclear protein 1
ANAPC1	anaphase promoting complex subunit 1
CCDC136	coiled-coil domain containing 136
CDCP1	CUB domain containing protein 1
NDRG4	NDRG family member 4
WNK2	WNK lysine deficient protein kinase 2
PHACTR4	phosphatase and actin regulator 4
DUSP26	dual specificity phosphatase 26 (putative)
AHNAK	AHNAK nucleoprotein
IRX1	iroquois homeobox 1
BHLHE41	basic helix-loop-helix family member e41
CDC73	cell division cycle 73
TNFAIP8L2	TNF alpha induced protein 8 like 2
FAT4	FAT atypical cadherin 4
MCPH1	microcephalin 1
PALB2	partner and localizer of BRCA2
ZNF668	zinc finger protein 668
FBXO31	F-box protein 31
ARMC5	armadillo repeat containing 5
KDM8	lysine demethylase 8
GGNBP2	gametogenetin binding protein 2
DOK3	docking protein 3
DENND2D	DENN domain containing 2D
PHC3	polyhomeotic homolog 3

FAM188A	family with sequence similarity 188 member A
NRSN2	neurensin 2
MUS81	MUS81 structure-specific endonuclease subunit
FER1L4	fer-1 like family member 4, pseudogene
CXXC4	CXXC finger protein 4
SPRY4	sprouty RTK signaling antagonist 4
RASSF5	Ras association domain family member 5
SOX7	SRY-box 7
YPEL3	yippee like 3
MARVELD1	MARVEL domain containing 1
ARMC10	armadillo repeat containing 10
RASSF4	Ras association domain family member 4
FAM172A	family with sequence similarity 172 member A
PPP1R1B	protein phosphatase 1 regulatory inhibitor subunit 1B
TCHP	trichoplein keratin filament binding
ING5	inhibitor of growth family member 5
PHF6	PHD finger protein 6
BRMS1L	breast cancer metastasis-suppressor 1-like
C2orf40	chromosome 2 open reading frame 40
LZTS2	leucine zipper tumor suppressor 2
BRSK1	BR serine/threonine kinase 1
SLX4	SLX4 structure-specific endonuclease subunit
HOPX	HOP homeobox
AFAP1L2	actin filament associated protein 1 like 2
SPINK7	serine peptidase inhibitor, Kazal type 7 (putative)
MYO18B	myosin XVIIIIB
BEX2	brain expressed X-linked 2
RTN4IP1	reticulon 4 interacting protein 1
ZC3H10	zinc finger CCCH-type containing 10
MFSD2A	major facilitator superfamily domain containing 2A
TBRG1	transforming growth factor beta regulator 1
ZNF382	zinc finger protein 382
RITA1	RBPJ interacting and tubulin associated 1
EAF1	ELL associated factor 1
TSLP	thymic stromal lymphopoietin
TRIM15	tripartite motif containing 15
LHX4	LIM homeobox 4
UNC5A	unc-5 netrin receptor A
BMF	Bcl2 modifying factor
GADD45GIP1	GADD45G interacting protein 1
STARD13	StAR related lipid transfer domain containing 13
CREB3L1	cAMP responsive element binding protein 3 like 1
L3MBTL4	l(3)mbt-like 4 (Drosophila)
RASL10B	RAS like family 10 member B
CABLES1	Cdk5 and Abl enzyme substrate 1
SCGB3A1	secretoglobin family 3A member 1
STRADA	STE20-related kinase adaptor alpha
GORAB	golgin, RAB6 interacting
MOB1B	MOB kinase activator 1B
TPTE2	transmembrane phosphoinositide 3-phosphatase and tensin homolog 2
HTRA3	HtrA serine peptidase 3
TP53INP1	tumor protein p53 inducible nuclear protein 1
EGLN3	egl-9 family hypoxia inducible factor 3
PRKCDBP	protein kinase C delta binding protein

CYGB	cytoglobin
SMYD4	SET and MYND domain containing 4
FBXO32	F-box protein 32
UHRF2	ubiquitin like with PHD and ring finger domains 2
ARL11	ADP ribosylation factor like GTPase 11
BATF2	basic leucine zipper ATF-like transcription factor 2
LRRC3B	leucine rich repeat containing 3B
CMTM5	CKLF like MARVEL transmembrane domain containing 5
MIA2	melanoma inhibitory activity 2
TWIST2	twist family bHLH transcription factor 2
LRIG3	leucine rich repeats and immunoglobulin like domains 3
JDP2	Jun dimerization protein 2
DCUN1D3	defective in cullin neddylation 1 domain containing 3
CMTM3	CKLF like MARVEL transmembrane domain containing 3
OVCA2	ovarian tumor suppressor candidate 2
PLK5	polo like kinase 5
OSCP1	organic solute carrier partner 1
ACVR1C	activin A receptor type 1C
UBE2QL1	ubiquitin conjugating enzyme E2 Q family like 1
PACRG	PARK2 coregulated
CLDN23	claudin 23
UNC5D	unc-5 netrin receptor D
AMER1	APC membrane recruitment protein 1
GATA5	GATA binding protein 5
CTCFL	CCCTC-binding factor like
ST13P5	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 5
PRICKLE1	prickle planar cell polarity protein 1
ST13P3	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 3
ST13P4	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 4
TOM1L2	target of myb1 like 2 membrane trafficking protein
DIRAS1	DIRAS family GTPase 1
PYHIN1	pyrin and HIN domain family member 1
SIK1	salt inducible kinase 1
PPM1L	protein phosphatase, Mg ²⁺ /Mn ²⁺ dependent 1L
SHISA3	shisa family member 3
DAB2IP	DAB2 interacting protein
ST13P7	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 7
ST13P6	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 6
DEUP1	deuterosome assembly protein 1
LMNTD1	lamin tail domain containing 1
SLC5A8	solute carrier family 5 member 8
TMPRSS6	transmembrane protease, serine 6
ZNF366	zinc finger protein 366
ADAMTS18	ADAM metallopeptidase with thrombospondin type 1 motif 18
ASXL1	additional sex combs like 1, transcriptional regulator
SYNPO2	synaptopodin 2
ARID2	AT-rich interaction domain 2
CADM4	cell adhesion molecule 4
GKN2	gastrokine 2
FLCN	folliculin
ZBTB7C	zinc finger and BTB domain containing 7C

SAMD9L	sterile alpha motif domain containing 9 like
USP12	ubiquitin specific peptidase 12
UNC5B	unc-5 netrin receptor B
HEPACAM	hepatic and glial cell adhesion molecule
FBXL13	F-box and leucine rich repeat protein 13
NAPEPLD	N-acyl phosphatidylethanolamine phospholipase D
CADM2	cell adhesion molecule 2
EBF3	early B-cell factor 3
MCM9	minichromosome maintenance 9 homologous recombination repair factor
CASC2	cancer susceptibility candidate 2 (non-protein coding)
BCL6B	B-cell CLL/lymphoma 6B
SHPRH	SNF2 histone linker PHD RING helicase
SGMS1	sphingomyelin synthase 1
ITS	Insulinoma tumor suppressor gene locus
H19	H19, imprinted maternally expressed transcript (non-protein coding)
RASSF3	Ras association domain family member 3
KCNRG	potassium channel regulator
ZFP82	ZFP82 zinc finger protein
TUSC7	tumor suppressor candidate 7 (non-protein coding)
RNF180	ring finger protein 180
TUSC1	tumor suppressor candidate 1
TUSC5	tumor suppressor candidate 5
LIN9	lin-9 DREAM MuvB core complex component
MT1DP	metallothionein 1D, pseudogene
HCAR2	hydroxycarboxylic acid receptor 2
ST13P8	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 8
TMPRSS11A	transmembrane protease, serine 11A
ST13P2	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 2
IGFBPL1	insulin like growth factor binding protein like 1
PWAR4	Prader Willi/Angelman region RNA 4
TUSC2P1	tumor suppressor candidate 2 pseudogene 1
DND1	DND microRNA-mediated repression inhibitor 1
KIF7	kinesin family member 7
CENPS	centromere protein S
LINC-PINT	long intergenic non-protein coding RNA, p53 induced transcript
RASL11A	RAS like family 11 member A
ST13P9	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 9
VHLL	von Hippel-Lindau tumor suppressor like
ST13P10	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 10
TUSC8	tumor suppressor candidate 8 (non-protein coding)
ST20	suppressor of tumorigenicity 20
LOC401317	uncharacterized LOC401317
HACD4	3-hydroxyacyl-CoA dehydratase 4
ST13P13	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 13
MIRLET7A1	microRNA let-7a-1
MIRLET7A2	microRNA let-7a-2
MIRLET7A3	microRNA let-7a-3
MIRLET7B	microRNA let-7b
MIRLET7C	microRNA let-7c
MIRLET7D	microRNA let-7d
MIRLET7E	microRNA let-7e

MIRLET7F1	microRNA let-7f-1
MIRLET7F2	microRNA let-7f-2
MIRLET7G	microRNA let-7g
MIRLET7I	microRNA let-7i
MIR100	microRNA 100
MIR101-1	microRNA 101-1
MIR101-2	microRNA 101-2
MIR106A	microRNA 106a
MIR107	microRNA 107
MIR10A	microRNA 10a
MIR1-1	microRNA 1-1
MIR1-2	microRNA 1-2
MIR122	microRNA 122
MIR124-1	microRNA 124-1
MIR124-2	microRNA 124-2
MIR124-3	microRNA 124-3
MIR125A	microRNA 125a
MIR125B1	microRNA 125b-1
MIR125B2	microRNA 125b-2
MIR126	microRNA 126
MIR127	microRNA 127
MIR129-1	microRNA 129-1
MIR129-2	microRNA 129-2
MIR130A	microRNA 130a
MIR132	microRNA 132
MIR133A1	microRNA 133a-1
MIR133A2	microRNA 133a-2
MIR134	microRNA 134
MIR135A1	microRNA 135a-1
MIR135A2	microRNA 135a-2
MIR136	microRNA 136
MIR137	microRNA 137
MIR138-1	microRNA 138-1
MIR138-2	microRNA 138-2
MIR140	microRNA 140
MIR141	microRNA 141
MIR142	microRNA 142
MIR143	microRNA 143
MIR145	microRNA 145
MIR146A	microRNA 146a
MIR147A	microRNA 147a
MIR148A	microRNA 148a
MIR149	microRNA 149
MIR150	microRNA 150
MIR152	microRNA 152
MIR155	microRNA 155
MIR15A	microRNA 15a
MIR16-1	microRNA 16-1
MIR16-2	microRNA 16-2
MIR17	microRNA 17
MIR18A	microRNA 18a
MIR181A2	microRNA 181a-2
MIR181B1	microRNA 181b-1
MIR181B2	microRNA 181b-2

MIR181C	microRNA 181c
MIR182	microRNA 182
MIR183	microRNA 183
MIR185	microRNA 185
MIR186	microRNA 186
MIR187	microRNA 187
MIR192	microRNA 192
MIR193A	microRNA 193a
MIR194-1	microRNA 194-1
MIR194-2	microRNA 194-2
MIR195	microRNA 195
MIR196A2	microRNA 196a-2
MIR198	microRNA 198
MIR199A1	microRNA 199a-1
MIR20A	microRNA 20a
MIR200A	microRNA 200a
MIR200B	microRNA 200b
MIR200C	microRNA 200c
MIR203A	microRNA 203a
MIR204	microRNA 204
MIR205	microRNA 205
MIR206	microRNA 206
MIR210	microRNA 210
MIR211	microRNA 211
MIR181A1	microRNA 181a-1
MIR214	microRNA 214
MIR215	microRNA 215
MIR217	microRNA 217
MIR218-1	microRNA 218-1
MIR218-2	microRNA 218-2
MIR219A1	microRNA 219a-1
MIR22	microRNA 22
MIR222	microRNA 222
MIR223	microRNA 223
MIR23A	microRNA 23a
MIR23B	microRNA 23b
MIR24-1	microRNA 24-1
MIR25	microRNA 25
MIR26A1	microRNA 26a-1
MIR26A2	microRNA 26a-2
MIR26B	microRNA 26b
MIR27A	microRNA 27a
MIR27B	microRNA 27b
MIR28	microRNA 28
MIR29A	microRNA 29a
MIR296	microRNA 296
MIR29B1	microRNA 29b-1
MIR29C	microRNA 29c
MIR30A	microRNA 30a
MIR30C1	microRNA 30c-1
MIR31	microRNA 31
MIR320A	microRNA 320a
MIR33A	microRNA 33a
MIR34A	microRNA 34a

MIR34B	microRNA 34b
MIR34C	microRNA 34c
MIR7-1	microRNA 7-1
MIR7-2	microRNA 7-2
MIR7-3	microRNA 7-3
MIR9-1	microRNA 9-1
MIR9-2	microRNA 9-2
MIR9-3	microRNA 9-3
MIR98	microRNA 98
MIR99A	microRNA 99a
BLID	BH3-like motif containing, cell death inducer
LOC440311	glioma tumor suppressor candidate region gene 2 pseudogene
ZFAS1	ZNFX1 antisense RNA 1
ST13P17	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 17
MIR148B	microRNA 148b
MIR302B	microRNA 302b
MIR326	microRNA 326
MIR335	microRNA 335
MIR338	microRNA 338
MIR340	microRNA 340
MIR367	microRNA 367
MIR370	microRNA 370
MIR196B	microRNA 196b
JST	tumor suppressor gene JST
MIR375	microRNA 375
MIR378A	microRNA 378a
MIR383	microRNA 383
MIR422A	microRNA 422a
MIR424	microRNA 424
MIR449A	microRNA 449a
MIR18B	microRNA 18b
MIR329-1	microRNA 329-1
MIR451A	microRNA 451a
MIR409	microRNA 409
MIR410	microRNA 410
MIR490	microRNA 490
MIR511	microRNA 511
MIR493	microRNA 493
MIR494	microRNA 494
MIR495	microRNA 495
MIR193B	microRNA 193b
MIR497	microRNA 497
MIR520B	microRNA 520b
MIR520C	microRNA 520c
MIR517A	microRNA 517a
MIR519D	microRNA 519d
MIR502	microRNA 502
MIR503	microRNA 503
MIR504	microRNA 504
MIR505	microRNA 505
MIR508	microRNA 508
MIR483	microRNA 483
MIR486-1	microRNA 486-1
ST13P21	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein)

	pseudogene 21
ST13P18	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 18
TSG1	tumor suppressor TSG1
RASSF10	Ras association domain family member 10
CCDC154	coiled-coil domain containing 154
TSSC2	tumor suppressing subtransferable candidate 2 pseudogene
CHES1L1	checkpoint suppressor 1-like 1
MIR487B	microRNA 487b
MIR449B	microRNA 449b
MIR551A	microRNA 551a
MIR574	microRNA 574
MIR615	microRNA 615
MIR636	microRNA 636
ST13P11	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 11
ST13P20	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 20
ST13P1	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 1
TDRG1	testis development related 1 (non-protein coding)
VTRNA2-1	vault RNA 2-1
MIR888	microRNA 888
MIR941-1	microRNA 941-1
MIR708	microRNA 708
MIR509-3	microRNA 509-3
MIR874	microRNA 874
ST13P12	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 12
ST13P19	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 19
FOXO6	forkhead box O6
MIR1247	microRNA 1247
MIR1297	microRNA 1297
MIR1291	microRNA 1291
MIR1226	microRNA 1226
ST13P14	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 14
ST13P15	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 15
ST13P16	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 16
ADAMTS9-AS2	ADAMTS9 antisense RNA 2
ST13P22	suppression of tumorigenicity 13 (colon carcinoma) (Hsp70 interacting protein) pseudogene 22
PTCSC3	papillary thyroid carcinoma susceptibility candidate 3 (non-protein coding)
PANO1	proapoptotic nucleolar protein 1
TP53COR1	tumor protein p53 pathway corepressor 1 (non-protein coding)
HOTS	H19 opposite tumor suppressor

Table S3: LK, LY, ME, GL - OG, TS

	Proteins	OG	TS
BCR-ABL1	xxxxxxxxxx		
RUNX1- RUNX1T1	HDAC1		√
	BRCA1		√

	KMT2A	√	
	SMARCC1		√
	HDAC2		√
	CREBBP		√
	CTBP1		√
	EP300		√
	SMARCA4	√	√
	NCOR2	√	
	NCOR1	√	
	xxxxx		
	VDR		√
	SMARCA4	√	√
	xxxxxxxxxxx		
KMT2A-MLLT10	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2		√
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxxx		
IGH-BCL2	TP53		√
	CASP3		
	PARP1		√
	CASP8		√
	HIF1A		√
	BCL2	√	
	xxxxx		
	BAG3	√	
	PARP1		√
	BCL2	√	
	xxxxxxxxxxx		
KMT2A-AFF1	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxxx		
PICALM-MLLT10	FN1		√
	EEF1A1		√

	EGFR	√	
	NTRK1	√	
	PLCG1	√	
	DNM2		
	ILVBL		
	PICALM	√	
	xxxxx		
	HNRNPD	√	
	FUS	√	√
	FN1		√
	DDX1		√
	xxxxx		
	SEC24D		
	PICALM	√	
	NTRK1	√	
	SEC24C		
	xxxxxxxxxxx		
PML-RARA	NCOA2	√	
	NR3C1		
	NR4A1		√
	KAT2B		
	RXRA	√	
	PPARG	√	√
	TP53		√
	MDM2	√	
	EP300		√
	SMARCA4	√	√
	RELA	√	
	RARA	√	
	NCOA3	√	
	NCOA1	√	
	STAT3	√	√
	ARNT	√	
	NPAS2		√
	PARP1		√
	NFKB1	√	√
	TRIP4		
	CREBBP		√
	xxxxx		
	NFKB1	√	√
	EP300		√
	PARP1		√
	xxxxxxxxxxx		
KMT2A-MLLT3	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√

	KMT2A	√	
	CREBBP		√
	xxxxxxxxxx		
KMT2A-AFDN	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxx		
CBFB-MYH11	ACTA2		
	MYH11	√	
	MYO1E		
	RPA1		√
	RPA2	√	
	ACTB	√	
	xxxxx		
	RPA1		√
	ELAVL1	√	
	RPA2	√	
	xxxxxxxxxx		
IGH-MYC			
	xxxxx		
	xxxxxxxxxx		
NUP98-DDX10	SIRT7		
	DDX10	√	
	APP		
	DDX56		
	NTRK1	√	
	DDX54		
	PUM3		
	PWP1		
	CSNK2A1	√	
	xxxxx		
	HDAC1		√
	CTNNB1	√	
	MAPK8	√	
	EP300		√
	CREBBP		√
	xxxxx		
	PUM3		
	NXF1		
	EED		√
	KPNB1		
	HNRNPUL1		
	xxxxx		

	HDAC1		√
	CREBBP		√
	APC	√	√
	CSNK2A1	√	
	xxxxx		
	CTNNB1	√	
	APC	√	√
	CREBBP		√
	xxxxx		
	USP7	√	
	NTRK1	√	
	CDC37		
	xxxxxxxxxxx		
PCM1-JAK2	ERBB2	√	
	ERBB3	√	
	VAV1	√	
	TEC		
	EGFR	√	
	INSR		
	PLCG1	√	
	JAK2	√	
	xxxxx		
	STAT5A	√	√
	JAK2	√	
	INSR		
	xxxxxxxxxxx		
KMT2A-SEPT9	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxxx		
FUS-ERG	RPA1		√
	SF3B2		
	PRKDC		
	PRPF8	√	
	SF3A2		
	DHX15		
	RPA2	√	
	CUL3		
	xxxxx		
	ABL1	√	
	PARP1		√
	PRKDC		
	xxxxxxxxxxx		
NUP98-HOXA9	HDAC1		√

	TP53		√
	SMAD4	√	√
	CTNNB1	√	
	CSNK2A1	√	
	MAPK8	√	
	EP300		√
	CREBBP		√
	xxxxx		
	CTNNB1	√	
	APC	√	√
	CREBBP		√
	xxxxxxxxxxx		
ETV6-ABL1	ERBB2	√	
	CBLB	√	
	UBASH3B		
	SOS1	√	
	ERBB4	√	√
	SRC	√	
	VAV1	√	
	EGFR	√	
	CBL	√	√
	PLCG1	√	
	PIK3R2	√	
	PIK3R1	√	
	ABL1	√	
	xxxxx		
	ABL1	√	
	ABL2	√	
	JAK1	√	
	xxxxxxxxxxx		
SET-NUP214	NXF1		
	FAF1		
	SUPT5H		
	GART		
	CUL2		√
	CUL3		
	xxxxx		
	NXF1		
	CUL2		√
	RANBP2	√	
	xxxxxxxxxxx		
MNX1-ETV6	HDAC3	√	√
	ETV6	√	√
	HDAC9		
	PIN1		√
	NCOR1	√	
	SIN3A	√	
	xxxxx		
	L3MBTL1		
	ETV7		
	ETV6	√	√
	xxxxxxxxxxx		

KMT2A-MLLT1	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxxx		
KMT2A-MLLT6	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxxx		
ETV6-ACSL6	HDAC3	√	√
	ETV6	√	√
	HDAC9		
	PIN1		√
	NCOR1	√	
	SIN3A	√	
	xxxxx		
	L3MBTL1		
	ETV7		
	ETV6	√	√
	xxxxxxxxxxx		
ETV6-MECOM	HDAC1		√
	UBE2I		
	HDAC3	√	√
	EHMT2		
	ELAVL1	√	
	MECOM	√	
	SMAD1		
	SMAD2	√	√

	SMAD3	√	
	KAT2B		
	SUV39H1		
	NCOR1	√	
	CTBP1		√
	CREBBP		√
	xxxxx		
	MECOM	√	
	SUV39H1		
	HDAC4	√	
	xxxxxxxxxx		
KMT2A-EPS15	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxx		
KMT2A-GAS7	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxx		
KMT2A-ABL1	SMARCC2		
	KMT2A	√	
	SMARCC1		√
	CHD3	√	
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	xxxxx		
	ABL1	√	
	CBLB	√	
	CBL	√	√
	xxxxxxxxxx		
KMT2A-MLLT11	SMARCC2		
	KMT2A	√	
	HDAC2		√

	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxx		
MN1-ETV6	HDAC3	√	√
	ETV6	√	√
	HDAC9		
	PIN1		√
	EP300		√
	NCOR1	√	
	SIN3A	√	
	xxxxx		
	HDAC3	√	√
	EP300		√
	KAT5	√	√
	xxxxxxxxxx		
KMT2A-MAML2	SMARCC2		
	KMT2A	√	
	SMARCC1		√
	CHD3	√	
	SMARCA2	√	
	CREBBP		√
	xxxxx		
	SMARCA2	√	
	EP300		√
	CREBBP		√
	xxxxxxxxxx		
KMT2A-FOXO4	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxx		
DEK-NUP214	ESR1	√	√
	KAT2B		
	SMAD2	√	√
	SMAD3	√	
	CDK2	√	√
	DEK	√	

	EP300		√
	CREBBP		√
	xxxxx		
	NXF1		
	DHX15		
	CUL2		√
	CUL3		
	xxxxxxxxxxx		
RUNX1- CBFA2T3	KMT2A	√	
	SMARCC1		√
	SMARCA4	√	√
	CREBBP		√
	xxxxx		
	EP300		√
	CREBBP		√
	xxxxxxxxxxx		
NUP98-PSIP1	HDAC1		√
	KMT2A	√	
	ESR1	√	√
	CTNNB1	√	
	EP300		√
	CREBBP		√
	xxxxx		
	NXF1		
	EIF4A3		
	SON		
	xxxxxxxxxxx		
NUP98-HOXC13	HDAC1		√
	CTNNB1	√	
	MAPK8	√	
	EP300		√
	CREBBP		√
	xxxxx		
	NXF1		
	HNRNPAB		
	EED		√
	KPNB1		
	HNRNPUL1		
	xxxxx		
	HDAC1		√
	CREBBP		√
	APC	√	√
	CSNK2A1	√	
	xxxxx		
	CTNNB1	√	
	APC	√	√
	CREBBP		√
	xxxxxxxxxxx		
NUP98-HOXC11	HDAC1		√
	STAT3	√	√
	SP1		
	SMAD3	√	
	CTNNB1	√	
	MAPK8	√	

	EP300		√
	CREBBP		√
	xxxxx		
	CTNNB1	√	
	APC	√	√
	CREBBP		√
	xxxxxxxxxxx		
PAX5-ETV6	UBE2I		
	HDAC3	√	√
	TBP		
	KAT5	√	√
	RB1	√	√
	PAX5	√	√
	RUNX1	√	√
	PIN1		√
	EP300		√
	NCOR1	√	
	xxxxx		
	MAPK1	√	
	EP300		√
	HDAC6	√	
	xxxxxxxxxxx		
NUP98-HOXA11	HDAC1		√
	HDAC2		√
	YY1		
	CTNNB1	√	
	CSNK2A1	√	
	MAPK8	√	
	EP300		√
	CREBBP		√
	xxxxx		
	CTNNB1	√	
	APC	√	√
	CREBBP		√
	xxxxxxxxxxx		
BCR-PDGFRA	TGFBR2	√	√
	PDGFRA	√	
	SHC1	√	
	CRKL	√	
	EGFR	√	
	PLCG1	√	
	FES	√	
	CRK	√	
	ABL1	√	
	HCK	√	
	PTPN6	√	√
	BCR	√	√
	UBASH3B		
	INPP5D		
	SOS1	√	
	GRB2	√	
	NTRK1	√	
	CBL	√	√
	KIT	√	

	DOK1		√
	PIK3R2	√	
	PIK3R1	√	
	xxxxx		
	ABL1	√	
	TP53		√
	RB1	√	√
	BCR	√	√
	xxxxxxxxxxx		
BCR-FGFR1	SRC	√	
	ITK	√	
	SOS1	√	
	ERBB3	√	
	VAV1	√	
	CBL	√	√
	PLCG1	√	
	ABL1	√	
	xxxxx		
	ABL1	√	
	HCK	√	
	BCR	√	√
	CBL	√	√
	xxxxxxxxxxx		
NPM1-RARA			
KMT2A-CBL			
IGH-BCL6	HDAC1		√
	TP53		√
	CTBP1		√
	EP300		√
	NCOR2	√	
	CREBBP		√
	xxxxx		
	HDAC2		√
	SMARCA4	√	√
	CREBBP		√
	xxxxxxxxxxx		
LCP1-BCL6	HDAC1		√
	TP53		√
	CTBP1		√
	EP300		√
	NCOR2	√	
	CREBBP		√
	xxxxx		
	HDAC2		√
	SMARCA4	√	√
	CREBBP		√
	xxxxxxxxxxx		
CREBBP-KAT6A	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		

	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxx		
KMT2A-ARHGAP26	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxx		
FOXO3-KMT2A	SMARCC2		
	KMT2A	√	
	SMARCC1		√
	CHD3	√	
	SMARCA2	√	
	CREBBP		√
	xxxxx		
	SMARCA2	√	
	EP300		√
	CREBBP		√
	xxxxxxxxxx		
KMT2A-DCPS	SMARCC2		
	KMT2A	√	
	HDAC2		√
	CHD3	√	
	SMARCC1		√
	POLR2A		
	SMARCA2	√	
	CREBBP		√
	SIN3A	√	
	xxxxx		
	CTBP1		√
	KMT2A	√	
	CREBBP		√
	xxxxxxxxxx		
KMT2A-EP300			
	xxxxxxxxxx		
IGH-CEBPE	UBE2I		
	BATF	√	
	DDIT3	√	
	CEBPG		
	CEBPE		

	FOS	√	
	JUN	√	
	STAT6	√	
	RB1	√	√
	PIAS1		√
	FOSL1	√	
	BATF3		
	BATF2		√
	ATF4	√	
	MYB	√	
	ATF3	√	√
	xxxxxxxxxx		
HSP90AA1-BCL6			

Table S4: SC - OG, TS

	Proteins	OG	TS
ASPSCR1-TFE3			
	xxxxxxxxxxxxxxxxxxxx		
ASTN2-CNOT2	CNOT6L		
	AURKA	√	
	CNOT8		
	TNRC6C		
	TNRC6B		
	CNOT3		√
	CNOT2		
	CNOT1		
	CNOT7		
	AGO2		
	xxxxx		
	HDAC3	√	√
	GPS2	√	
	CNOT2		
	NCOR2	√	
	NCOR1	√	
	xxxxxxxxxxxxxxxxxxxx		
BCOR-ZC3H7B	HDAC3	√	√
	HDAC4	√	
	SP1		
	CTBP1		√
	NACC1		
	NCOR2	√	
	xxxxx		
	HDAC1		√
	CTBP1		√
	NCOR2	√	
	xxxxxxxxxxxxxxxxxxxx		
BCOR-CCNB3	HDAC3	√	√
	HDAC4	√	
	SP1		
	CTBP1		√
	NACC1		
	NCOR2	√	

	HDAC1		√
	CTBP1		√
	NCOR2	√	
	XXXXXXXXXXXXXXXXXXXX		
CDX1-IRF2BP2	ELAVL1	√	
	NTRK1	√	
	IRF2BPL		
	IRF2BP2	√	
	RBM39	√	
	XXXXXXXXXXXXXXXXXXXX		
CIC-DUX4			
	XXXXXXXXXXXXXXXXXXXX		
CREB1-EWSR1	BRCA1		√
	EPAS1		√
	MYOD1	√	
	ESR1	√	√
	JUN	√	
	POLR2A		
	EP300		√
	SMARCA4	√	√
	EWSR1	√	
	CREBBP		√
	xxxxx		
	NR3C1		
	EP300		√
	SMARCA4	√	√
	CREBBP		√
	xxxxx		
	NONO	√	
	SMARCA4	√	√
	CUL3		
	XXXXXXXXXXXXXXXXXXXX		
CTDSP2-FAM19A2	SETD1A		
	POLR2A		
	INTS6	√	√
	CTDSP1		
	CTDSP2		
	XXXXXXXXXXXXXXXXXXXX		
CXorf67-MBTD1			
	XXXXXXXXXXXXXXXXXXXX		
EPC1-PHF1	HDAC1		√
	DHX9	√	
	TP53		√
	ELAVL1	√	
	E2F6	√	
	RBBP7		√
	RBBP4	√	
	EZH1		√
	EZH2		√
	EED		√
	XRCC6		√
	XRCC5		√
	PHF1		
	xxxxx		

	HDAC1		√
	TP53		√
	YEATS4		
	TRIM27	√	
	KAT5	√	√
	TRIM23		
	HIST1H2BA		
	DMAP1		
	MYC	√	
	XRCC6		√
	MORF4L1		
	ING3	√	√
	xxxxxxxxxxxxxxxxxxx		
ERG-EWSR1	TP53		√
	ESR1	√	√
	PARP1		√
	EP300		√
	CREBBP		√
	XRCC6		√
	xxxxx		
	EPAS1		√
	EP300		√
	CREBBP		√
	xxxxxxxxxxxxxxxxxxx		
ETV6-NTRK3	PDGFRB	√	
	SHC1	√	
	CRKL	√	
	GAB2	√	
	NTRK1	√	
	PLCG1	√	
	GRB2	√	
	xxxxx		
	HDAC3	√	√
	PIN1		√
	ETV6	√	√
	xxxxxxxxxxxxxxxxxxx		
EWSR1-ATF1	PDGFRB	√	
	SHC1	√	
	CRKL	√	
	GAB2	√	
	NTRK1	√	
	PLCG1	√	
	GRB2	√	
	xxxxx		
	HDAC3	√	√
	PIN1		√
	ETV6	√	√
	xxxxxxxxxxxxxxxxxxx		
EWSR1-FLI1	BRCA1		√
	POLR2A		
	ESR1	√	√
	EP300		√
	KAT2B		
	CREBBP		√

	xxxxx		
	EPAS1		√
	EP300		√
	CREBBP		√
	xxxxxxxxxxxxxxxxxxxxx		
EWSR1-NR4A3	TSG101	√	√
	DHX9	√	
	HDAC3	√	√
	TRIM28	√	
	FUS	√	√
	RAD23A	√	
	JUN	√	
	PRMT1		
	ILK		√
	BMI1	√	
	ELK1	√	
	POLR2A		
	CHERP		
	ATXN3		
	EP300		√
	IRF3		√
	EPAS1		√
	TP53		√
	ESR1	√	√
	NONO	√	
	RPA1		√
	NTRK1	√	
	RPA2	√	
	CUL4A		
	CUL4B	√	
	FASN		
	CREBBP		√
	HBP1	√	√
	CUL5		√
	HLTF	√	√
	EWSR1	√	
	YBX1	√	
	CUL1	√	√
	CUL2		√
	CUL3		
	xxxxx		
	HDAC2		√
	CREBBP		√
	ESR1	√	√
	xxxxx		
	NONO	√	
	FXR2		
	CUL3		
	xxxxxxxxxxxxxxxxxxxxx		
EWSR1-ETV4	TSG101	√	√
	DHX9	√	
	HDAC3	√	√
	RFWD2		√
	FUS	√	√

	RAD23A	√	
	JUN	√	
	PRMT1		
	ILK		√
	SMAD2	√	√
	BMI1	√	
	ELK1	√	
	POLR2A		
	CHERP		
	ATXN3		
	EP300		√
	IRF3		√
	EPAS1		√
	TP53		√
	ESR1	√	√
	NONO	√	
	RPA1		√
	NTRK1	√	
	RPA2	√	
	CUL4A		
	CUL4B	√	
	FASN		
	CREBBP		√
	HBP1	√	√
	CUL5		√
	HLTF	√	√
	EWSR1	√	
	YBX1	√	
	CUL1	√	√
	CUL2		√
	CUL3		
	xxxxx		
	HDAC2		√
	CREBBP		√
	ESR1	√	√
	xxxxx		
	NONO	√	
	FXR2		
	CUL3		
	xxxxxxxxxxxxxxxxxxxx		
EWSR1-PATZ1	TSG101	√	√
	DHX9	√	
	HDAC3	√	√
	RFWD2		√
	FUS	√	√
	RAD23A	√	
	JUN	√	
	PRMT1		
	ILK		√
	SMAD2	√	√
	BMI1	√	
	ELK1	√	
	POLR2A		
	CHERP		

	ATXN3		
	EP300		√
	IRF3		√
	EPAS1		√
	TP53		√
	ESR1	√	√
	NONO	√	
	RPA1		√
	NTRK1	√	
	RPA2	√	
	CUL4A		
	CUL4B	√	
	FASN		
	CREBBP		√
	HBP1	√	√
	CUL5		√
	HLTF	√	√
	EWSR1	√	
	YBX1	√	
	CUL1	√	√
	CUL2		√
	CUL3		
	xxxxx		
	HDAC2		√
	CREBBP		√
	ESR1	√	√
	xxxxx		
	NONO	√	
	FXR2		
	CUL3		
	xxxxxxxxxxxxxxxxxxxx		
EWSR1-DDIT3	HDAC1		√
	EPAS1		√
	HDAC3	√	√
	DDIT3	√	
	CEBPB	√	
	ESR1	√	√
	FOS	√	
	JUN	√	
	HBP1	√	√
	POLR2A		
	IRF3		√
	TP53		√
	EP300		√
	EWSR1	√	
	CREBBP		√
	xxxxx		
	DHX9	√	
	CUL4A		
	CUL4B	√	
	CUL5		√
	CUL1	√	√
	CUL2		√
	CUL3		

	XXXXXXXXXXXXXXXXXXXX		
EWSR1-POU5F1	IRF3		√
	EPAS1		√
	HDAC3	√	√
	TP53		√
	ESR1	√	√
	JUN	√	
	HBP1	√	√
	ETS2		
	CTNNB1	√	
	POLR2A		
	EP300		√
	EWSR1	√	
	CREBBP		√
	xxxxx		
	NONO	√	
	CUL2		√
	CUL3		
	XXXXXXXXXXXXXXXXXXXX		
EWSR1-SP3	HDAC1		√
	EPAS1		√
	HDAC3	√	√
	CEBPB	√	
	ESR1	√	√
	JUN	√	
	HBP1	√	√
	POLR2A		
	IRF3		√
	TP53		√
	RELA	√	
	EP300		√
	EWSR1	√	
	CREBBP		√
	xxxxx		
	DHX9	√	
	CUL4A		
	CUL4B	√	
	CUL5		√
	CUL1	√	√
	CUL2		√
	CUL3		
	XXXXXXXXXXXXXXXXXXXX		
FOXO4-CIC	XPO1		
	CTNNB1	√	
	VDR		√
	ESR1	√	√
	SMAD4	√	√
	SMAD3	√	
	SFN		√
	AKT1	√	
	FOXO4	√	√
	MDM2	√	
	NLK		
	CREBBP		√

	XXXXXXXXXXXXXXXXXXXX		
FUS-ERG	RPA1		√
	SF3B2		
	PRKDC		
	PRPF8	√	
	SF3A2		
	DHX15		
	RPA2	√	
	CUL3		
	xxxxx		
	ABL1	√	
	PARP1		√
	PRKDC		
	XXXXXXXXXXXXXXXXXXXX		
FUS-CREB3L1	NONO	√	
	CUL4A		
	CUL4B	√	
	DHX15		
	CUL5		√
	CUL1	√	√
	CUL2		√
	CUL3		
	xxxxx		
	VCP		
	FBXW11		
	CUL1	√	√
	XXXXXXXXXXXXXXXXXXXX		
FUS-DDIT3	HDAC1		√
	DDX17		
	EPAS1		√
	RELA	√	
	ESR1	√	√
	JUN	√	
	TP73	√	√
	EWSR1	√	
	CTNNB1	√	
	DDX5	√	
	CDK2	√	√
	DDIT3	√	
	MDM2	√	
	EP300		√
	TRIP4		
	CREBBP		√
	xxxxx		
	VCP		
	FBXW11		
	CUL1	√	√
	XXXXXXXXXXXXXXXXXXXX		
FUS-ATF1	HDAC1		√
	DDX17		
	EPAS1		√
	RELA	√	
	ESR1	√	√
	JUN	√	

	TP73	√	√
	EWSR1	√	
	CTNNB1	√	
	DDX5	√	
	CDK2	√	√
	DDIT3	√	
	MDM2	√	
	EP300		√
	TRIP4		
	CREBBP		√
	xxxxx		
	VCP		
	FBXW11		
	CUL1	√	√
	xxxxxxxxxxxxxxxxxxxx		
FUS-CREB3L2	NONO	√	
	CUL4A		
	CUL4B	√	
	DHX15		
	CUL5		√
	CUL1	√	√
	CUL2		√
	CUL3		
	xxxxx		
	VCP		
	FBXW11		
	CUL1	√	√
	xxxxxxxxxxxxxxxxxxxx		
HEY1-NCOA2	BRCA1		√
	RARA	√	
	NR3C1		
	VDR		√
	STAT6	√	
	HNF4A		√
	PRMT1		
	CARM1	√	
	RXRA	√	
	PPARG	√	√
	PPARD	√	
	AR		
	PPARA		√
	ESR2	√	√
	EP300		√
	NCOA2	√	
	NCOA3	√	
	NCOA1	√	
	TP53		√
	ESR1	√	√
	AHR		√
	ARNT		√
	THRB		√
	THRA	√	√
	NR113		
	NR112		√

	PGR		√
	CREBBP		√
	PIAS3	√	
	xxxxx		
	NCOA2	√	
	NCOA1	√	
	UBR5		
	xxxxxxxxxxxxxxxxxxxx		
IRX2-TERT	YWHAZ		
	AKT1	√	
	RPS6KB1		
	ENO1	√	
	MTOR	√	
	MDM2	√	
	TERT	√	
	XRCC6		√
	xxxxx		
	TERF1		
	STUB1		√
	TERT	√	
	POT1		
	xxxxx		
	TERT	√	
	MTOR	√	
	YWHAQ		
	RUVBL2	√	
	xxxxx		
	TPP1		
	TERT	√	
	POT1		
	xxxxxxxxxxxxxxxxxxxx		
JAZF1-SUZ12	DHX9	√	
	RBM5	√	√
	FBXW11		
	DDX3X		√
	NXF1		
	SF3B4		
	PRMT1		
	SF3B1	√	
	SF3B2		
	PRPF8	√	
	EED		√
	CRNKL1		
	RNPS1		
	UBE2I		
	SNRNP200		
	SRSF7		
	SNRPD3		
	RALY		
	DDX5	√	
	PRPF19		
	RNF2		
	SNRPA1		√
	SON		

	EFTUD2		
	U2AF1	√	
	SF3A1		
	EPRS		
	ILF2		
	EIF4A3		
	CDC40		
	ILF3	√	
	RANBP2	√	
	xxxxx		
	DNMT3B		√
	HDAC1		√
	HDAC2		√
	TRIM28	√	
	CHD4	√	
	UHRF1		
	DNMT1	√	
	MTA1	√	
	NR2C2		√
	EZH2		√
	GATAD2B		
	EED		√
	CBX5		√
	RBBP4	√	
	CBX3		
	SETDB1		
	xxxxx		
	VCP		
	BRCA1		√
	MTOR	√	
	NXF1		
	RUVBL2	√	
	xxxxx		
	VCP		
	FBXW11		
	SKP1	√	
	BTRC	√	
	EZH2		√
	xxxxx		
	DHX9	√	
	ADAR		
	EZH2		√
	FBXW11		
	xxxxx		
	HDAC2		√
	NXF1		
	JARID2		
	SETDB1		
	xxxxx		
	RELA	√	
	FBXW11		
	BTRC	√	
	xxxxx		
	BTRC	√	

	CSNK2B		
	NXF1		
	XXXXXXXXXXXXXXXXXXXX		
JAZF1-PHF1	DHX9	√	
	EZH1		√
	PPARG	√	√
	EZH2		√
	EED		√
	XRCC6		√
	XRCC5		√
	PHF1		
	xxxxx		
	HDAC1		√
	PPARG	√	√
	EZH2		√
	PHF1		
	xxxxx		
	PHF1		
	TP53		√
	XRCC6		√
	XXXXXXXXXXXXXXXXXXXX		
LMNA-NTRK1			
	XXXXXXXXXXXXXXXXXXXX		
MEAF6-TRERF1	HDAC1		√
	TRERF1		
	KAT5	√	√
	ING3	√	√
	CREBBP		√
	YEATS4		
	EP300		√
	MORF4L1		
	HIST1H2BA		
	xxxxx		
	ELAVL1	√	
	TRERF1		
	KAT6A		
	CREBBP		√
	NR5A1		
	xxxxx		
	SOX2	√	
	HDAC1		√
	TRERF1		
	XXXXXXXXXXXXXXXXXXXX		
MEAF6-PHF1	DHX9	√	
	EZH1		√
	EZH2		√
	EED		√
	XRCC6		√
	XRCC5		√
	PHF1		
	xxxxx		
	PHF1		
	TP53		√
	XRCC6		√

	xxxxx		
	KAT6A		
	TP53		√
	ELAVL1	√	
	xxxxx		
	HDAC1		√
	EZH2		√
	PHF1		
	xxxxxxxxxxxxxxxxxxxxx		
NR4A3-TAF15	TRIM28	√	
	FUS	√	√
	PRMT1		
	COPS6		
	COPS5		
	POLR2C		
	POLR2A		
	TAF15	√	
	SF1		
	NEDD8		
	POLR2E		
	RPA1		√
	RPA2	√	
	CUL4A		
	CUL4B	√	
	CUL5		√
	CUL1	√	√
	CUL2		√
	CUL3		
	xxxxx		
	EZH2		√
	TRIM28	√	
	CUL1	√	√
	xxxxxxxxxxxxxxxxxxxxx		
NR4A3-TFG	CUL4A		
	CUL4B	√	
	CUL5		√
	CUL1	√	√
	CUL2		√
	CUL3		
	xxxxx		
	TRIM28	√	
	CUL1	√	√
	CUL3		
	xxxxxxxxxxxxxxxxxxxxx		
NR6A1-TRHDE			
	xxxxxxxxxxxxxxxxxxxxx		
NUP107-LGR5	NUP153		
	KPNB1		
	NTRK1	√	
	CUL3		
	xxxxx		
	NUP153		
	EIF4B		
	CUL3		

	xxxxx		
	EED		√
	KPNB1		
	TP53BP1		√
	xxxxxxxxxxxxxxxxxxxx		
PAPPA-NUP107	NUP153		
	ELAVL1	√	
	KPNB1		
	NTRK1	√	
	SMAD3	√	
	VCP		
	CUL3		
	EIF4B		
	xxxxx		
	SMAD9		
	SKIL	√	√
	PAPPA		
	SMAD2	√	√
	SMAD3	√	
	xxxxx		
	TP53BP1		√
	ELAVL1	√	
	EED		√
	KPNB1		
	xxxxx		
	NUP214	√	
	SMAD2	√	√
	SMAD3	√	
	xxxxxxxxxxxxxxxxxxxx		
PAX3-FOXO1	NCOA1	√	
	ESR1	√	√
	PARP1		√
	AR		
	EP300		√
	CREBBP		√
	xxxxx		
	TRIM28	√	
	PARP1		√
	CREBBP		√
	xxxxxxxxxxxxxxxxxxxx		
PAX7-FOXO1	RARA	√	
	NCOA1	√	
	MYOD1	√	
	ESR1	√	√
	HNF4A		√
	PARP1		√
	SMAD3	√	
	FOXO1	√	√
	AR		
	MDM2	√	
	EP300		√
	CREBBP		√
	xxxxx		
	AKT1	√	

	EP300		√
	CREBBP		√
	xxxxxxxxxxxxxxxxxxxx		
SS18-SSX2	DPF2		
	SMARCC2		
	SMARCC1		
	PHF10		
	ELAVL1	√	
	DPF3		
	ARID2	√	√
	DPF1		
	SMARCD3		
	SMARCE1		
	SMARCD1		
	EED		√
	SMARCA2	√	√
	EP300		√
	SMARCA4	√	√
	HDAC1		√
	ARID1B	√	
	ARID1A	√	√
	ACTL6A		
	HDAC2		√
	CUL3		
	RNF2		
	SMARCD2		
	xxxxx		
	GRB2	√	
	YWHAG		
	CUL3		
	xxxxxxxxxxxxxxxxxxxx		
SS18-SSX1	SMARCC2		
	DPF2		
	SMARCC1		
	PHF10		
	ELAVL1	√	
	DPF3		
	DPF1		
	ARID2	√	√
	HDAC2		√
	SMARCD3		
	SMARCE1		
	SMARCD1		
	EED		√
	SMARCA2	√	√
	EP300		√
	SMARCA4	√	√
	HDAC1		√
	ARID1B	√	
	ARID1A	√	√
	ACTL6A		
	CUL3		
	SMARCD2		
	xxxxx		

	GRB2	√	
	YWHAG		
	CUL3		
	XXXXXXXXXXXXXXXXXXXX		
SS18L1-SSX1	SMARCC1		
	STAT3	√	√
	BMI1	√	
	WHSC1L1	√	√
	SMAD3	√	
	HDAC2		√
	SMAD1		
	EP300		√
	SMARCA4	√	√
	CREBBP		√
	xxxxx		
	DPF2		
	SMARCC1		
	SMARCE1		
	SMARCA4	√	√
	CUL3		
	XXXXXXXXXXXXXXXXXXXX		
SSX1-SYT4			
	XXXXXXXXXXXXXXXXXXXX		
TGFBR3-MGEA5	MAST1		
	RNF32		
	PAXIP1		
	xxxxx		
	CBX8		
	CSNK2B		
	PAXIP1		
	XXXXXXXXXXXXXXXXXXXX		
TRIO-TERT	YWHAZ		
	AKT1	√	
	RPS6KB1		
	ENO1	√	
	MTOR	√	
	MDM2	√	
	TERT	√	
	XRCC6		√
	xxxxx		
	TERF1		
	STUB1		√
	TERT	√	
	POT1		
	xxxxx		
	TERT	√	
	MTOR	√	
	YWHAQ		
	RUVBL2	√	
	XXXXXXXXXXXXXXXXXXXX		
WDR70-RCOR1	SMARCC2		
	HDAC1		√
	HDAC3	√	√
	HDAC2		√

	KDM1A		
	RCOR1		
	NR2C1		
	SMARCE1		
	CTBP1		√
	NR2E1		
	SMARCA4	√	√
	CTBP2		
	KDM5B		
	MTA3	√	
	xxxxx		
	KDM1A		
	HDAC3	√	√
	CTBP1		√
	xxxxxxxxxxxxxxxxxxxxx		
YWHAE-NUTM2B	LARP1		
	NOS2		
	YWHAQ		
	YWHAG		
	HUWE1	√	
	MAST2	√	
	NTRK1	√	
	VCP		
	AKT1	√	
	MAP2K1	√	
	FBXW11		
	ARAF	√	
	CUL3		
	PARK2		√
	RAF1	√	
	YWHAZ		
	UBXN1		
	TP53		√
	RUVBL2	√	
	BTRC	√	
	TUBB		
	CDC37		
	YWHAH		
	MAST3		
	BRAF	√	
	YWHAB		
	KSR1	√	
	YWHAE	√	
	CUL1	√	√
	MAPK7	√	
	xxxxx		
	YWHAZ		
	IGF1R	√	
	IRS1		
	YWHAQ		
	MST1R	√	√
	NTRK1	√	
	CBL	√	√
	TUBB		

	YWHAB		
	YWHAH		
	GRB2	√	
	ABL1	√	
	SORBS2	√	
	BCAR1	√	
	YWHAE	√	
	xxxxx		
	VCP		
	CDK2	√	√
	CUL1	√	√
	xxxxx		
	CDC37		
	LRRK2	√	
	YWHAE	√	
	xxxxxxxxxxxxxxxxxxxx		
YWHAE-NUTM2A-AS1	LARP1		
	NOS2		
	YWHAQ		
	YWHAG		
	HUWE1	√	
	MAST2	√	
	NTRK1	√	
	VCP		
	AKT1	√	
	MAP2K1	√	
	FBXW11		
	ARAF	√	
	CUL3		
	PARK2		√
	RAF1	√	
	YWHAZ		
	UBXN1		
	TP53		√
	RUVBL2	√	
	BTRC	√	
	TUBB		
	CDC37		
	YWHAH		
	MAST3		
	BRAF	√	
	YWHAB		
	KSR1	√	
	YWHAE	√	
	CUL1	√	√
	MAPK7	√	
	xxxxx		
	YWHAZ		
	IGF1R	√	
	IRS1		
	YWHAQ		
	MST1R	√	√
	NTRK1	√	
	CBL	√	√

	TUBB		
	YWHAB		
	YWHAH		
	GRB2	√	
	ABL1	√	
	SORBS2	√	
	BCAR1	√	
	YWHAE	√	
	xxxxx		
	VCP		
	CDK2	√	√
	CUL1	√	√
	xxxxx		
	CDC37		
	LRRK2	√	
	YWHAE	√	
	xxxxxxxxxxxxxxxxxxxx		
YWHAE-NUTM2A	LARP1		
	NOS2		
	YWHAQ		
	YWHAG		
	HUWE1	√	
	MAST2	√	
	NTRK1	√	
	VCP		
	AKT1	√	
	MAP2K1	√	
	FBXW11		
	ARAF	√	
	CUL3		
	PARK2		√
	RAF1	√	
	YWHAZ		
	UBXN1		
	TP53		√
	RUVBL2	√	
	BTRC	√	
	TUBB		
	CDC37		
	YWHAH		
	MAST3		
	BRAF	√	
	YWHAB		
	KSR1	√	
	YWHAE	√	
	CUL1	√	√
	MAPK7	√	
	xxxxx		
	YWHAZ		
	IGF1R	√	
	IRS1		
	YWHAQ		
	MST1R	√	√
	NTRK1	√	

	CBL	√	√
	TUBB		
	YWHAB		
	YWHAH		
	GRB2	√	
	ABL1	√	
	SORBS2	√	
	BCAR1	√	
	YWHAE	√	
	xxxxx		
	VCP		
	CDK2	√	√
	CUL1	√	√
	xxxxx		
	CDC37		
	LRRK2	√	
	YWHAE	√	
	xxxxxxxxxxxxxxxxxxxx		

Table S5: CA - OG, TS

	Proteins	OG	TS
ARGLU1-CXCR4	APP	√	
	CHERP	√	
	SNRNP70	√	
	SRPK1	√	
	SRPK2		√
	PTK2	√	
	JAK2	√	
	SOCS3	√	
	PTPN11	√	
	NTRK1	√	
	PTK2	√	
	ELAVL1	√	
	SRPK1	√	
	NTRK1	√	
	PTK2	√	
	JAK2	√	
	JAK3	√	
	SOCS3	√	
	PTPN11	√	
	STAM	√	
ATXN10-FBLN1	FN1		√
	ATXN10	√	
	EGFR	√	
	GSTK1	√	
	ATXN10	√	
	VCP		√
	BSG	√	√
	CUL3	√	
	VCP		√
	ABCE1	√	√
	ATXN10	√	

	APP	√	
	YWHAQ	√	
	CUL3	√	
BCAS3-NFS1	CTBP1		√
	CTBP2	√	
	BCAS3	√	
	KAT2B	√	
	CTBP1		√
	CTBP2	√	
	CDC23	√	
	KAT2B	√	
	BCAS3	√	
BCAS4-BCAS3	CTBP1		√
	CTBP2	√	
	BCAS3	√	
	KAT2B	√	
	CTBP1		√
	CTBP2	√	
	CDC23	√	
	KAT2B	√	
	BCAS3	√	
BCL2L12-PRMT1	NCOA2	√	
	NCOA3	√	
	NCOA1	√	
	TP53		√
	ESR1	√	√
	BRCA1		√
	PRMT1	√	
	THRB	√	
	CARM1	√	
	NR1H2	√	
	AR	√	
	PPARA	√	
	EP300		√
	NCOA2	√	
	NCOA3	√	
	NCOA1	√	
	EP300		√
	PARP1		√
CAPNS1-WDR62	YWHAZ	√	
	FBXW11	√	
	FN1		√
	HUWE1	√	
	YWHAQ	√	
	GAPDH	√	
	FERMT2	√	
	YWHAH	√	
	VCAM1		√
	YWHAB	√	
	PAFAH1B1	√	
	YWHAG	√	
	PAK2	√	
	YWHAE	√	
	OGFOD1	√	

	MYO1E	√	
	ASNS	√	
	TBCB	√	
	CAPN2	√	
	PROSC	√	
	YWHAE	√	
CCDC6-ANK3	HDAC1		√
	NR3C1	√	
	TRIM28	√	
	SF3A1	√	
	HNRNPR	√	
	BRCC3	√	
	HDAC1		√
	NR3C1	√	
	TRIM28	√	
	ELAVL1	√	
	SKP1	√	
	HNRNPR	√	
	PPP1CA	√	
	BRCC3	√	
	NTRK1	√	
	SF3A1	√	
	CUL1	√	√
	FBXW7	√	√
CCDC9-DHX34	EIF4A3	√	
	SNIP1	√	
	CCDC9	√	
	PRPF40A	√	
CDC27-ST7L	CDC16	√	
	CDC27	√	
	MDC1	√	
	CDC20	√	
	CREBBP		√
	ANAPC2	√	
	ANAPC7	√	
	CREBBP		√
	E2F1	√	
	RB1	√	
	TFDP1	√	
	CDC16	√	
	CDC27	√	
	MDC1	√	
	SMAD2	√	√
	TP53BP1		√
	CREBBP		√
	UBE2S	√	
	ANAPC2	√	
	ANAPC7	√	
CDK7-RIN3	BRCA1		√
	TP53		√
	RUVBL2	√	
	SUPT5H	√	
	ESR1	√	√
	RPA1		√

	HNRNPU		√
	RPA2	√	√
	CDK2	√	√
	POLR2A		√
	GTF2H1	√	
	RPA1		√
	RPA2	√	√
	POLR2A		√
	CCNH	√	
	HDAC2		√
	TP53		√
	ESR1	√	√
	MTA1	√	
	GTF2H1	√	
	ERCC3	√	
	POLR2A		√
	ERCC5	√	
	BRCA1		√
	POLR2A		√
	RUVBL2	√	
	GTF2H1	√	
	RPA1		√
	RPA2	√	√
	PRKCI	√	
	APP	√	
	CDK7	√	
	CDC37	√	
CHERP-CPAMD8	DHX8	√	
	U2AF1	√	
	RPA1		√
	PRPF40A	√	
	RPA2	√	√
	CHERP	√	
	SF3A2	√	
	RBM39	√	
	EWSR1	√	
	DHX8	√	
	AGGF1	√	
	RNPS1	√	
	SNIP1	√	
	SF3B4	√	
	NTRK1	√	
	CHERP	√	
	SRPK1	√	
	SRPK2		√
	U2AF1	√	
	U2AF2	√	
	RPA1		√
	APBB1	√	
	PRPF40A	√	
	RPA2	√	√
	TTC14	√	
	RBM23	√	
	SF3A2	√	

	SNRNP70	√	
	RBM39	√	
	EWSR1	√	
	WBP4	√	
CYTH1-PRPSAP1	DDX17	√	
	DDX5	√	
	ILK		√
	COPS5		√
	CYTH1	√	
	ARRB2	√	
	ARF6	√	
	ARRB1	√	
	DDX5	√	
	FBXW11	√	
	DDX17	√	
	ILK		√
	ITGB2	√	
	COPS5		√
DLG1-CRYBG3	DLG1	√	
	LIN7A	√	
	LIN7C	√	
	APBA1	√	√
	CASK	√	
	DLG1	√	
	NTRK1	√	
	CASK	√	
	EPB41	√	
	DLG1	√	
	KHDRBS1	√	
	LCK	√	
	NTRK1	√	
	MAPK1	√	
	ARRB2	√	
	ARRB1	√	
DTX4-CCDC102B	MCM7	√	
	CDK18	√	
	LENG1	√	
	TRIM54	√	
	TRIM27	√	
	KIFC3	√	
	SFN	√	
	MARK1	√	
	CCDC102B	√	
EHD4-FSIP1	EHD4	√	
	CTPS2	√	
	EHD1	√	
	EGFR	√	
	NTRK1	√	
	WARS	√	
	PLCG1	√	
	UBA2	√	
	ADSL	√	
	UQCRC2	√	
	PLCG1	√	

	EHD4	√	
	EGFR	√	
	NTRK1	√	
ELK4-SLC26A9	BRCA1		√
	MAPK3	√	√
	MAPK1	√	
	ELK4	√	
	BRCA1		√
	MAPK3	√	√
	MAPK1	√	
	ELK4	√	
	BLM	√	
ERAL1-DIDO1	HNRNPDL	√	
	RPA1		√
	RPA2	√	√
	HNRNPK	√	
	RBM15	√	
	CUL3	√	
	DIDO1	√	
	FUS	√	√
	FUS	√	√
	APP	√	
	RPA1		√
	RPA2	√	√
	RBM15	√	
	CUL3	√	
	DIDO1	√	
	SRPK2		√
GMDS-CCND3	PCNA	√	
	PPP1CC	√	√
	RBL2	√	
	PPP1CA	√	
	CCND3	√	
	RB1	√	
	POLD1	√	
	CDK2	√	√
	CDK4	√	
	CDK6	√	
	CREBBP		√
	GMDS	√	
	NSFL1C	√	
	CTH	√	
	CAPN2	√	
	ATIC	√	
	RARA	√	
	NCOA2	√	
	VDR		√
	CCND3	√	
	CREBBP		√
	MCM10	√	
	RBX1	√	
	CCND3	√	
	APP	√	
	NCOA2	√	

	RARA	√	
	VDR		√
	CCND3	√	
	CREBBP		√
HJURP-EIF4E2	FBXW11	√	
	TP53		√
	GIGYF2	√	
	APP	√	
	HUWE1	√	
	EIF4E2	√	
	YWHAB	√	
	SHMT2		√
	YWHAE	√	
INTS4-GAB2	SRC	√	
	PLCG1	√	
	GRB2	√	
	ZAP70	√	
	NTRK1	√	
	SHC1	√	
	PIK3CB	√	
	PIK3R2	√	
	PIK3R1	√	
KDM5A-ANO2	HDAC1		√
	HDAC2		√
	RBL1	√	
	TBP	√	
	RB1	√	
	VDR		√
	KDM5A	√	
	MORF4L1	√	
	HDAC2		√
	EZH2		√
	KDM5A	√	
	ESR1	√	√
MAPK10-FAM13A	HDAC1		√
	TP53		√
	HDAC9	√	
	JUN	√	
	DDX5	√	
	ELK1	√	
	MAPK10	√	
	RELA	√	
	CREBBP		√
	ATF2	√	
	APP	√	
	MAPK10	√	
	MAP2K4	√	
MAPRE1-TM9SF4	YWHAZ	√	
	FN1		√
	APP	√	
	TUBB	√	
	NTRK1	√	
	VCAM1		√
	UNK	√	√

	COPS5		√
	CDK5RAP2	√	
	PRKACA	√	
	AKAP9	√	
	PRKACB	√	
	CLIP1	√	
	TUBB	√	
	TUBA1A	√	
	HDAC6	√	
	PDE4DIP	√	
	PRKACA	√	
	PRKACB	√	
	CDK5RAP2	√	
	AKAP9	√	
	TERF1	√	√
	SPTAN1	√	
	DST	√	
	MAPRE1	√	
NUMB-ALDH6A1	TP53		√
	NUMB	√	
	ITCH	√	
	MDM2	√	
	EGFR	√	
	EPS15	√	
	EGFR	√	
	AP2A1	√	
	NUMB	√	
	PRKCZ	√	
	NUMB	√	
	APP	√	
	EGFR	√	
PARD6B-CD48	PRKCI	√	
	RASSF8	√	
	PARD3	√	
	PARD6G	√	
	APP	√	
	PARD6B	√	
	PARD6A	√	
	YWHAH	√	
	PRKCZ	√	
	WWC1	√	
	PRKCI	√	
	PARD3	√	
	PARD6G	√	
	APP	√	
	PARD6B	√	
	PARD6A	√	
	YWHAH	√	
	PRKCZ	√	
	RAC1	√	√
	PARD6G	√	
	PARD6B	√	
	PARD6A	√	
PPP1R12A-MGAT4C	KDM1A	√	√

	ELAVL1	√	
	RPA1		√
	RPA2	√	√
	PPP1R12A	√	
	CUL1	√	√
	KDM1A	√	√
	NUDT5	√	
	TP53		√
	ELAVL1	√	
	PUS1	√	
	NUAK1	√	
	AARSD1	√	
	RPA1		√
	NTRK1	√	
	RPA2	√	√
	RPRD1B	√	
	PPP1R12A	√	
	TRIM47	√	
	PAXIP1	√	√
	ACTR3	√	
	CUL1	√	√
RNF11-C8A	CBLB	√	
	RNF11	√	
	ITCH	√	
	SMAD4	√	√
	EPN1	√	
	RABGEF1	√	
	UBE2E1	√	√
	UBE2D3	√	√
	UBE2E3	√	
	HGS	√	√
	GGA1	√	
	AKT1	√	
	GGA3	√	
	GGA2	√	
	AP2A1	√	
	EPN3	√	
	UBE2D1	√	√
	AP2B1	√	
	CSNK2A1		√
	SMURF1	√	
	EPS15	√	
	SMURF2	√	
	UBQLN2	√	
	STAM2	√	
	NEDD4	√	√
	UBQLN4	√	√
	NEDD4L	√	√
	APP	√	
	RNF11	√	
	PSMD4	√	
	PSMD7	√	
	PSMD6	√	
	PSMD11	√	

	PSMD10	√	
	PSMD3	√	
	PSMD12	√	
	PSMD13	√	
	USP14	√	
	PSMD14	√	
	PSMD1	√	
	PSMD2	√	
	APP	√	
	GGA1	√	
	GGA3	√	
	GGA2	√	
	APP	√	
	AKT1	√	
	RNF11	√	
	TBK1	√	
	APP	√	
	NEDD4	√	√
SIPA1L3-WDR62	MAPK10	√	
	WDR62	√	
	MAPK8	√	
	MAPK9	√	
	SFN	√	
	YWHAB	√	
	SIPA1L3	√	
	YWHAQ	√	
	YWHAB	√	
	FBXW11	√	
	MAPK10	√	
	ELAVL1	√	
	WDR62	√	
	TBP	√	
	MAPK8	√	
	MAPK9	√	
SLC26A6-PRKAR2A	AKAP7	√	
	AKAP9	√	
	PRKAR2A	√	
	PRKAR2B	√	
	PRKACA	√	
	PRKACB	√	
	PRKAR2A	√	
	AKAP7	√	
	PRKACA	√	
	PRKACB	√	
	PRKAR2B	√	
	GCH1	√	
ST14-APLP2	BRCA1		√
	APLP2	√	
	ETS1	√	
	JUN	√	
	SFN	√	
	HDAC5	√	
	APLP2	√	
	RPL26	√	

	BRCA1		√
	JUNB	√	
	JUN	√	
	APBB1	√	
	APBB2	√	
	KAT5	√	√
	ETS1	√	
	APLP2	√	
	MAPK8	√	
STRADB-NOP58	NIFK	√	
	NOP56	√	
	HNRNPU		√
	RUVBL2	√	
	NOLC1	√	
	SNU13	√	
	NTRK1	√	
	PUM3	√	
	RPS15A	√	
	RSL1D1	√	
	KRR1	√	
	DDX18	√	
	EIF6	√	
	DHX15	√	
	RPS4X	√	
	EED		√
	PRPF3	√	
	TARDBP	√	
	RPL11	√	
	EIF2S2	√	
	DDX27	√	
	NOP58	√	
	FN1		√
	DDX24	√	
	U2AF1	√	
	RPL30	√	
	ESR1	√	√
	DDX56	√	
	FTSJ3	√	
	DDX47	√	
	KPNA6	√	
	GTPBP4	√	
	WDR36	√	
	KPNA1	√	
	DKC1	√	
	RRP12	√	
	BOP1	√	
	FBL	√	
	TBL3	√	
	WDR36	√	
	NOP58	√	
	DHX15	√	
	NOP56	√	
STX16-RAE1	FBXW11	√	
	NXF1	√	

	FAF1	√	
	RAE1	√	
	ILF3	√	
	CUL1	√	√
	HNRNPUL1	√	
	CUL3	√	
	NXF1	√	
	CUL1	√	√
	ILF3	√	
	CUL3	√	
TANC2-CHD6	ZFYVE9	√	
	PPP1CC	√	√
	PPP1CA	√	
	TANC2	√	
	ZFYVE9	√	
	PPP1CC	√	√
	PPP1CA	√	
	TANC2	√	
	MAEA	√	
	RANBP9	√	
	MKLN1	√	
	MMP7	√	
	RMND5A	√	
	MAEA	√	
	RANBP9	√	
	MKLN1	√	
	RANBP10	√	
	MMP7	√	
	RMND5A	√	
TMPRSS2-ERG	CDC5L		√
	DDX3X	√	
	ELAVL1	√	
	CAD	√	
	NEDD4	√	√
	SF3B1	√	
	PARP1		√
	PRKDC	√	
	PRPF8	√	
	SFPQ	√	
	ERG	√	
	POLR2A		√
	TOP1	√	
	CLTC	√	
	SF3B2	√	
	XRCC5		√
	XRCC6		√
	DDX23	√	
	SNRNP200	√	
	DDX21	√	
	TUBB	√	
	NONO	√	
	JUN	√	
	HNRNPU		√
	PRPF40A	√	

	AR	√	
	NCL	√	
	HNRNPM	√	
	HNRNPC	√	
	TOP2B	√	
	ILF3	√	
	ILF2	√	
	PRPF8	√	
	ERG	√	
	SF3B2	√	
	SF3B1	√	
	PARP1		√
	PRKDC	√	

Table S6: LK,LY,ME,GL –DR/PA

	UN	OG	TS
BCR-ABL1			
RUNX1-RUNX1T1			√
KMT2A-MLLT10	SMARCC2		√
	POLR2A		√
IGH-BCL2	CASP3		√
KMT2A-AFF1	SMARCC2		√
	POLR2A		√
PICALM-MLLT10	DNM2	√	
	ILVBL	√	
	SEC24D	√	
	SEC24C	√	
PML-RARA	NR3C1	√	
	KAT2B	√	
	TRIP4	√	
KMT2A-MLLT3	SMARCC2		√
	POLR2A		√
KMT2A-AFDN	SMARCC2		√
	POLR2A		√
CBFB-MYH11	ACTA2	√	
	MYO1E	√	
IGH-MYC			
NUP98-DDX10	SIRT7	√	
	APP	√	
	DDX56	√	
	DDX54	√	
	PUM3	√	
	PWP1	√	
	PUM3	√	
	NXF1	√	
	KPNB1	√	
	HNRNPUL1	√	
	CDC37	√	
PCM1-JAK2	TEC	√	
	INSR	√	
KMT2A-SEPT9	SMARCC2		√
	POLR2A		√
FUS-ERG	SF3B2	√	

	PRKDC	√	
	SF3A2	√	
	DHX15	√	
	CUL3	√	
	PRKDC	√	
NUP98-HOXA9			
ETV6-ABL1	UBASH3B	√	
SET-NUP214	NXF1	√	
	FAF1	√	
	SUPT5H	√	
	GART	√	
	CUL3	√	
MNX1-ETV6	HDAC9	√	
	L3MBTL1	√	
	ETV7	√	
KMT2A-MLLT1	SMARCC2		√
	POLR2A		√
KMT2A-MLLT6	SMARCC2		√
	POLR2A		√
ETV6-ACSL6	HDAC9	√	
	L3MBTL1	√	
	ETV7	√	
ETV6-MECOM	UBE2I	√	
	EHMT2	√	
	SMAD1	√	
	KAT2B	√	
	SUV39H1	√	
	SUV39H1	√	
KMT2A-EPS15	SMARCC2		√
	POLR2A		√
KMT2A-GAS7	SMARCC2		√
	POLR2A		√
KMT2A-ABL1	SMARCC2		√
	POLR2A		√
KMT2A-MLLT11	SMARCC2		√
	POLR2A		√
MN1-ETV6	HDAC9	√	
KMT2A-MAML2	SMARCC2		√
KMT2A-FOXO4	SMARCC2		√
	POLR2A		√
DEK-NUP214	KAT2B	√	
	NXF1	√	
	DHX15	√	
	CUL3	√	
RUNX1-CBFA2T3			
NUP98-PSIP1	NXF1	√	
	EIF4A3		
	SON		
NUP98-HOXC13	NXF1	√	
	HNRNPAB		
	KPNB1		
	HNRNPUL1		
NUP98-HOXC11	SP1	√	
PAX5-ETV6	UBE2I	√	

	TBP	√	
NUP98-HOXA11	YY1	√	
BCR-PDGFR	UBASH3B	√	
	INPP5D	√	
BCR-FGFR1			
NPM1-RARA			
KMT2A-CBL			
IGH-BCL6			√
LCP1-BCL6			√
CREBBP-KAT6A	SMARCC2		√
	POLR2A		√
KMT2A-ARHGAP26	SMARCC2		√
	POLR2A		√
FOXO3-KMT2A	SMARCC2		√
KMT2A-DCPS	SMARCC2		√
	POLR2A		√
KMT2A-EP300			
IGH-CEBPE	UBE2I	√	
	CEBPG	√	
	CEBPE	√	
	BATF3	√	
HSP90AA1-BCL6			

Table S7: SC -DR/PA

	UN	OG	TS
ASPSR1-TFE3			
ASTN2-CNOT2	CNOT6L	√	
	CNOT8	√	
	TNRC6C	√	
	TNRC6B	√	
	CNOT2	√	
	CNOT1	√	
	CNOT7	√	
	AGO2	√	
	CNOT2	√	
BCOR-ZC3H7B	SP1	√	
	NACC1	√	
BCOR-CCNB3	SP1	√	
	NACC1	√	
CDX1-IRF2BP2	IRF2BPL	√	
CIC-DUX4			
CREB1-EWSR1	POLR2A		√
	NR3C1	√	
	CUL3	√	
CTDSP2-FAM19A2	SETD1A		√
	POLR2A		√
	CTDSP1		√
	CTDSP2		√
CXorf67-MBTD1			
EPC1-PHF1	PHF1		√
	YEATS4		√
	TRIM23		√
	HIST1H2BA		√
	DMAP1		√

	MORF4L1		√
ERG-EWSR1			
ETV6-NTRK3			
EWSR1-ATF1			
EWSR1-FLI1	POLR2A		√
	KAT2B	√	
EWSR1-NR4A3	PRMT1	√	
	POLR2A		√
	CHERP	√	
	ATXN3	√	
	CUL4A	√	
	FASN	√	
	CUL3	√	
	FXR2	√	
	CUL3	√	
EWSR1-ETV4	PRMT1	√	
	POLR2A		√
	CHERP	√	
	ATXN3	√	
	CUL4A	√	
	FASN	√	
	CUL3	√	
	FXR2	√	
	CUL3	√	
EWSR1-PATZ1	PRMT1	√	
	POLR2A		√
	CHERP	√	
	ATXN3	√	
	CUL4A	√	
	FASN	√	
	CUL3	√	
	FXR2	√	
	CUL3	√	
EWSR1-DDIT3	POLR2A		√
	CUL4A	√	
	CUL3	√	
EWSR1-POU5F1	ETS2	√	√
	POLR2A		√
	CUL3	√	
EWSR1-SP3	POLR2A		√
	CUL4A	√	
	CUL3	√	
FOXO4-CIC	XPO1	√	
	NLK	√	
FUS-ERG	SF3B2	√	
	PRKDC	√	
	SF3A2	√	
	DHX15		
	CUL3	√	
	PRKDC	√	
FUS-CREB3L1	CUL4A	√	
	DHX15	√	
	CUL3	√	
	VCP	√	

	FBXW11	√	
FUS-DDIT3	DDX17	√	
	TRIP4	√	
	VCP	√	
	FBXW11	√	
FUS-ATF1	DDX17	√	
	TRIP4	√	
	VCP	√	
	FBXW11	√	
FUS-CREB3L2	CUL4A	√	
	DHX15	√	
	CUL3	√	
	VCP	√	
	FBXW11	√	
HEY1-NCOA2	NR3C1	√	
	PRMT1	√	
	AR	√	
	NR1I3	√	
	UBR5	√	
IRX2-TERT	YWHAZ	√	
	RPS6KB1	√	
	TERF1	√	
	POT1	√	
	YWHAQ	√	
	TPP1	√	
	POT1	√	
JAZF1-SUZ12	FBXW11	√	
	NXF1	√	
	SF3B4	√	
	PRMT1	√	
	SF3B2	√	
	CRNKL1	√	
	RNPS1	√	
	UBE2I	√	
	SNRNP200	√	
	SRSF7	√	
	SNRPD3	√	
	RALY	√	
	PRPF19	√	
	RNF2	√	
	SON	√	
	EFTUD2	√	
	SF3A1	√	
	EPRS	√	
	ILF2	√	
	EIF4A3	√	
	CDC40	√	
	UHRF1	√	
	GATAD2B	√	
	CBX3	√	
	SETDB1	√	
	VCP	√	
	NXF1	√	
	VCP	√	

	FBXW11	√	
	ADAR	√	
	FBXW11	√	
	NXF1	√	
	JARID2	√	
	SETDB1	√	
	FBXW11	√	
	CSNK2B	√	
	NXF1	√	
JAZF1-PHF1	PHF1		√
	PHF1		√
	PHF1		√
LMNA-NTRK1			
MEAF6-TRERF1	TRERF1		√
	YEATS4		√
	MORF4L1		√
	HIST1H2BA		√
	TRERF1		√
	KAT6A		√
	NR5A1		√
	TRERF1		√
MEAF6-PHF1	PHF1		√
	PHF1		√
	KAT6A		√
	PHF1		√
NR4A3-TAF15	PRMT1	√	
	COPS6	√	
	COPS5	√	
	POLR2C	√	
	POLR2A	√	
	SF1	√	
	NEDD8	√	
	POLR2E	√	
	CUL4A	√	
	CUL3	√	
NR4A3-TFG	CUL4A	√	
	CUL3	√	
	CUL3	√	
	NUP153	√	
	KPNB1	√	
NR6A1-TRHDE	CUL3	√	
NUP107-LGR5	NUP153	√	
	EIF4B	√	
	CUL3	√	
	KPNB1	√	
	NUP153	√	
	KPNB1	√	
PAPPA-NUP107	VCP	√	
	CUL3	√	
	EIF4B	√	
	SMAD9	√	
	PAPPA	√	
	KPNB1	√	
	AR	√	

PAX3-FOXO1			
PAX7-FOXO1	AR	√	
	DPF2	√	
	SMARCC2	√	
	SMARCC1	√	
	PHF10	√	
SS18-SSX2	DPF3	√	
	DPF1	√	
	SMARCD3	√	
	SMARCE1	√	
	SMARCD1	√	
	ACTL6A	√	
	CUL3	√	
	RNF2	√	
	SMARCD2	√	
	YWHAG	√	
	CUL3	√	
	SMARCC2	√	
	DPF2	√	
	SMARCC1	√	
	PHF10	√	
SS18-SSX1	DPF3	√	
	DPF1	√	
	SMARCD3	√	
	SMARCE1	√	
	SMARCD1	√	
	ACTL6A	√	
	CUL3	√	
	SMARCD2	√	
	YWHAG	√	
	CUL3	√	
	SMARCC1	√	
SS18L1-SSX1	SMAD1	√	
	DPF2	√	
	SMARCC1	√	
	SMARCE1	√	
	CUL3	√	
	MAST1	√	
	RNF32	√	
SSX1-SYT4	PAXIP1	√	
TGFBR3-MGEA5	CSNK2B	√	
	PAXIP1	√	
	YWHAZ	√	
	RPS6KB1	√	
TRIO-TERT	TERF1	√	
	POT1	√	
	YWHAQ	√	
	SMARCC2		√
WDR70-RCOR1	KDM1A	√	
	RCOR1	√	
	NR2C1	√	
	SMARCE1	√	
	NR2E1	√	
	CTBP2	√	

	KDM5B	√	
	KDM1A	√	
	LARP1	√	
	NOS2	√	
	YWHAQ	√	
	YWHAG	√	
YWHAE-NUTM2B	VCP	√	
	FBXW11	√	
	CUL3	√	
	YWHAZ	√	
	UBXN1	√	
	TUBB	√	
	CDC37	√	
	YWHAH	√	
	MAST3	√	
	YWHAB	√	
	YWHAZ	√	
	IRS1	√	
	YWHAQ	√	
	TUBB	√	
	YWHAB	√	
	YWHAH	√	
	VCP	√	
	CDC37	√	
	LARP1	√	
	NOS2	√	
	YWHAQ	√	
	YWHAG	√	
YWHAE-NUTM2A-AS1	VCP	√	
	FBXW11	√	
	CUL3	√	
	YWHAZ	√	
	UBXN1	√	
	TUBB	√	
	CDC37	√	
	YWHAH	√	
	MAST3	√	
	YWHAB	√	
	YWHAZ	√	
	IRS1	√	
	YWHAQ	√	
	TUBB	√	
	YWHAB	√	
	YWHAH	√	
	VCP	√	
	CDC37	√	
	LARP1	√	
	NOS2	√	
	YWHAQ	√	
	YWHAG	√	
YWHAE-NUTM2A	VCP	√	
	FBXW11	√	
	CUL3	√	
	YWHAZ	√	

	UBXN1	√	
	TUBB	√	
	CDC37	√	
	YWHAH	√	
	MAST3	√	
	YWHAB	√	
	YWHAZ	√	
	IRS1	√	
	YWHAQ	√	
	TUBB	√	
	YWHAB	√	
	YWHAH	√	
	VCP	√	
	CDC37	√	

Table S8: CA -DR/PA

	Essential Community Vertices	OG	TS
ARGLU1-CXCR4	APP	√	
	CHERP	√	
	SNRNP70	√	
	SRPK1	√	
	PTK2	√	
	PTK2	√	
	SRPK1	√	
	PTK2	√	
	STAM	√	
ATXN10-FBLN1	ATXN10	√	
	GSTK1	√	
	ATXN10	√	
	VCP		√
	BSG	√	√
	CUL3	√	
	VCP		√
	ABCE1	√	√
	ATXN10	√	
	APP	√	
	YWHAQ	√	
	CUL3	√	
BCAS3-NFS1	CTBP2	√	
	KAT2B	√	
	CTBP2	√	
	CDC23	√	
	KAT2B	√	
BCAS4-BCAS3	CTBP2	√	
	KAT2B	√	
	CTBP2	√	
	CDC23	√	
	KAT2B	√	
BCL2L12-PRMT1	PRMT1	√	
	AR	√	
CAPNS1-WDR62	YWHAZ	√	
	FBXW11	√	

	YWHAQ	√	
	FERMT2	√	
	YWHAH	√	
	VCAM1		√
	YWHAB	√	
	PAFAH1B1	√	
	YWHAG	√	
	PAK2	√	
	OGFOD1	√	
	MYO1E	√	
	TBCB	√	
	CAPN2	√	
	PROSC	√	
CCDC6-ANK3	NR3C1	√	
	TRIM28	√	
	SF3A1	√	
	HNRNPR	√	
	BRCC3	√	
	NR3C1	√	
	TRIM28	√	
	HNRNPR	√	
	BRCC3	√	
	SF3A1	√	
CCDC9-DHX34	EIF4A3	√	
	SNIP1	√	
	CCDC9	√	
	PRPF40A	√	
CDC27-ST7L	ANAPC2	√	
	ANAPC7	√	
	TFDP1	√	
	UBE2S	√	
	ANAPC2	√	
	ANAPC7	√	
CDK7-RIN3	SUPT5H	√	
	HNRNPU		√
	POLR2A		√
	POLR2A		√
	POLR2A		√
	POLR2A		√
	PRKCI	√	
	APP	√	
	CDC37	√	
CHERP-CPAMD8	DHX8	√	
	PRPF40A	√	
	CHERP	√	
	SF3A2	√	
	DHX8	√	
	AGGF1	√	
	RNPS1	√	
	SNIP1	√	
	SF3B4	√	
	CHERP	√	
	SRPK1	√	
	U2AF2	√	

	APBB1	√	
	PRPF40A	√	
	TTC14	√	
	RBM23	√	
	SF3A2	√	
	SNRNP70	√	
	WBP4	√	
CYTH1-PRPSAP1	DDX17	√	
	COPS5		√
	CYTH1	√	
	ARRB2	√	
	ARRB1	√	
	FBXW11	√	
	DDX17	√	
	ITGB2	√	
	COPS5		√
DLG1-CRYBG3	LIN7A	√	
	LIN7C	√	
	APBA1	√	√
	CASK	√	
	CASK	√	
	KHDRBS1	√	
	ARRB2	√	
	ARRB1	√	
DTX4-CCDC102B	MCM7	√	
	LENG1	√	
	TRIM54	√	
	MARK1	√	
	CCDC102B	√	
EHD4-FSIP1	EHD4	√	
	CTPS2	√	
	EHD1	√	
	WARS	√	
	UBA2	√	
	ADSL	√	
	UQCRC2	√	
	EHD4	√	
ELK4-SLC26A9			
ERAL1-DIDO1	HNRNPDL	√	
	HNRNPK	√	
	CUL3	√	
	APP	√	
	CUL3	√	
GMDS-CCND3	PPP1CC	√	√
	POLD1	√	
	GMDS	√	
	NSFL1C	√	
	CTH	√	
	CAPN2	√	
	MCM10	√	
	APP	√	
HJURP-EIF4E2	FBXW11	√	
	GIGYF2	√	
	APP	√	

	EIF4E2	√	
	YWHAB	√	
	SHMT2		√
INTS4-GAB2	ZAP70	√	
KDM5A-ANO2	TBP	√	
	MORF4L1	√	
MAPK10-FAM13A	HDAC9	√	
	RELA	√	
	APP	√	
MAPRE1-TM9SF4	YWHAZ	√	
	APP	√	
	TUBB	√	
	VCAM1		√
	UNK	√	√
	COPS5		√
	CDK5RAP2	√	
	PRKACA	√	
	PRKACB	√	
	TUBB	√	
	TUBA1A	√	
	PRKACA	√	
	PRKACB	√	
	CDK5RAP2	√	
	TERF1	√	√
	SPTAN1	√	
NUMB-ALDH6A1	ITCH	√	
	AP2A1	√	
	PRKCZ	√	
	APP	√	
PARD6B-CD48	PRKCI	√	
	PARD3	√	
	PARD6G	√	
	APP	√	
	PARD6B	√	
	PARD6A	√	
	YWHAH	√	
	PRKCZ	√	
	WWC1	√	
	PRKCI	√	
	PARD3	√	
	PARD6G	√	
	APP	√	
	PARD6B	√	
	PARD6A	√	
	YWHAH	√	
	PRKCZ	√	
	PARD6G	√	
	PARD6B	√	
	PARD6A	√	
PPP1R12A-MGAT4C	KDM1A	√	√
	PPP1R12A	√	
	KDM1A	√	√
	PUS1	√	
	AARSD1	√	

	RPRD1B	√	
	PPP1R12A	√	
	TRIM47	√	
	PAXIP1	√	√
	ACTR3	√	
RNF11-C8A	ITCH	√	
	EPN1	√	
	RABGEF1	√	
	UBE2E1	√	√
	UBE2D3	√	√
	UBE2E3	√	
	HGS	√	√
	GGA3	√	
	GGA2	√	
	AP2A1	√	
	EPN3	√	
	UBE2D1	√	√
	AP2B1	√	
	SMURF1	√	
	SMURF2	√	
	UBQLN2	√	
	STAM2	√	
	UBQLN4	√	√
	APP	√	
	PSMD4	√	
	PSMD7	√	
	PSMD6	√	
	PSMD11	√	
	PSMD10	√	
	PSMD3	√	
	PSMD12	√	
	PSMD13	√	
	USP14	√	
	PSMD14	√	
	PSMD1	√	
	APP	√	
	GGA3	√	
	GGA2	√	
	APP	√	
	TBK1	√	
	APP	√	
SIPA1L3-WDR62	WDR62	√	
	YWHAB	√	
	SIPA1L3	√	
	YWHAQ	√	
	YWHAB	√	
	FBXW11	√	
	WDR62	√	
	TBP	√	
SLC26A6-PRKAR2A	AKAP7	√	
	PRKAR2A	√	
	PRKAR2B	√	
	PRKACA	√	
	PRKACB	√	

	PRKAR2A	√	
	AKAP7	√	
	PRKACA	√	
	PRKACB	√	
	PRKAR2B	√	
	GCH1	√	
ST14-APLP2	APLP2	√	
	HDAC5	√	
	APLP2	√	
	APBB1	√	
	APBB2	√	
	APLP2	√	
STRADB-NOP58	NIFK	√	
	NOP56	√	
	HNRNPU		√
	SNU13	√	
	PUM3	√	
	RPS15A	√	
	RSL1D1	√	
	KRR1	√	
	DDX18	√	
	EIF6	√	
	DHX15	√	
	RPS4X	√	
	PRPF3	√	
	TARDBP	√	
	EIF2S2	√	
	DDX27	√	
	NOP58	√	
	DDX24	√	
	RPL30	√	
	DDX56	√	
	FTSJ3	√	
	DDX47	√	
	KPNA6	√	
	WDR36	√	
	KPNA1	√	
	RRP12	√	
	FBL	√	
	TBL3	√	
	WDR36	√	
	NOP58	√	
	DHX15	√	
	NOP56	√	
STX16-RAE1	FBXW11	√	
	NXF1	√	
	FAF1	√	
	RAE1	√	
	HNRNPUL1	√	
	CUL3	√	
	NXF1	√	
	CUL3	√	
TANC2-CHD6	ZFYVE9	√	
	PPP1CC	√	√

	TANC2	√	
	ZFYVE9	√	
	PPP1CC	√	√
	TANC2	√	
	MAEA	√	
	MKLN1	√	
	MMP7	√	
	RMND5A	√	
	MAEA	√	
	MKLN1	√	
	RANBP10	√	
	MMP7	√	
	RMND5A	√	
TMPRSS2-ERG	CDC5L		√
	DDX3X	√	
	PRKDC	√	
	POLR2A		√
	SF3B2	√	
	XRCC5		√
	XRCC6		√
	DDX23	√	
	SNRNP200	√	
	DDX21	√	
	TUBB	√	
	HNRNPU		√
	PRPF40A	√	
	AR	√	
	NCL	√	
	HNRNPM	√	
	HNRNPC	√	
	ILF2	√	
	SF3B2	√	
	PRKDC	√	

Table S9: List of fusions and parental proteins

LK,LY,M,GL	SC	CA
BCR	ASPCR1	ANK3
ABL1	TFE3	USP9Y
BCR-ABL1	ASPCR1-TFE3	ANK3-USP9Y
RUNX1	ASTN2	ARGLU1
RUNX1T1	CNOT2	CXCR4
RUNX1-RUNX1T1	ASTN2-CNOT2	ARGLU1-CXCR4
KMT2A	BCOR	ATXN10
MLLT10	ZC3H7B	FBLN1
KMT2A-MLLT10	BCOR-ZC3H7B	ATXN10-FBLN1
IGH	BCOR	BCAS3
BCL2	CCNB3	NFS1
IGH-BCL2	BCOR-CCNB3	BCAS3-NFS1

KMT2A	CDX1	BCAS4
AFF1	IRF2BP2	BCAS3
KMT2A-AFF1	CDX1-IRF2BP2	BCAS4-BCAS3
PICALM	CIC	BCL2L12
MLLT10	DUX4	PRMT1
PICALM-MLLT10	CIC-DUX4	BCL2L12-PRMT1
PML	CREB1	CAPNS1
RARA	EWSR1	WDR62
PML-RARA	CREB1-EWSR1	CAPNS1-WDR62
KMT2A	CTDSP2	CCDC6
MLLT3	FAM19A2	ANK3
KMT2A-MLLT3	CTDSP2-FAM19A2	CCDC6-ANK3
KMT2A	CXorf67	CCDC9
AFDN	MBTD1	DHX34
KMT2A-AFDN	CXorf67-MBTD1	CCDC9-DHX34
CBFB	EPC1	CDC27
MYH11	PHF1	ST7L
CBFB-MYH11	EPC1-PHF1	CDC27-ST7L
IGH	ERG	CDK7
MYC	EWSR1	RIN3
IGH-MYC	ERG-EWSR1	CDK7-RIN3
NUP98	ETV6	CHERP
DDX10	NTRK3	CPAMD8
NUP98-DDX10	ETV6-NTRK3	CHERP-CPAMD8
PCM1	EWSR1	CPD
JAK2	ATF1	PIGW
PCM1-JAK2	EWSR1-ATF1	CPD-PIGW
KMT2A	EWSR1	CYTH1
SEPT9	FLI1	PRPSAP1
KMT2A-SEPT9	EWSR1-FLI1	CYTH1-PRPSAP1
FUS	EWSR1	DLG1
ERG	NR4A3	CRYBG3
FUS-ERG	EWSR1-NR4A3	DLG1-CRYBG3
NUP98	EWSR1	DTX4
HOXA9	ETV4	CCDC102B
NUP98-HOXA9	EWSR1-ETV4	DTX4-CCDC102B
ETV6	EWSR1	EHD4
ABL1	PATZ1	FSIP1
ETV6-ABL1	EWSR1-PATZ1	EHD4-FSIP1
SET	EWSR1	ELK4
NUP214	DDIT3	SLC26A9
SET-NUP214	EWSR1-DDIT3	ELK4-SLC26A9
MNX1	EWSR1	EMID1
ETV6	POU5F1	CBY1
MNX1-ETV6	EWSR1-POU5F1	EMID1-CBY1
KMT2A	EWSR1	EPHA6
MLLT1	SP3	CNTN6
KMT2A-MLLT1	EWSR1-SP3	EPHA6-CNTN6
KMT2A	FOXO4	ERAL1
MLLT6	CIC	DIDO1

KMT2A-MLLT6	FOXO4-CIC	ERAL1-DIDO1
ETV6	FUS	GMDS
ACSL6	ERG	CCND3
ETV6-ACSL6	FUS-ERG	GMDS-CCND3
ETV6	FUS	HJURP
MECOM	CREB3L1	EIF4E2
ETV6-MECOM	FUS-CREB3L1	HJURP-EIF4E2
KMT2A	FUS	INTS4
EPS15	DDIT3	GAB2
KMT2A-EPS15	FUS-DDIT3	INTS4-GAB2
KMT2A	FUS	KCNQ5
GAS7	ATF1	RIMS1
KMT2A-GAS7	FUS-ATF1	KCNQ5-RIMS1
KMT2A	FUS	KDM5A
ABI1	CREB3L2	ANO2
KMT2A-ABI1	FUS-CREB3L2	KDM5A-ANO2
KMT2A	HEY1	LAMA5
MLLT11	NCOA2	C12orf28
KMT2A-MLLT11	HEY1-NCOA2	LAMA5-C12orf28
MN1	IRX2	MAPK10
ETV6	TERT	FAM13A
MN1-ETV6	IRX2-TERT	MAPK10-FAM13A
KMT2A	JAZF1	MAPRE1
MAML2	SUZ12	TM9SF4
KMT2A-MAML2	JAZF1-SUZ12	MAPRE1-TM9SF4
KMT2A	JAZF1	NCKAP5
FOXO4	PHF1	MZT2A
KMT2A-FOXO4	JAZF1-PHF1	NCKAP5-MZT2A
DEK	LMNA	NUMB
NUP214	NTRK1	ALDH6A1
DEK-NUP214	LMNA-NTRK1	NUMB-ALDH6A1
RUNX1	MEAF6	PARD6B
CBFA2T3	TRERF1	CD48
RUNX1-CBFA2T3	MEAF6-TRERF1	PARD6B-CD48
NUP98	MEAF6	PPP1R12A
PSIP1	PHF1	MGAT4C
NUP98-PSIP1	MEAF6-PHF1	PPP1R12A-MGAT4C
NUP98	NR4A3	RNF11
HOXC13	TAF15	C8A
NUP98-HOXC13	NR4A3-TAF15	RNF11-C8A
NUP98	NR4A3	SIPA1L3
HOXC11	TFG	WDR62
NUP98-HOXC11	NR4A3-TFG	SIPA1L3-WDR62
PAX5	NR6A1	SLC26A6
ETV6	TRHDE	PRKAR2A
PAX5-ETV6	NR6A1-TRHDE	SLC26A6-PRKAR2A
NUP98	NUP107	ST14
HOXA11	LGR5	APLP2
NUP98-HOXA11	NUP107-LGR5	ST14-APLP2
BCR	PAPPA	STRADB

PDGFRA	NUP107	NOP58
BCR-PDGFRA	PAPPA-NUP107	STRADB-NOP58
BCR	PAX3	STX16
FGFR1	FOXO1	RAE1
BCR-FGFR1	PAX3-FOXO1	STX16-RAE1
NPM1	PAX7	TANC2
RARA	FOXO1	CHD6
NPM1-RARA	PAX7-FOXO1	TANC2-CHD6
KMT2A	SS18	THSD7B
CBL	SSX2	DARS
KMT2A-CBL	SS18-SSX2	THSD7B-DARS
IGH	SS18	TMEM123
BCL6	SSX1	MMP7
IGH-BCL6	SS18-SSX1	TMEM123-MMP7
LCPI	SS18L1	TMPRSS2
BCL6	SSX1	ERG
LCPI-BCL6	SS18L1-SSX1	TMPRSS2-ERG
CREBBP	SSX1	TOX3
KAT6A	SYT4	CNTN5
CREBBP-KAT6A	SSX1-SYT4	TOX3-CNTN5
KMT2A	TGFBR3	UBR2
ARHGAP26	MGEA5	XPO5
KMT2A-ARHGAP26	TGFBR3-MGEA5	UBR2-XPO5
FOXO3	TRIO	UVRAG
KMT2A	TERT	INTS4
FOXO3-KMT2A	TRIO-TERT	UVRAG-INTS4
KMT2A	WDR70	WNT11
DCPS	RCOR1	TSPAN8
KMT2A-DCPS	WDR70-RCOR1	WNT11-TSPAN8
KMT2A	YWHAE	XRCC5
EP300	NUTM2B	ACADL
KMT2A-EP300	YWHAE-NUTM2B	XRCC5-ACADL
IGH	YWHAE	ZCCHC7
CEBPE	NUTM2A-AS1	PRSS3
IGH-CEBPE	YWHAE-NUTM2A-AS1	ZCCHC7-PRSS3
HSP90AA1	YWHAE	ZFP91
BCL6	NUTM2A	NOX4
HSP90AA1-BCL6	YWHAE-NUTM2A	ZFP91-NOX4

Table S10: List of PAS

LK,LY,ME,GL	Proteins	PAS	PAS/D	D/PAS
RUNX1-RUNX1T1	HDAC1	119.739	0.2505	3.992
	BRCA1	94.4444	5.55556	0.18
	KMT2A	9.00695	0.02286	43.744
	SMARCC1	103.757	0.89445	1.118
	HDAC2	80.3095	0.26681	3.748
	CREBBP	139.491	0.47125	2.122
	CTBP1	98.5353	0.66578	1.502
	EP300	113.477	0.2505	3.992

	SMARCA4	28.4738	0.14237	7.024
	NCOR2	3.28906	0.03163	31.62
	NCOR1	4.69557	0.0311	32.158
	VDR	119.946	1.34771	0.742
	SMARCA4	28.4738	0.14237	7.024
KMT2A-MLLT10	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
IGH-BCL2	TP53	240.49	0.25025	3.996
	CASP3	92.4453	0.99404	1.006
	PARP1	88.8078	0.40552	2.466
	CASP8	172.68	1.28866	0.776
	HIF1A	97.973	0.67568	1.48
	BCL2	5.70804	0.06072	16.468
	BAG3	7.46766	0.01667	59.992
	PARP1	88.8078	0.40552	2.466
	BCL2	5.70804	0.06072	16.468
KMT2A-AFF1	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
PICALM-MLLT10	FN1	105.505	4.58716	0.218
	EEF1A1	158.526	0.42845	2.334
	EGFR	8.00992	0.00962	103.996
	NTRK1	8.72582	0.05257	19.024
	PLCG1	5.71137	0.05099	19.61
	DNM2	5.98802	0.06805	14.696
	ILVBL	2.86994	0.07	14.286
	PICALM	3.01572	0.03388	29.512
	HNRNPD	6.06047	0.02253	44.386
	FUS	19.9375	0.0625	16
	FN1	105.505	4.58716	0.218
	DDX1	89.9433	0.70822	1.412
	SEC24D	2.43765	0.09376	10.666
	PICALM	3.01572	0.03388	29.512
	NTRK1	8.72582	0.05257	19.024

	SEC24C	3.28071	0.05126	19.508
PML-RARA	NCOA2	3.38768	0.05293	18.892
	NR3C1	6.22472	0.03965	25.222
	NR4A1	185.771	1.97628	0.506
	KAT2B	6.53815	0.03736	26.766
	RXRA	4.57676	0.04199	23.816
	PPARG	5.04776	0.03883	25.754
	TP53	240.49	0.25025	3.996
	MDM2	9.93482	0.05257	19.024
	EP300	113.477	0.2505	3.992
	SMARCA4	28.4738	0.14237	7.024
	RELA	9.3566	0.05257	19.024
	RARA	5.00185	0.04631	21.592
	NCOA3	3.96588	0.03741	26.728
	NCOA1	3.6746	0.03638	27.486
	STAT3	19.766	0.08864	11.282
	ARNT	4.42664	0.1054	9.488
	NPAS2	83.3333	3.20513	0.312
	PARP1	88.8078	0.40552	2.466
	NFKB1	23.3366	0.16551	6.042
	TRIP4	1.76435	0.04303	23.238
	CREBBP	139.491	0.47125	2.122
	NFKB1	23.3366	0.16551	6.042
	EP300	113.477	0.2505	3.992
	PARP1	88.8078	0.40552	2.466
KMT2A-MLLT3	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
KMT2A-AFDN	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
CBFB-MYH11	ACTA2	4.39678	0.05362	18.65
	MYH11	4.45976	0.10136	9.866
	MYO1E	2.45997	0.04473	22.358
	RPA1	115.982	0.2505	3.992
	RPA2	11.8797	0.05257	19.024

	ACTB	5.97407	0.02679	37.328
	RPA1	115.982	0.2505	3.992
	ELAVL1	5.70617	0.02679	37.328
	RPA2	11.8797	0.05257	19.024
NUP98-DDX10	SIRT7	9.04121	0.05257	19.024
	DDX10	2.75895	0.02172	46.032
	APP	6.2537	0.037	27.024
	DDX56	1.94682	0.02374	42.12
	NTRK1	8.72582	0.05257	19.024
	DDX54	3.01289	0.07007	14.272
	PUM3	1.32572	0.0204	49.03
	PWP1	1.48662	0.0413	24.216
	CSNK2A1	8.68379	0.02273	43.99
	HDAC1	119.739	0.2505	3.992
	CTNNB1	7.85024	0.02745	36.432
	MAPK8	9.04121	0.05257	19.024
	EP300	113.477	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
	PUM3	1.32572	0.0204	49.03
	NXF1	1.24414	0.0204	49.03
	EED	197.605	2.99401	0.334
	KPNB1	6.2426	0.02959	33.8
	HNRNPUL1	3.24977	0.02902	34.464
	HDAC1	119.739	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
	APC	12.2289	0.07279	13.738
	CSNK2A1	8.68379	0.02273	43.99
	CTNNB1	7.85024	0.02745	36.432
	APC	12.2289	0.07279	13.738
	CREBBP	139.491	0.47125	2.122
	USP7	1.76435	0.04303	23.238
	NTRK1	8.72582	0.05257	19.024
	CDC37	4.10142	0.09321	10.728
PCM1-JAK2	ERBB2	2.49512	0.10848	9.218
	ERBB3	1.33581	0.05808	17.218
	VAV1	2.1312	0.05198	19.238
	TEC	6.57728	0.04216	23.718
	EGFR	8.00992	0.00962	103.996
	INSR	2.24215	0.05469	18.286
	PLCG1	5.71137	0.05099	19.61
	JAK2	1.44948	0.03535	28.286
	STAT5A	16.7896	0.07529	13.282
	JAK2	1.44948	0.03535	28.286
	INSR	2.24215	0.05469	18.286
KMT2A-SEPT9	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502

	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
FUS-ERG	RPA1	115.982	0.2505	3.992
	SF3B2	1.77281	0.06818	14.666
	PRKDC	1.01978	0.0204	49.03
	PRPF8	4.5895	0.05099	19.61
	SF3A2	2.05274	0.07895	12.666
	DHX15	1.94682	0.02374	42.12
	RPA2	11.8797	0.05257	19.024
	CUL3	3.3748	0.04821	20.742
	ABL1	5.80459	0.03355	29.804
	PARP1	88.8078	0.40552	2.466
	PRKDC	1.01978	0.0204	49.03
NUP98-HOXA9	HDAC1	119.739	0.2505	3.992
	TP53	240.49	0.25025	3.996
	SMAD4	25.6219	0.24876	4.02
	CTNNB1	7.85024	0.02745	36.432
	CSNK2A1	8.68379	0.02273	43.99
	MAPK8	9.04121	0.05257	19.024
	EP300	113.477	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
	CTNNB1	7.85024	0.02745	36.432
	APC	12.2289	0.07279	13.738
	CREBBP	139.491	0.47125	2.122
ETV6-ABL1	ERBB2	2.49512	0.10848	9.218
	CBLB	3.45695	0.07857	12.728
	UBASH3B	4.44644	0.04079	24.514
	SOS1	2.36839	0.05383	18.578
	ERBB4	18.8834	0.82102	1.218
	SRC	4.15958	0.09454	10.578
	VAV1	2.1312	0.05198	19.238
	EGFR	8.00992	0.00962	103.996
	CBL	19.2785	0.08274	12.086
	PLCG1	5.71137	0.05099	19.61
	PIK3R2	3.9234	0.03599	27.782
	PIK3R1	5.51541	0.03804	26.29
	ABL1	5.80459	0.03355	29.804
	ABL1	5.80459	0.03355	29.804
	ABL2	5.13354	0.03355	29.804
	JAK1	1.44948	0.03535	28.286
SET-NUP214	NXF1	1.24414	0.0204	49.03
	FAF1	4.40782	0.19164	5.218
	SUPT5H	5.13901	0.08425	11.87
	GART	1.93343	0.06905	14.482
	CUL2	138.926	0.16678	5.996
	CUL3	3.3748	0.04821	20.742
	NXF1	1.24414	0.0204	49.03
	CUL2	138.926	0.16678	5.996
	RANBP2	4.07955	0.05099	19.61
MNX1-ETV6	HDAC3	22.5933	0.98232	1.018
	ETV6	37.2168	1.61812	0.618
	HDAC9	2.52262	0.0174	57.48
	PIN1	102.388	0.45914	2.178
	NCOR1	4.69557	0.0311	32.158

	SIN3A	6.12284	0.03189	31.358
	L3MBTL1	3.92193	0.01859	53.8
	ETV7	3.18648	0.13854	7.218
	ETV6	37.2168	1.61812	0.618
KMT2A-MLLT1	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
KMT2A-MLLT6	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
ETV6-ACSL6	HDAC3	22.5933	0.98232	1.018
	ETV6	37.2168	1.61812	0.618
	HDAC9	2.52262	0.0174	57.48
	PIN1	102.388	0.45914	2.178
	NCOR1	4.69557	0.0311	32.158
	SIN3A	6.12284	0.03189	31.358
	L3MBTL1	3.92193	0.01859	53.8
	ETV7	3.18648	0.13854	7.218
	ETV6	37.2168	1.61812	0.618
ETV6-MECOM	HDAC1	119.739	0.2505	3.992
	UBE2I	107.519	0.25063	3.99
	HDAC3	22.5933	0.98232	1.018
	EHMT2	9.91714	0.01191	83.996
	ELAVL1	5.70617	0.02679	37.328
	MECOM	7.55275	0.03996	25.024
	SMAD1	8.21988	0.04281	23.358
	SMAD2	22.8889	0.22222	4.5
	SMAD3	1.9619	0.01905	52.5
	KAT2B	6.53815	0.03736	26.766
	SUV39H1	7.75095	0.12706	7.87
	NCOR1	4.69557	0.0311	32.158
	CTBP1	98.5353	0.66578	1.502
	CREBBP	139.491	0.47125	2.122
	MECOM	7.55275	0.03996	25.024
	SUV39H1	7.75095	0.12706	7.87

	HDAC4	4.33094	0.02987	33.48
KMT2A-EPS15	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
KMT2A-GAS7	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
KMT2A-ABL1	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	SMARCC1	103.757	0.89445	1.118
	CHD3	5.7671	0.0395	25.316
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	ABL1	5.80459	0.03355	29.804
	CBLB	3.45695	0.07857	12.728
	CBL	19.2785	0.08274	12.086
KMT2A-MLLT11	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
MN1-ETV6	HDAC3	22.5933	0.98232	1.018
	ETV6	37.2168	1.61812	0.618
	HDAC9	2.52262	0.0174	57.48
	PIN1	102.388	0.45914	2.178
	EP300	113.477	0.2505	3.992
	NCOR1	4.69557	0.0311	32.158
	SIN3A	6.12284	0.03189	31.358

	HDAC3	22.5933	0.98232	1.018
	EP300	113.477	0.2505	3.992
	KAT5	32.4274	0.15442	6.476
KMT2A-MAML2	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	SMARCC1	103.757	0.89445	1.118
	CHD3	5.7671	0.0395	25.316
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SMARCA2	3.16923	0.03077	32.5
	EP300	113.477	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
KMT2A-FOXO4	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
DEK-NUP214	ESR1	28.1174	1.22249	0.818
	KAT2B	6.53815	0.03736	26.766
	SMAD2	22.8889	0.22222	4.5
	SMAD3	1.9619	0.01905	52.5
	CDK2	14.4846	0.06217	16.086
	DEK	3.70705	0.04521	22.12
	EP300	113.477	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
	NXF1	1.24414	0.0204	49.03
	DHX15	1.94682	0.02374	42.12
	CUL2	138.926	0.16678	5.996
	CUL3	3.3748	0.04821	20.742
RUNX1-CBFA2T3	KMT2A	9.00695	0.02286	43.744
	SMARCC1	103.757	0.89445	1.118
	SMARCA4	28.4738	0.14237	7.024
	CREBBP	139.491	0.47125	2.122
	EP300	113.477	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
NUP98-PSIP1	HDAC1	119.739	0.2505	3.992
	KMT2A	9.00695	0.02286	43.744
	ESR1	28.1174	1.22249	0.818
	CTNNB1	7.85024	0.02745	36.432
	EP300	113.477	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
	NXF1	1.24414	0.0204	49.03
	EIF4A3	6.71796	0.00806	123.996
	SON	3.01825	0.0686	14.578
NUP98-	HDAC1	119.739	0.2505	3.992

HOXC13				
	CTNNB1	7.85024	0.02745	36.432
	MAPK8	9.04121	0.05257	19.024
	EP300	113.477	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
	NXF1	1.24414	0.0204	49.03
	HNRNPAB	2.52262	0.0174	57.48
	EED	197.605	2.99401	0.334
	KPNB1	6.2426	0.02959	33.8
	HNRNPUL1	3.24977	0.02902	34.464
	HDAC1	119.739	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
	APC	12.2289	0.07279	13.738
	CSNK2A1	8.68379	0.02273	43.99
	CTNNB1	7.85024	0.02745	36.432
	APC	12.2289	0.07279	13.738
	CREBBP	139.491	0.47125	2.122
NUP98- HOXC11	HDAC1	119.739	0.2505	3.992
	STAT3	19.766	0.08864	11.282
	SP1	3.01825	0.0686	14.578
	SMAD3	1.9619	0.01905	52.5
	CTNNB1	7.85024	0.02745	36.432
	MAPK8	9.04121	0.05257	19.024
	EP300	113.477	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
	CTNNB1	7.85024	0.02745	36.432
	APC	12.2289	0.07279	13.738
	CREBBP	139.491	0.47125	2.122
PAX5-ETV6	UBE2I	107.519	0.25063	3.99
	HDAC3	22.5933	0.98232	1.018
	TBP	6.06579	0.03888	25.718
	KAT5	32.4274	0.15442	6.476
	RB1	7.40059	0.0341	29.322
	PAX5	22.5	2.5	0.4
	RUNX1	2.91921	0.04293	23.294
	PIN1	102.388	0.45914	2.178
	EP300	113.477	0.2505	3.992
	NCOR1	4.69557	0.0311	32.158
	MAPK1	5.32418	0.02488	40.194
	EP300	113.477	0.2505	3.992
	HDAC6	3.86873	0.02668	37.48
NUP98- HOXA11	HDAC1	119.739	0.2505	3.992
	HDAC2	80.3095	0.26681	3.748
	YY1	4.46363	0.03689	27.108
	CTNNB1	7.85024	0.02745	36.432
	CSNK2A1	8.68379	0.02273	43.99
	MAPK8	9.04121	0.05257	19.024
	EP300	113.477	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
	CTNNB1	7.85024	0.02745	36.432
	APC	12.2289	0.07279	13.738
	CREBBP	139.491	0.47125	2.122
BCR-PDGFR	TGFBR2	7.20943	0.08792	11.374

	PDGFRA	3.84	0.08	12.5
	SHC1	7.13762	0.03335	29.982
	CRKL	6.10583	0.05654	17.688
	EGFR	8.00992	0.00962	103.996
	PLCG1	5.71137	0.05099	19.61
	FES	2.49512	0.10848	9.218
	CRK	6.51925	0.04405	22.702
	ABL1	5.80459	0.03355	29.804
	HCK	4.13571	0.0701	14.266
	PTPN6	4.41336	0.0679	14.728
	BCR	15.6512	0.27949	3.578
	UBASH3B	4.44644	0.04079	24.514
	INPP5D	2.63514	0.06757	14.8
	SOS1	2.36839	0.05383	18.578
	GRB2	9.90537	0.01923	51.992
	NTRK1	8.72582	0.05257	19.024
	CBL	19.2785	0.08274	12.086
	KIT	2.56536	0.06108	16.372
	DOK1	98.8024	2.99401	0.334
	PIK3R2	3.9234	0.03599	27.782
	PIK3R1	5.51541	0.03804	26.29
	ABL1	5.80459	0.03355	29.804
	TP53	240.49	0.25025	3.996
	RB1	7.40059	0.0341	29.322
	BCR	15.6512	0.27949	3.578
BCR-FGFR1	SRC	4.15958	0.09454	10.578
	ITK	1.83972	0.04487	22.286
	SOS1	2.36839	0.05383	18.578
	ERBB3	1.33581	0.05808	17.218
	VAV1	2.1312	0.05198	19.238
	CBL	19.2785	0.08274	12.086
	PLCG1	5.71137	0.05099	19.61
	ABL1	5.80459	0.03355	29.804
	ABL1	5.80459	0.03355	29.804
	HCK	4.13571	0.0701	14.266
	BCR	15.6512	0.27949	3.578
	CBL	19.2785	0.08274	12.086
IGH-BCL6	HDAC1	119.739	0.2505	3.992
	TP53	240.49	0.25025	3.996
	CTBP1	98.5353	0.66578	1.502
	EP300	113.477	0.2505	3.992
	NCOR2	3.28906	0.03163	31.62
	CREBBP	139.491	0.47125	2.122
	HDAC2	80.3095	0.26681	3.748
	SMARCA4	28.4738	0.14237	7.024
	CREBBP	139.491	0.47125	2.122
LCP1-BCL6	HDAC1	119.739	0.2505	3.992
	TP53	240.49	0.25025	3.996
	CTBP1	98.5353	0.66578	1.502
	EP300	113.477	0.2505	3.992
	NCOR2	3.28906	0.03163	31.62
	CREBBP	139.491	0.47125	2.122
	HDAC2	80.3095	0.26681	3.748
	SMARCA4	28.4738	0.14237	7.024

	CREBBP	139.491	0.47125	2.122
CREBBP-KAT6A	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
KMT2A-ARHGAP26	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
FOXO3-KMT2A	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	SMARCC1	103.757	0.89445	1.118
	CHD3	5.7671	0.0395	25.316
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SMARCA2	3.16923	0.03077	32.5
	EP300	113.477	0.2505	3.992
	CREBBP	139.491	0.47125	2.122
KMT2A-DCPS	SMARCC2	103.531	0.80257	1.246
	KMT2A	9.00695	0.02286	43.744
	HDAC2	80.3095	0.26681	3.748
	CHD3	5.7671	0.0395	25.316
	SMARCC1	103.757	0.89445	1.118
	POLR2A	101.291	0.40355	2.478
	SMARCA2	3.16923	0.03077	32.5
	CREBBP	139.491	0.47125	2.122
	SIN3A	6.12284	0.03189	31.358
	CTBP1	98.5353	0.66578	1.502
	KMT2A	9.00695	0.02286	43.744
	CREBBP	139.491	0.47125	2.122
IGH-CEBPE	UBE2I	107.519	0.25063	3.99
	BATF	1.28936	0.06786	14.736
	DDIT3	4.74834	0.06783	14.742
	CEBPG	1.22222	0.05556	18
	CEBPE	4.10142	0.09321	10.728
	FOS	7.41248	0.05702	17.538

	JUN	6.18406	0.02931	34.12
	STAT6	6.18034	0.10132	9.87
	RB1	7.40059	0.0341	29.322
	PIAS1	30.7789	0.31407	3.184
	FOSL1	1.93343	0.06905	14.482
	BATF3	1.39553	0.06645	15.048
	BATF2	109.254	6.42674	0.1556
	ATF4	5.16412	0.07074	14.136
	MYB	2.9401	0.06125	16.326
	ATF3	11.6832	0.19802	5.05
SC				
ASTN2-CNOT2	CNOT6L	1.171	0.065	15.37
	AURKA	4.163	0.051	19.46
	CNOT8	2.06	0.09	11.17
	TNRC6C	1.942	0.067	14.93
	TNRC6B	3.5	0.05	20
	CNOT3	86.83	2.994	0.334
	CNOT2	3.106	0.068	14.81
	CNOT1	4.661	0.059	16.95
	CNOT7	2.513	0.057	17.51
	AGO2	4.73	0.054	18.61
	HDAC3	22.59	0.982	1.018
	GPS2	0.696	0.054	18.67
	CNOT2	3.106	0.068	14.81
	NCOR2	3.289	0.032	31.62
	NCOR1	4.696	0.031	32.16
BCOR-ZC3H7B	HDAC3	22.59	0.982	1.018
	HDAC4	4.331	0.03	33.48
	SP1	3.018	0.069	14.58
	CTBP1	98.54	0.666	1.502
	NACC1	3.947	0.132	7.6
	NCOR2	3.289	0.032	31.62
	HDAC1	119.7	0.251	3.992
	CTBP1	98.54	0.666	1.502
	NCOR2	3.289	0.032	31.62
BCOR-CCNB3	HDAC3	22.59	0.982	1.018
	HDAC4	4.331	0.03	33.48
	SP1	3.018	0.069	14.58
	CTBP1	98.54	0.666	1.502
	NACC1	3.947	0.132	7.6
	NCOR2	3.289	0.032	31.62
	HDAC1	119.7	0.251	3.992
	CTBP1	98.54	0.666	1.502
	NCOR2	3.289	0.032	31.62
CDX1-IRF2BP2	ELAVL1	5.706	0.027	37.33
	NTRK1	8.726	0.053	19.02
	IRF2BPL	1.378	0.024	42.1
	IRF2BP2	2.624	0.045	22.1
	RBM39	3.092	0.021	46.57
CREB1-EWSR1	BRCA1	94.44	5.556	0.18
	EPAS1	252.5	2.475	0.404
	MYOD1	3.693	0.054	18.41
	ESR1	28.12	1.222	0.818
	JUN	6.184	0.029	34.12

	POLR2A	101.3	0.404	2.478
	EP300	113.5	0.251	3.992
	SMARCA4	28.47	0.142	7.024
	EWSR1	10.05	0.016	63.99
	CREBBP	139.5	0.471	2.122
	NR3C1	6.225	0.04	25.22
	EP300	113.5	0.251	3.992
	SMARCA4	28.47	0.142	7.024
	CREBBP	139.5	0.471	2.122
	NONO	4.27	0.03	33.72
	SMARCA4	28.47	0.142	7.024
	CUL3	3.375	0.048	20.74
CTDSP2- FAM19A2	SETD1A	1.835	0.068	14.71
	POLR2A	101.3	0.404	2.478
	INTS6	27.59	0.476	2.102
	CTDSP1	2.625	0.187	5.334
	CTDSP2	4.199	0.3	3.334
EPC1-PHF1	HDAC1	119.7	0.251	3.992
	DHX9	3.391	0.045	22.12
	TP53	240.5	0.25	3.996
	ELAVL1	5.706	0.027	37.33
	E2F6	2.239	0.061	16.53
	RBBP7	4.723	0.031	31.97
	RBBP4	4.303	0.025	39.51
	EZH1	135.1	15.02	0.067
	EZH2	111.5	0.406	2.466
	EED	197.6	2.994	0.334
	XRCC6	232.4	0.88	1.136
	XRCC5	152.1	0.576	1.736
	PHF1	1.917	0.083	12
	HDAC1	119.7	0.251	3.992
	TP53	240.5	0.25	3.996
	YEATS4	6.25	0.063	15.84
	TRIM27	1.32	0.12	8.334
	KAT5	32.43	0.154	6.476
	TRIM23	1.32	0.12	8.334
	HIST1H2BA	4.442	0.049	20.26
	DMAP1	2.383	0.041	24.34
	MYC	151	0.25	3.994
	XRCC6	232.4	0.88	1.136
	MORF4L1	4.827	0.046	21.96
	ING3	27.59	0.476	2.102
ERG-EWSR1	TP53	240.5	0.25	3.996
	ESR1	28.12	1.222	0.818
	PARP1	88.81	0.406	2.466
	EP300	113.5	0.251	3.992
	CREBBP	139.5	0.471	2.122
	XRCC6	232.4	0.88	1.136
	EPAS1	252.5	2.475	0.404
	EP300	113.5	0.251	3.992
	CREBBP	139.5	0.471	2.122
ETV6-NTRK3	PDGFRB	3.317	0.06	16.58
	SHC1	7.138	0.033	29.98
	CRKL	6.106	0.057	17.69

	GAB2	1.768	0.054	18.67
	NTRK1	8.726	0.053	19.02
	PLCG1	5.711	0.051	19.61
	GRB2	9.905	0.019	51.99
	HDAC3	22.59	0.982	1.018
	PIN1	102.4	0.459	2.178
	ETV6	27.36	0.829	1.206
EWSR1-ATF1	PDGFRB	3.317	0.06	16.58
	SHC1	7.138	0.033	29.98
	CRKL	6.106	0.057	17.69
	GAB2	1.768	0.054	18.67
	NTRK1	8.726	0.053	19.02
	PLCG1	5.711	0.051	19.61
	GRB2	9.905	0.019	51.99
	HDAC3	22.59	0.982	1.018
	PIN1	102.4	0.459	2.178
	ETV6	27.36	0.829	1.206
EWSR1-FLI1	BRCA1	94.44	5.556	0.18
	POLR2A	101.3	0.404	2.478
	ESR1	28.12	1.222	0.818
	EP300	113.5	0.251	3.992
	KAT2B	6.538	0.037	26.77
	CREBBP	139.5	0.471	2.122
	EPAS1	252.5	2.475	0.404
	EP300	113.5	0.251	3.992
	CREBBP	139.5	0.471	2.122
EWSR1-NR4A3	TSG101	17.85	0.123	8.124
	DHX9	3.391	0.045	22.12
	HDAC3	22.59	0.982	1.018
	TRIM28	6.961	0.031	32.04
	FUS	19.94	0.063	16
	RAD23A	4.032	0.027	36.46
	JUN	6.184	0.029	34.12
	PRMT1	5.148	0.036	28.17
	ILK	200.6	0.951	1.052
	BMI1	2.558	0.041	24.62
	ELK1	2.68	0.099	10.07
	POLR2A	101.3	0.404	2.478
	CHERP	2.649	0.046	21.52
	ATXN3	5.241	0.065	15.46
	EP300	113.5	0.251	3.992
	IRF3	84.6	1.263	0.792
	EPAS1	252.5	2.475	0.404
	TP53	240.5	0.25	3.996
	ESR1	28.12	1.222	0.818
	NONO	4.27	0.03	33.72
	RPA1	116	0.251	3.992
	NTRK1	8.726	0.053	19.02
	RPA2	11.88	0.053	19.02
	CUL4A	6.399	0.023	43.6
	CUL4B	8.304	0.03	33.6
	FASN	3.59	0.042	23.95
	CREBBP	139.5	0.471	2.122
	HBP1	17.21	0.82	1.22

	CUL5	77.54	0.278	3.598
	HLTF	18.24	0.397	2.522
	EWSR1	10.05	0.016	63.99
	YBX1	3.744	0.021	47.54
	CUL1	27.92	0.042	23.99
	CUL2	138.9	0.167	5.996
	CUL3	3.375	0.048	20.74
	HDAC2	80.31	0.267	3.748
	CREBBP	139.5	0.471	2.122
	ESR1	28.12	1.222	0.818
	NONO	4.27	0.03	33.72
	FXR2	8.166	0.07	14.21
	CUL3	3.375	0.048	20.74
EWSR1-ETV4	TSG101	17.85	0.123	8.124
	DHX9	3.391	0.045	22.12
	HDAC3	22.59	0.982	1.018
	RFWD2	2.935	0.039	25.89
	FUS	19.94	0.063	16
	RAD23A	4.032	0.027	36.46
	JUN	6.184	0.029	34.12
	PRMT1	5.148	0.036	28.17
	ILK	200.6	0.951	1.052
	SMAD2	22.89	0.222	4.5
	BMI1	2.558	0.041	24.62
	ELK1	2.68	0.099	10.07
	POLR2A	101.3	0.404	2.478
	CHERP	2.649	0.046	21.52
	ATXN3	5.241	0.065	15.46
	EP300	113.5	0.251	3.992
	IRF3	84.6	1.263	0.792
	EPAS1	252.5	2.475	0.404
	TP53	240.5	0.25	3.996
	ESR1	28.12	1.222	0.818
	NONO	4.27	0.03	33.72
	RPA1	116	0.251	3.992
	NTRK1	8.726	0.053	19.02
	RPA2	11.88	0.053	19.02
	CUL4A	6.399	0.023	43.6
	CUL4B	8.304	0.03	33.6
	FASN	3.59	0.042	23.95
	CREBBP	139.5	0.471	2.122
	HBP1	17.21	0.82	1.22
	CUL5	77.54	0.278	3.598
	HLTF	18.24	0.397	2.522
	EWSR1	10.05	0.016	63.99
	YBX1	3.744	0.021	47.54
	CUL1	27.92	0.042	23.99
	CUL2	138.9	0.167	5.996
	CUL3	3.375	0.048	20.74
	HDAC2	80.31	0.267	3.748
	CREBBP	139.5	0.471	2.122
	ESR1	28.12	1.222	0.818
	NONO	4.27	0.03	33.72
	FXR2	8.166	0.07	14.21

	CUL3	3.375	0.048	20.74
EWSR1-PATZ1	TSG101	17.85	0.123	8.124
	DHX9	3.391	0.045	22.12
	HDAC3	22.59	0.982	1.018
	RFWD2	2.935	0.039	25.89
	FUS	19.94	0.063	16
	RAD23A	4.032	0.027	36.46
	JUN	6.184	0.029	34.12
	PRMT1	5.148	0.036	28.17
	ILK	200.6	0.951	1.052
	SMAD2	22.89	0.222	4.5
	BMI1	2.558	0.041	24.62
	ELK1	2.68	0.099	10.07
	POLR2A	101.3	0.404	2.478
	CHERP	2.649	0.046	21.52
	ATXN3	5.241	0.065	15.46
	EP300	113.5	0.251	3.992
	IRF3	84.6	1.263	0.792
	EPAS1	252.5	2.475	0.404
	TP53	240.5	0.25	3.996
	ESR1	28.12	1.222	0.818
	NONO	4.27	0.03	33.72
	RPA1	116	0.251	3.992
	NTRK1	8.726	0.053	19.02
	RPA2	11.88	0.053	19.02
	CUL4A	6.399	0.023	43.6
	CUL4B	8.304	0.03	33.6
	FASN	3.59	0.042	23.95
	CREBBP	139.5	0.471	2.122
	HBP1	17.21	0.82	1.22
	CUL5	77.54	0.278	3.598
	HLTF	18.24	0.397	2.522
	EWSR1	10.05	0.016	63.99
	YBX1	3.744	0.021	47.54
	CUL1	27.92	0.042	23.99
	CUL2	138.9	0.167	5.996
	CUL3	3.375	0.048	20.74
	HDAC2	80.31	0.267	3.748
	CREBBP	139.5	0.471	2.122
	ESR1	28.12	1.222	0.818
	NONO	4.27	0.03	33.72
	FXR2	8.166	0.07	14.21
	CUL3	3.375	0.048	20.74
EWSR1-DDIT3	HDAC1	119.7	0.251	3.992
	EPAS1	252.5	2.475	0.404
	HDAC3	22.59	0.982	1.018
	DDIT3	4.748	0.068	14.74
	CEBPB	2.123	0.032	31.09
	ESR1	28.12	1.222	0.818
	FOS	7.412	0.057	17.54
	JUN	6.184	0.029	34.12
	HBP1	17.21	0.82	1.22
	POLR2A	101.3	0.404	2.478
	IRF3	84.6	1.263	0.792

	TP53	240.5	0.25	3.996
	EP300	113.5	0.251	3.992
	EWSR1	10.05	0.016	63.99
	CREBBP	139.5	0.471	2.122
	DHX9	3.391	0.045	22.12
	CUL4A	6.399	0.023	43.6
	CUL4B	8.304	0.03	33.6
	CUL5	77.54	0.278	3.598
	CUL1	27.92	0.042	23.99
	CUL2	138.9	0.167	5.996
	CUL3	3.375	0.048	20.74
EWSR1-POU5F1	IRF3	84.6	1.263	0.792
	EPAS1	252.5	2.475	0.404
	HDAC3	22.59	0.982	1.018
	TP53	240.5	0.25	3.996
	ESR1	28.12	1.222	0.818
	JUN	6.184	0.029	34.12
	HBP1	17.21	0.82	1.22
	ETS2	2.266	0.078	12.8
	CTNNB1	7.85	0.027	36.43
	POLR2A	101.3	0.404	2.478
	EP300	113.5	0.251	3.992
	EWSR1	10.05	0.016	63.99
	CREBBP	139.5	0.471	2.122
	NONO	4.27	0.03	33.72
	CUL2	138.9	0.167	5.996
	CUL3	3.375	0.048	20.74
EWSR1-SP3	HDAC1	119.7	0.251	3.992
	EPAS1	252.5	2.475	0.404
	HDAC3	22.59	0.982	1.018
	CEBPB	2.123	0.032	31.09
	ESR1	28.12	1.222	0.818
	JUN	6.184	0.029	34.12
	HBP1	17.21	0.82	1.22
	POLR2A	101.3	0.404	2.478
	IRF3	84.6	1.263	0.792
	TP53	240.5	0.25	3.996
	RELA	9.357	0.053	19.02
	EP300	113.5	0.251	3.992
	EWSR1	10.05	0.016	63.99
	CREBBP	139.5	0.471	2.122
	DHX9	3.391	0.045	22.12
	CUL4A	6.399	0.023	43.6
	CUL4B	8.304	0.03	33.6
	CUL5	77.54	0.278	3.598
	CUL1	27.92	0.042	23.99
	CUL2	138.9	0.167	5.996
	CUL3	3.375	0.048	20.74
FOXO4-CIC	XPO1	4.291	0.048	20.74
	CTNNB1	7.85	0.027	36.43
	VDR	119.9	1.348	0.742
	ESR1	28.12	1.222	0.818
	SMAD4	25.62	0.249	4.02
	SMAD3	1.962	0.019	52.5

	SFN	8.389	0.034	29.8
	AKT1	2.106	0.035	28.49
	FOXO4	20.83	1.042	0.96
	MDM2	9.935	0.053	19.02
	NLK	5.058	0.09	11.07
	CREBBP	139.5	0.471	2.122
FUS-ERG	RPA1	116	0.251	3.992
	SF3B2	1.773	0.068	14.67
	PRKDC	5.478	0.023	42.72
	PRPF8	2.684	0.018	56.99
	SF3A2	2.053	0.079	12.67
	DHX15	1.947	0.024	42.12
	RPA2	11.88	0.053	19.02
	CUL3	3.375	0.048	20.74
	ABL1	5.805	0.034	29.8
	PARP1	88.81	0.406	2.466
	PRKDC	5.478	0.023	42.72
FUS-CREB3L1	NONO	4.27	0.03	33.72
	CUL4A	6.399	0.023	43.6
	CUL4B	8.304	0.03	33.6
	DHX15	1.947	0.024	42.12
	CUL5	77.54	0.278	3.598
	CUL1	27.92	0.042	23.99
	CUL2	138.9	0.167	5.996
	CUL3	3.375	0.048	20.74
	VCP	146.7	0.25	3.994
	FBXW11	3.809	0.05	19.95
	CUL1	27.92	0.042	23.99
FUS-DDIT3	HDAC1	119.7	0.251	3.992
	DDX17	2.559	0.018	55.49
	EPAS1	252.5	2.475	0.404
	RELA	9.357	0.053	19.02
	ESR1	28.12	1.222	0.818
	JUN	6.184	0.029	34.12
	TP73	30.45	0.272	3.678
	EWSR1	10.05	0.016	63.99
	CTNNB1	7.85	0.027	36.43
	DDX5	3.278	0.016	61.93
	CDK2	28.82	0.124	8.086
	DDIT3	4.748	0.068	14.74
	MDM2	9.935	0.053	19.02
	EP300	113.5	0.251	3.992
	TRIP4	1.764	0.043	23.24
	CREBBP	139.5	0.471	2.122
	VCP	146.7	0.25	3.994
	FBXW11	3.809	0.05	19.95
	CUL1	27.92	0.042	23.99
FUS-ATF1	HDAC1	119.7	0.251	3.992
	DDX17	2.559	0.018	55.49
	EPAS1	252.5	2.475	0.404
	RELA	9.357	0.053	19.02
	ESR1	28.12	1.222	0.818
	JUN	6.184	0.029	34.12
	TP73	30.45	0.272	3.678

	EWSR1	10.05	0.016	63.99
	CTNNB1	7.85	0.027	36.43
	DDX5	3.278	0.016	61.93
	CDK2	28.82	0.124	8.086
	DDIT3	4.748	0.068	14.74
	MDM2	9.935	0.053	19.02
	EP300	113.5	0.251	3.992
	TRIP4	1.764	0.043	23.24
	CREBBP	139.5	0.471	2.122
	VCP	146.7	0.25	3.994
	FBXW11	3.809	0.05	19.95
	CUL1	27.92	0.042	23.99
FUS-CREB3L2	NONO	4.27	0.03	33.72
	CUL4A	6.399	0.023	43.6
	CUL4B	8.304	0.03	33.6
	DHX15	1.947	0.024	42.12
	CUL5	77.54	0.278	3.598
	CUL1	27.92	0.042	23.99
	CUL2	138.9	0.167	5.996
	CUL3	3.375	0.048	20.74
	VCP	146.7	0.25	3.994
	FBXW11	3.809	0.05	19.95
	CUL1	27.92	0.042	23.99
HEY1-NCOA2	BRCA1	94.44	5.556	0.18
	RARA	5.002	0.046	21.59
	NR3C1	6.225	0.04	25.22
	VDR	119.9	1.348	0.742
	STAT6	6.18	0.101	9.87
	HNF4A	128	2	0.5
	PRMT1	5.148	0.036	28.17
	CARM1	3.802	0.043	23.15
	RXRA	4.577	0.042	23.82
	PPARG	5.048	0.039	25.75
	PPARD	3.533	0.08	12.45
	AR	2.106	0.035	28.49
	PPARA	3.641	0.087	11.53
	ESR2	41.67	0.417	2.4
	EP300	113.5	0.251	3.992
	NCOA2	3.388	0.053	18.89
	NCOA3	3.966	0.037	26.73
	NCOA1	3.675	0.036	27.49
	TP53	240.5	0.25	3.996
	ESR1	28.12	1.222	0.818
	AHR	150.8	3.968	0.252
	ARNT	222.5	5.297	0.189
	THRB	3.31	0.069	14.5
	THRA	4.344	0.063	15.88
	NR1I3	2.242	0.077	12.93
	NR1I2	3.385	0.106	9.454
	PGR	3.769	0.061	16.45
	CREBBP	139.5	0.471	2.122
	PIAS3	4.01	0.08	12.47
	NCOA2	3.388	0.053	18.89
	NCOA1	3.675	0.036	27.49

	UBR5	4.334	0.02	50.07
IRX2-TERT	YWHAZ	9.094	0.027	36.84
	AKT1	2.106	0.035	28.49
	RPS6KB1	3.456	0.061	16.49
	ENO1	6.627	0.245	4.074
	MTOR	6.768	0.048	20.69
	MDM2	9.935	0.053	19.02
	TERT	4.892	0.074	13.49
	XRCC6	232.4	0.88	1.136
	TERF1	15.75	0.051	19.49
	STUB1	7.969	0.033	29.99
	TERT	4.892	0.074	13.49
	POT1	15.33	0.073	13.76
	TERT	4.892	0.074	13.49
	MTOR	6.768	0.048	20.69
	YWHAQ	9.32	0.023	43.99
	RUVBL2	5.408	0.024	41.24
	TPP1	4.73	0.042	23.68
	TERT	4.892	0.074	13.49
	POT1	15.33	0.073	13.76
JAZF1-SUZ12	DHX9	3.391	0.045	22.12
	RBM5	2.34	0.075	13.25
	FBXW11	3.809	0.05	19.95
	DDX3X	97.86	0.67	1.492
	NXF1	1.244	0.02	49.03
	SF3B4	3.44	0.034	29.07
	PRMT1	5.148	0.036	28.17
	SF3B1	3.067	0.017	57.71
	SF3B2	1.773	0.068	14.67
	PRPF8	2.684	0.018	56.99
	EED	197.6	2.994	0.334
	CRNKL1	2.125	0.051	19.77
	RNPS1	3.812	0.023	44.07
	UBE2I	4.334	0.02	50.07
	SNRNP200	2.819	0.019	53.92
	SRSF7	2.019	0.019	53.5
	SNRPD3	2.323	0.022	44.76
	RALY	2.018	0.027	37.66
	DDX5	3.278	0.016	61.93
	PRPF19	2.593	0.019	53.61
	RNF2	177.8	0.25	3.994
	SNRPA1	3.076	0.023	43.56
	SON	3.018	0.069	14.58
	EFTUD2	2.743	0.02	50.68
	U2AF1	4.334	0.02	50.07
	SF3A1	2.895	0.019	52.86
	EPRS	3.12	0.03	33.33
	ILF2	2.535	0.039	25.64
	EIF4A3	6.718	0.008	124
	CDC40	1.125	0.043	23.11
	ILF3	1.727	0.027	37.64
	RANBP2	3.654	0.029	33.94
	DNMT3B	293.1	4.31	0.232
	HDAC1	119.7	0.251	3.992

	HDAC2	80.31	0.267	3.748
	TRIM28	6.961	0.031	32.04
	CHD4	3.583	0.03	33.21
	UHRF1	5.639	0.042	23.76
	DNMT1	3.02	0.036	27.81
	MTA1	3.367	0.036	27.62
	NR2C2	0.959	0.074	13.56
	EZH2	111.5	0.406	2.466
	GATAD2B	1.071	0.054	18.67
	EED	197.6	2.994	0.334
	CBX5	60.85	0.378	2.646
	RBBP4	4.303	0.025	39.51
	CBX3	4.562	0.045	22.14
	SETDB1	9.781	0.078	12.88
	VCP	146.7	0.25	3.994
	BRCA1	94.44	5.556	0.18
	MTOR	6.768	0.048	20.69
	NXF1	1.244	0.02	49.03
	RUVBL2	5.408	0.024	41.24
	VCP	146.7	0.25	3.994
	FBXW11	3.809	0.05	19.95
	SKP1	7.259	0.039	25.48
	BTRC	1.723	0.041	24.38
	EZH2	111.5	0.406	2.466
	DHX9	3.391	0.045	22.12
	ADAR	2.668	0.044	22.49
	EZH2	111.5	0.406	2.466
	FBXW11	3.809	0.05	19.95
	HDAC2	80.31	0.267	3.748
	NXF1	1.244	0.02	49.03
	JARID2	1.378	0.024	42.1
	SETDB1	9.781	0.078	12.88
	RELA	9.357	0.053	19.02
	FBXW11	3.809	0.05	19.95
	BTRC	1.723	0.041	24.38
	BTRC	1.723	0.041	24.38
	CSNK2B	3.051	0.073	13.77
	NXF1	1.244	0.02	49.03
JAZF1-PHF1	DHX9	3.391	0.045	22.12
	EZH1	135.1	15.02	0.067
	PPARG	5.048	0.039	25.75
	EZH2	111.5	0.406	2.466
	EED	197.6	2.994	0.334
	XRCC6	232.4	0.88	1.136
	XRCC5	152.1	0.576	1.736
	PHF1	1.917	0.083	12
	HDAC1	119.7	0.251	3.992
	PPARG	5.048	0.039	25.75
	EZH2	111.5	0.406	2.466
	PHF1	1.917	0.083	12
	PHF1	1.917	0.083	12
	TP53	240.5	0.25	3.996
	XRCC6	232.4	0.88	1.136
MEAF6-TRERF1	HDAC1	119.7	0.251	3.992

	TRERF1	1.32	0.12	8.334
	KAT5	32.43	0.154	6.476
	ING3	27.59	0.476	2.102
	CREBBP	139.5	0.471	2.122
	YEATS4	6.25	0.063	15.84
	EP300	113.5	0.251	3.992
	MORF4L1	4.827	0.046	21.96
	HIST1H2BA	4.442	0.049	20.26
	ELAVL1	5.706	0.027	37.33
	TRERF1	1.32	0.12	8.334
	KAT6A	308.3	8.333	0.12
	CREBBP	139.5	0.471	2.122
	NR5A1	2.7	0.104	9.63
	SOX2	19.59	0.057	17.66
	HDAC1	119.7	0.251	3.992
	TRERF1	1.32	0.12	8.334
MEAF6-PHF1	DHX9	3.391	0.045	22.12
	EZH1	135.1	15.02	0.067
	EZH2	111.5	0.406	2.466
	EED	197.6	2.994	0.334
	XRCC6	232.4	0.88	1.136
	XRCC5	152.1	0.576	1.736
	PHF1	1.917	0.083	12
	PHF1	1.917	0.083	12
	TP53	240.5	0.25	3.996
	XRCC6	232.4	0.88	1.136
	KAT6A	308.3	8.333	0.12
	TP53	240.5	0.25	3.996
	ELAVL1	5.706	0.027	37.33
	HDAC1	119.7	0.251	3.992
	EZH2	111.5	0.406	2.466
	PHF1	1.917	0.083	12
NR4A3-TAF15	TRIM28	6.961	0.031	32.04
	FUS	19.94	0.063	16
	PRMT1	5.148	0.036	28.17
	COPS6	199	0.25	3.994
	COPS5	199	0.25	3.994
	POLR2C	3.4	0.034	29.7
	POLR2A	101.3	0.404	2.478
	TAF15	2.424	0.042	23.93
	SF1	5.091	0.041	24.16
	NEDD8	5.227	0.02	49.17
	POLR2E	2.95	0.029	34.91
	RPA1	116	0.251	3.992
	RPA2	11.88	0.053	19.02
	CUL4A	6.399	0.023	43.6
	CUL4B	8.304	0.03	33.6
	CUL5	77.54	0.278	3.598
	CUL1	27.92	0.042	23.99
	CUL2	138.9	0.167	5.996
	CUL3	3.375	0.048	20.74
	EZH2	111.5	0.406	2.466
	TRIM28	6.961	0.031	32.04
	CUL1	27.92	0.042	23.99

NR4A3-TFG	CUL4A	6.399	0.023	43.6
	CUL4B	8.304	0.03	33.6
	CUL5	77.54	0.278	3.598
	CUL1	27.92	0.042	23.99
	CUL2	138.9	0.167	5.996
	CUL3	3.375	0.048	20.74
	TRIM28	6.961	0.031	32.04
	CUL1	27.92	0.042	23.99
	CUL3	3.375	0.048	20.74
NUP107-LGR5	NUP153	3.7	0.035	28.38
	KPNB1	4.058	0.072	13.8
	NTRK1	8.726	0.053	19.02
	CUL3	3.375	0.048	20.74
	NUP153	3.7	0.035	28.38
	EIF4B	3.678	0.048	20.94
	CUL3	3.375	0.048	20.74
	EED	197.6	2.994	0.334
	KPNB1	4.058	0.072	13.8
	TP53BP1	240.5	0.25	3.996
PAPPA-NUP107	NUP153	3.7	0.035	28.38
	ELAVL1	5.706	0.027	37.33
	KPNB1	4.058	0.072	13.8
	NTRK1	8.726	0.053	19.02
	SMAD3	1.962	0.019	52.5
	VCP	146.7	0.25	3.994
	CUL3	3.375	0.048	20.74
	EIF4B	3.678	0.048	20.94
	SMAD9	13.88	0.125	8
	SKIL	7.834	0.082	12.13
	PAPPA	1.31	0.131	7.636
	SMAD2	22.89	0.222	4.5
	SMAD3	1.962	0.019	52.5
	TP53BP1	240.5	0.25	3.996
	ELAVL1	5.706	0.027	37.33
	EED	197.6	2.994	0.334
	KPNB1	4.058	0.072	13.8
	NUP214	2.745	0.047	21.49
	SMAD2	22.89	0.222	4.5
	SMAD3	1.962	0.019	52.5
PAX3-FOXO1	NCOA1	3.675	0.036	27.49
	ESR1	28.12	1.222	0.818
	PARP1	88.81	0.406	2.466
	AR	2.106	0.035	28.49
	EP300	113.5	0.251	3.992
	CREBBP	139.5	0.471	2.122
	TRIM28	6.961	0.031	32.04
	PARP1	88.81	0.406	2.466
	CREBBP	139.5	0.471	2.122
PAX7-FOXO1	RARA	5.002	0.046	21.59
	NCOA1	3.675	0.036	27.49
	MYOD1	3.693	0.054	18.41
	ESR1	28.12	1.222	0.818
	HNF4A	128	2	0.5
	PARP1	88.81	0.406	2.466

	SMAD3	1.962	0.019	52.5
	FOXO1	28.04	0.519	1.926
	AR	2.106	0.035	28.49
	MDM2	9.935	0.053	19.02
	EP300	113.5	0.251	3.992
	CREBBP	139.5	0.471	2.122
	AKT1	2.106	0.035	28.49
	EP300	113.5	0.251	3.992
	CREBBP	139.5	0.471	2.122
SS18-SSX2	DPF2	2.095	0.047	21.48
	SMARCC2	103.5	0.803	1.246
	SMARCC1	103.8	0.894	1.118
	PHF10	1.917	0.083	12
	ELAVL1	5.706	0.027	37.33
	DPF3	0.95	0.038	26.31
	ARID2	30	1.25	0.8
	DPF1	0.703	0.078	12.8
	SMARCD3	1.971	0.049	20.29
	SMARCE1	4.706	0.04	25.08
	SMARCD1	4.956	0.046	21.59
	EED	197.6	2.994	0.334
	SMARCA2	3.169	0.031	32.5
	EP300	113.5	0.251	3.992
	SMARCA4	28.47	0.142	7.024
	HDAC1	119.7	0.251	3.992
	ARID1B	1.658	0.045	22.32
	ARID1A	1.812	0.033	30.36
	ACTL6A	3.533	0.034	29.15
	HDAC2	80.31	0.267	3.748
	CUL3	3.375	0.048	20.74
	RNF2	177.8	0.25	3.994
	SMARCD2	1.937	0.042	23.74
	GRB2	9.905	0.019	51.99
	YWHAG	8.003	0.029	33.99
	CUL3	3.375	0.048	20.74
SS18-SSX1	SMARCC2	103.5	0.803	1.246
	DPF2	2.095	0.047	21.48
	SMARCC1	103.8	0.894	1.118
	PHF10	5.155	0.224	4.462
	ELAVL1	5.706	0.027	37.33
	DPF3	0.95	0.038	26.31
	DPF1	0.703	0.078	12.8
	ARID2	30	1.25	0.8
	HDAC2	80.31	0.267	3.748
	SMARCD3	1.971	0.049	20.29
	SMARCE1	4.706	0.04	25.08
	SMARCD1	4.956	0.046	21.59
	EED	197.6	2.994	0.334
	SMARCA2	3.169	0.031	32.5
	EP300	113.5	0.251	3.992
	SMARCA4	28.47	0.142	7.024
	HDAC1	119.7	0.251	3.992
	ARID1B	1.658	0.045	22.32
	ARID1A	1.812	0.033	30.36

	ACTL6A	3.533	0.034	29.15
	CUL3	3.375	0.048	20.74
	SMARCD2	1.937	0.042	23.74
	GRB2	9.905	0.019	51.99
	YWHAG	8.003	0.029	33.99
	CUL3	3.375	0.048	20.74
SS18L1-SSX1	SMARCC1	103.8	0.894	1.118
	STAT3	9.578	0.043	23.28
	BMI1	2.558	0.041	24.62
	WHSC1L1	119.9	1.348	0.742
	SMAD3	1.962	0.019	52.5
	HDAC2	80.31	0.267	3.748
	SMAD1	8.22	0.043	23.36
	EP300	113.5	0.251	3.992
	SMARCA4	28.47	0.142	7.024
	CREBBP	139.5	0.471	2.122
	DPF2	2.095	0.047	21.48
	SMARCC1	103.8	0.894	1.118
	SMARCE1	4.706	0.04	25.08
	SMARCA4	28.47	0.142	7.024
	CUL3	3.375	0.048	20.74
TGFBR3-MGEA5	MAST1	2.031	0.052	19.2
	RNF32	2.1	0.05	20
	PAXIP1	13.28	0.052	19.35
	CBX8	5.876	0.046	21.78
	CSNK2B	3.051	0.073	13.77
	PAXIP1	13.28	0.052	19.35
TRIO-TERT	YWHAZ	9.094	0.027	36.84
	AKT1	2.106	0.035	28.49
	RPS6KB1	3.456	0.061	16.49
	ENO1	6.627	0.245	4.074
	MTOR	6.768	0.048	20.69
	MDM2	9.935	0.053	19.02
	TERT	4.892	0.074	13.49
	XRCC6	232.4	0.88	1.136
	TERF1	15.75	0.051	19.49
	STUB1	7.969	0.033	29.99
	TERT	4.892	0.074	13.49
	POT1	15.33	0.073	13.76
	TERT	4.892	0.074	13.49
	MTOR	6.768	0.048	20.69
	YWHAQ	9.32	0.023	43.99
	RUVBL2	5.408	0.024	41.24
WDR70-RCOR1	SMARCC2	103.5	0.803	1.246
	HDAC1	119.7	0.251	3.992
	HDAC3	22.59	0.982	1.018
	HDAC2	80.31	0.267	3.748
	KDM1A	32.43	0.154	6.476
	RCOR1	3.204	0.062	16.23
	NR2C1	1.132	0.042	23.86
	SMARCE1	4.706	0.04	25.08
	CTBP1	98.54	0.666	1.502
	NR2E1	4	0.129	7.75
	SMARCA4	28.47	0.142	7.024

	CTBP2	9.352	0.094	10.59
	KDM5B	9.343	0.044	22.48
	MTA3	2.232	0.041	24.64
	KDM1A	32.43	0.154	6.476
	HDAC3	22.59	0.982	1.018
	CTBP1	98.54	0.666	1.502
YWHAE- NUTM2B	LARP1	2.17	0.026	37.78
	NOS2	4.671	0.032	31.26
	YWHAQ	9.32	0.023	43.99
	YWHAG	8.003	0.029	33.99
	HUWE1	7.079	0.016	63.99
	MAST2	2.442	0.122	8.19
	NTRK1	8.726	0.053	19.02
	VCP	146.7	0.25	3.994
	AKT1	2.106	0.035	28.49
	MAP2K1	3.938	0.067	14.98
	FBXW11	3.809	0.05	19.95
	ARAF	6.317	0.073	13.77
	CUL3	3.375	0.048	20.74
	PARK2	102	0.251	3.99
	RAF1	6.385	0.043	23.49
	YWHAZ	9.094	0.027	36.84
	UBXN1	5.639	0.042	23.76
	TP53	240.5	0.25	3.996
	RUVBL2	5.408	0.024	41.24
	BTRC	1.723	0.041	24.38
	TUBB	4.334	0.02	50.07
	CDC37	4.101	0.093	10.73
	YWHAH	6.807	0.038	26.44
	MAST3	4.683	0.109	9.182
	BRAF	2.061	0.049	20.38
	YWHAB	5.302	0.017	58.65
	KSR1	1.73	0.108	9.25
	YWHAE	9.029	0.026	38.65
	CUL1	27.92	0.042	23.99
	MAPK7	3.783	0.061	16.39
	YWHAZ	9.094	0.027	36.84
	IGF1R	3.686	0.057	17.64
	IRS1	2.624	0.045	22.1
	YWHAQ	9.32	0.023	43.99
	MST1R	1.235	0.062	16.19
	NTRK1	8.726	0.053	19.02
	CBL	19.28	0.083	12.09
	TUBB	4.334	0.02	50.07
	YWHAB	5.302	0.017	58.65
	YWHAH	6.807	0.038	26.44
	GRB2	9.905	0.019	51.99
	ABL1	5.805	0.034	29.8
	SORBS2	2.606	0.057	17.65
	BCAR1	3.383	0.054	18.62
	YWHAE	9.029	0.026	38.65
	VCP	146.7	0.25	3.994
	CDK2	28.82	0.124	8.086
	CUL1	27.92	0.042	23.99

	CDC37	4.101	0.093	10.73
	LRRK2	7.159	0.052	19.28
	YWHAE	9.029	0.026	38.65
YWHAE- NUTM2A-AS1	LARP1	2.17	0.026	37.78
	NOS2	4.671	0.032	31.26
	YWHAQ	9.32	0.023	43.99
	YWHAG	8.003	0.029	33.99
	HUWE1	7.079	0.016	63.99
	MAST2	2.442	0.122	8.19
	NTRK1	8.726	0.053	19.02
	VCP	146.7	0.25	3.994
	AKT1	2.106	0.035	28.49
	MAP2K1	3.938	0.067	14.98
	FBXW11	3.809	0.05	19.95
	ARAF	6.317	0.073	13.77
	CUL3	3.375	0.048	20.74
	PARK2	102	0.251	3.99
	RAF1	6.385	0.043	23.49
	YWHAZ	9.094	0.027	36.84
	UBXN1	5.639	0.042	23.76
	TP53	240.5	0.25	3.996
	RUVBL2	5.408	0.024	41.24
	BTRC	1.723	0.041	24.38
	TUBB	4.334	0.02	50.07
	CDC37	4.101	0.093	10.73
	YWHAH	6.807	0.038	26.44
	MAST3	4.683	0.109	9.182
	BRAF	2.061	0.049	20.38
	YWHAB	5.302	0.017	58.65
	KSR1	1.73	0.108	9.25
	YWHAE	9.029	0.026	38.65
	CUL1	27.92	0.042	23.99
	MAPK7	3.783	0.061	16.39
	YWHAZ	9.094	0.027	36.84
	IGF1R	3.686	0.057	17.64
	IRS1	2.624	0.045	22.1
	YWHAQ	9.32	0.023	43.99
	MST1R	1.235	0.062	16.19
	NTRK1	8.726	0.053	19.02
	CBL	19.28	0.083	12.09
	TUBB	4.334	0.02	50.07
	YWHAB	5.302	0.017	58.65
	YWHAH	6.807	0.038	26.44
	GRB2	9.905	0.019	51.99
	ABL1	5.805	0.034	29.8
	SORBS2	2.606	0.057	17.65
	BCAR1	3.383	0.054	18.62
	YWHAE	9.029	0.026	38.65
	VCP	146.7	0.25	3.994
	CDK2	28.82	0.124	8.086
	CUL1	27.92	0.042	23.99
	CDC37	4.101	0.093	10.73
	LRRK2	7.159	0.052	19.28
	YWHAE	9.029	0.026	38.65

YWHAE-NUTM2A	LARP1	2.17	0.026	37.78
	NOS2	4.671	0.032	31.26
	YWHAQ	9.32	0.023	43.99
	YWHAG	8.003	0.029	33.99
	HUWE1	7.079	0.016	63.99
	MAST2	2.442	0.122	8.19
	NTRK1	8.726	0.053	19.02
	VCP	146.7	0.25	3.994
	AKT1	2.106	0.035	28.49
	MAP2K1	3.938	0.067	14.98
	FBXW11	3.809	0.05	19.95
	ARAF	6.317	0.073	13.77
	CUL3	3.375	0.048	20.74
	PARK2	102	0.251	3.99
	RAF1	6.385	0.043	23.49
	YWHAZ	9.094	0.027	36.84
	UBXN1	5.639	0.042	23.76
	TP53	240.5	0.25	3.996
	RUVBL2	5.408	0.024	41.24
	BTRC	1.723	0.041	24.38
	TUBB	4.334	0.02	50.07
	CDC37	4.101	0.093	10.73
	YWHAH	6.807	0.038	26.44
	MAST3	4.683	0.109	9.182
	BRAF	2.061	0.049	20.38
	YWHAB	5.302	0.017	58.65
	KSR1	1.73	0.108	9.25
	YWHAE	9.029	0.026	38.65
	CUL1	27.92	0.042	23.99
	MAPK7	3.783	0.061	16.39
	YWHAZ	9.094	0.027	36.84
	IGF1R	3.686	0.057	17.64
	IRS1	2.624	0.045	22.1
	YWHAQ	9.32	0.023	43.99
	MST1R	1.235	0.062	16.19
	NTRK1	8.726	0.053	19.02
	CBL	19.28	0.083	12.09
	TUBB	4.334	0.02	50.07
	YWHAB	5.302	0.017	58.65
	YWHAH	6.807	0.038	26.44
	GRB2	9.905	0.019	51.99
	ABL1	5.805	0.034	29.8
	SORBS2	2.606	0.057	17.65
	BCAR1	3.383	0.054	18.62
	YWHAE	9.029	0.026	38.65
	VCP	146.7	0.25	3.994
	CDK2	28.82	0.124	8.086
	CUL1	27.92	0.042	23.99
	CDC37	4.101	0.093	10.73
	LRRK2	7.159	0.052	19.28
	YWHAE	9.029	0.026	38.65
CA				

ARGLU1- CXCR4	APP	1.25	0.139	7.2
	CHERP	2.649	0.046	21.5
	SNRNP70	2.622	0.021	47.7
	SRPK1	8.282	0.037	26.7
	SRPK2	112.5	0.251	3.99
	PTK2	5.022	0.044	22.7
	JAK2	1.449	0.035	28.3
	SOCS3	5.134	0.073	13.6
	PTPN11	5.675	0.054	18.7
	NTRK1	8.726	0.053	19
	PTK2	5.022	0.044	22.7
	ELAVL1	5.706	0.027	37.3
	SRPK1	8.282	0.037	26.7
	NTRK1	8.726	0.053	19
	PTK2	5.022	0.044	22.7
	JAK2	1.449	0.035	28.3
	JAK3	6.989	0.097	10.3
	SOCS3	5.134	0.073	13.6
	PTPN11	5.675	0.054	18.7
	STAM	3.871	0.067	15
ATXN10- FBLN1	FN1	105.5	4.587	0.22
	ATXN10	3.474	0.109	9.21
	EGFR	8.01	0.01	104
	GSTK1	4.688	0.104	9.6
	ATXN10	3.474	0.109	9.21
	VCP	146.7	0.25	3.99
	BSG	12.04	0.096	10.4
	CUL3	3.375	0.048	20.7
	VCP	146.7	0.25	3.99
	ABCE1	11.03	0.047	21.4
	ATXN10	3.474	0.109	9.21
	APP	1.25	0.139	7.2
	YWHAQ	6.807	0.038	26.4
	CUL3	3.375	0.048	20.7
BCAS3-NFS1	CTBP1	98.54	0.666	1.5
	CTBP2	9.352	0.094	10.6
	BCAS3	3.52	0.11	9.09
	KAT2B	6.538	0.037	26.8
	CTBP1	98.54	0.666	1.5
	CTBP2	9.352	0.094	10.6
	CDC23	5.183	0.051	19.5
	KAT2B	6.538	0.037	26.8
	BCAS3	3.52	0.11	9.09
BCAS4-BCAS3	CTBP1	98.54	0.666	1.5
	CTBP2	9.352	0.094	10.6
	BCAS3	3.52	0.11	9.09
	KAT2B	6.538	0.037	26.8
	CTBP1	98.54	0.666	1.5
	CTBP2	9.352	0.094	10.6
	CDC23	5.183	0.051	19.5
	KAT2B	6.538	0.037	26.8
	BCAS3	3.52	0.11	9.09
BCL2L12-	NCOA2	3.388	0.053	18.9

PRMT1				
	NCOA3	3.966	0.037	26.7
	NCOA1	3.675	0.036	27.5
	TP53	240.5	0.25	4
	ESR1	28.12	1.222	0.82
	BRCA1	94.44	5.556	0.18
	PRMT1	5.148	0.036	28.2
	THRB	3.31	0.069	14.5
	CARM1	3.802	0.043	23.1
	NR1I2	3.385	0.106	9.45
	AR	2.106	0.035	28.5
	PPARA	3.641	0.087	11.5
	EP300	113.5	0.251	3.99
	NCOA2	3.388	0.053	18.9
	NCOA3	3.966	0.037	26.7
	NCOA1	3.675	0.036	27.5
	EP300	113.5	0.251	3.99
	PARP1	88.81	0.406	2.47
CAPNS1- WDR62	YWHAZ	9.094	0.027	36.8
	FBXW11	3.809	0.05	20
	FN1	105.5	4.587	0.22
	HUWE1	7.079	0.016	64
	YWHAQ	6.807	0.038	26.4
	GAPDH	4.678	0.024	41.9
	FERMT2	3.036	0.061	16.5
	YWHAH	6.807	0.038	26.4
	VCAM1	110.8	0.251	3.99
	YWHAB	5.302	0.017	58.7
	PAFAH1B1	3.751	0.064	15.7
	YWHAG	8.003	0.029	34
	PAK2	4.364	0.061	16.5
	YWHAE	9.029	0.026	38.7
	OGFOD1	1.833	0.057	17.5
	MYO1E	2.46	0.045	22.4
	ASNS	4.051	0.049	20.2
	TBCB	2.353	0.055	18.3
	CAPN2	2.922	0.064	15.7
	PROSC	3.906	0.067	14.8
	YWHAE	9.029	0.026	38.7
CCDC6-ANK3	HDAC1	119.7	0.251	3.99
	NR3C1	6.225	0.04	25.2
	TRIM28	6.961	0.031	32
	SF3A1	2.895	0.019	52.9
	HNRNPR	2.866	0.015	66.6
	BRCC3	2.59	0.05	20.1
	HDAC1	119.7	0.251	3.99
	NR3C1	6.225	0.04	25.2
	TRIM28	6.961	0.031	32
	ELAVL1	5.706	0.027	37.3
	SKP1	7.259	0.039	25.5
	HNRNPR	2.866	0.015	66.6
	PPP1CA	9.653	0.034	29.5
	BRCC3	2.59	0.05	20.1
	NTRK1	8.726	0.053	19

	SF3A1	2.895	0.019	52.9
	CUL1	27.92	0.042	24
	FBXW7	17.98	0.062	16
CCDC9-DHX34	EIF4A3	6.718	0.008	124
	SNIP1	3.521	0.053	18.7
	CCDC9	1.838	0.115	8.71
	PRPF40A	4.985	0.028	35.7
CDC27-ST7L	CDC16	2.219	0.036	27.5
	CDC27	3.771	0.038	26.5
	MDC1	6.512	0.035	28.9
	CDC20	4.633	0.031	31.9
	CREBBP	139.5	0.471	2.12
	ANAPC2	1.684	0.038	26.1
	ANAPC7	1.91	0.035	28.8
	CREBBP	139.5	0.471	2.12
	E2F1	4.257	0.039	25.8
	RB1	7.401	0.034	29.3
	TFDP1	2.172	0.062	16.1
	CDC16	2.219	0.036	27.5
	CDC27	3.771	0.038	26.5
	MDC1	6.512	0.035	28.9
	SMAD2	22.89	0.222	4.5
	TP53BP1	240.5	0.25	4
	CREBBP	139.5	0.471	2.12
	UBE2S	4.152	0.066	15.2
	ANAPC2	1.684	0.038	26.1
	ANAPC7	1.91	0.035	28.8
CDK7-RIN3	BRCA1	94.44	5.556	0.18
	TP53	240.5	0.25	4
	RUVBL2	5.408	0.024	41.2
	SUPT5H	4.864	0.04	25.3
	ESR1	28.12	1.222	0.82
	RPA1	116	0.251	3.99
	HNRNPU	126	0.251	3.99
	RPA2	11.88	0.053	19
	CDK2	28.82	0.124	8.09
	POLR2A	101.3	0.404	2.48
	GTF2H1	3.282	0.062	16.1
	RPA1	116	0.251	3.99
	RPA2	11.88	0.053	19
	POLR2A	101.3	0.404	2.48
	CCNH	2.845	0.056	17.9
	HDAC2	80.31	0.267	3.75
	TP53	240.5	0.25	4
	ESR1	28.12	1.222	0.82
	MTA1	3.367	0.036	27.6
	GTF2H1	3.282	0.062	16.1
	ERCC3	2.875	0.063	16
	POLR2A	101.3	0.404	2.48
	ERCC5	1.781	0.099	10.1
	BRCA1	94.44	5.556	0.18
	POLR2A	101.3	0.404	2.48
	RUVBL2	5.408	0.024	41.2
	GTF2H1	3.282	0.062	16.1

	RPA1	116	0.251	3.99
	RPA2	11.88	0.053	19
	PRKCI	4.328	0.063	15.9
	APP	1.25	0.139	7.2
	CDK7	3.61	0.048	21.1
	CDC37	4.101	0.093	10.7
CHERP-CPAMD8	DHX8	3.14	0.05	20.1
	U2AF1	2.213	0.019	51.5
	RPA1	116	0.251	3.99
	PRPF40A	4.985	0.028	35.7
	RPA2	11.88	0.053	19
	CHERP	2.649	0.046	21.5
	SF3A2	2.053	0.079	12.7
	RBM39	3.092	0.021	46.6
	EWSR1	10.05	0.016	64
	DHX8	3.14	0.05	20.1
	AGGF1	3.937	0.187	5.33
	RNPS1	3.812	0.023	44.1
	SNIP1	3.521	0.053	18.7
	SF3B4	3.44	0.034	29.1
	NTRK1	8.726	0.053	19
	CHERP	2.649	0.046	21.5
	SRPK1	8.282	0.037	26.7
	SRPK2	112.5	0.251	3.99
	U2AF1	2.213	0.019	51.5
	U2AF2	5.046	0.014	69.2
	RPA1	116	0.251	3.99
	APBB1	5.343	0.066	15.2
	PRPF40A	4.985	0.028	35.7
	RPA2	11.88	0.053	19
	TTC14	1.1	0.1	10
	RBM23	4.659	0.116	8.59
	SF3A2	2.053	0.079	12.7
	SNRNP70	2.622	0.021	47.7
	RBM39	3.092	0.021	46.6
	EWSR1	10.05	0.016	64
	WBP4	2.368	0.054	18.6
CYTH1-PRPSAP1	DDX17	2.559	0.018	55.5
	DDX5	3.278	0.016	61.9
	ILK	200.6	0.951	1.05
	COPS5	199	0.25	3.99
	CYTH1	2.062	0.187	5.33
	ARRB2	0.238	0.024	42
	ARF6	4.542	0.103	9.69
	ARRB1	0.282	0.04	24.9
	DDX5	3.278	0.016	61.9
	FBXW11	3.809	0.05	20
	DDX17	2.559	0.018	55.5
	ILK	200.6	0.951	1.05
	ITGB2	3.25	0.125	8
	COPS5	199	0.25	3.99
DLG1-CRYBG3	DLG1	5.592	0.112	8.94
	LIN7A	3.508	0.121	8.27

	LIN7C	2.864	0.082	12.2
	APBA1	12.22	0.13	7.69
	CASK	6.782	0.109	9.14
	DLG1	5.592	0.112	8.94
	NTRK1	8.726	0.053	19
	CASK	6.782	0.109	9.14
	EPB41	2.719	0.094	10.7
	DLG1	5.592	0.112	8.94
	KHDRBS1	6.273	0.039	25.7
	LCK	6.021	0.073	13.8
	NTRK1	8.726	0.053	19
	MAPK1	5.324	0.025	40.2
	ARRB2	0.238	0.024	42
	ARRB1	0.282	0.04	24.9
DTX4- CCDC102B	MCM7	5.206	0.034	29
	CDK18	5.579	0.101	9.86
	LENG1	4.548	0.106	9.45
	TRIM54	10.87	0.086	11.7
	TRIM27	1.32	0.12	8.33
	KIFC3	6.577	0.058	17.3
	SFN	8.356	0.033	29.9
	MARK1	1.222	0.111	9
	CCDC102B	5.772	0.105	9.53
EHD4-FSIP1	EHD4	3.141	0.087	11.5
	CTPS2	2.97	0.106	9.43
	EHD1	5.281	0.081	12.3
	EGFR	8.01	0.01	104
	NTRK1	8.726	0.053	19
	WARS	4.256	0.071	14.1
	PLCG1	5.711	0.051	19.6
	UBA2	4.141	0.053	18.8
	ADSL	4.562	0.071	14
	UQCRC2	3.585	0.027	36.5
	PLCG1	5.711	0.051	19.6
	EHD4	3.141	0.087	11.5
	EGFR	8.01	0.01	104
	NTRK1	8.726	0.053	19
ELK4-SLC26A9	BRCA1	94.44	5.556	0.18
	MAPK3	13.19	0.075	13.3
	MAPK1	5.324	0.025	40.2
	ELK4	1.5	0.187	5.33
	BRCA1	94.44	5.556	0.18
	MAPK3	13.19	0.075	13.3
	MAPK1	5.324	0.025	40.2
	ELK4	1.5	0.187	5.33
	BLM	5.025	0.045	22.1
ERAL1-DIDO1	HNRNPDL	2.214	0.02	49.2
	RPA1	116	0.251	3.99
	RPA2	11.88	0.053	19
	HNRNPK	3.744	0.015	64.9
	RBM15	2.61	0.062	16.1
	CUL3	3.375	0.048	20.7
	DIDO1	2.75	0.086	11.6
	FUS	19.94	0.063	16

	FUS	19.94	0.063	16
	APP	1.25	0.139	7.2
	RPA1	116	0.251	3.99
	RPA2	11.88	0.053	19
	RBM15	2.61	0.062	16.1
	CUL3	3.375	0.048	20.7
	DIDO1	2.75	0.086	11.6
	SRPK2	112.5	0.251	3.99
GMDS-CCND3	PCNA	8.779	0.032	31.2
	PPP1CC	11.62	0.042	23.6
	RBL2	3.341	0.055	18.3
	PPP1CA	9.653	0.034	29.5
	CCND3	4.471	0.091	11
	RB1	7.401	0.034	29.3
	POLD1	3.859	0.063	15.8
	CDK2	28.82	0.124	8.09
	CDK4	7.033	0.049	20.3
	CDK6	7.725	0.067	14.9
	CREBBP	139.5	0.471	2.12
	GMDS	3.025	0.138	7.27
	NSFL1C	4.352	0.057	17.7
	CTH	4.861	0.139	7.2
	CAPN2	2.922	0.064	15.7
	ATIC	4.422	0.063	15.8
	RARA	5.002	0.046	21.6
	NCOA2	3.388	0.053	18.9
	VDR	119.9	1.348	0.74
	CCND3	4.471	0.091	11
	CREBBP	139.5	0.471	2.12
	MCM10	3.093	0.063	15.8
	RBX1	5.513	0.035	28.7
	CCND3	4.471	0.091	11
	APP	1.25	0.139	7.2
	NCOA2	3.388	0.053	18.9
	RARA	5.002	0.046	21.6
	VDR	119.9	1.348	0.74
	CCND3	4.471	0.091	11
	CREBBP	139.5	0.471	2.12
HJURP-EIF4E2	FBXW11	3.809	0.05	20
	TP53	240.5	0.25	4
	GIGYF2	2.64	0.05	20.1
	APP	1.25	0.139	7.2
	HUWE1	7.079	0.016	64
	EIF4E2	5.17	0.086	11.6
	YWHAB	5.302	0.017	58.7
	SHMT2	107	0.251	3.99
	YWHAE	9.029	0.026	38.7
INTS4-GAB2	SRC	7.782	0.035	28.4
	PLCG1	5.711	0.051	19.6
	GRB2	9.905	0.019	52
	ZAP70	2.313	0.048	20.8
	NTRK1	8.726	0.053	19
	SHC1	7.138	0.033	30
	PIK3CB	1.729	0.069	14.5

	PIK3R2	3.923	0.036	27.8
	PIK3R1	5.515	0.038	26.3
KDM5A-ANO2	HDAC1	119.7	0.251	3.99
	HDAC2	80.31	0.267	3.75
	RBL1	3.75	0.054	18.4
	TBP	6.066	0.039	25.7
	RB1	7.401	0.034	29.3
	VDR	119.9	1.348	0.74
	KDM5A	1.438	0.058	17.4
	MORF4L1	4.827	0.046	22
	HDAC2	80.31	0.267	3.75
	EZH2	111.5	0.406	2.47
	KDM5A	1.438	0.058	17.4
	ESR1	28.12	1.222	0.82
MAPK10-FAM13A	HDAC1	119.7	0.251	3.99
	TP53	240.5	0.25	4
	HDAC9	2.523	0.017	57.5
	JUN	6.184	0.029	34.1
	DDX5	3.278	0.016	61.9
	ELK1	2.68	0.099	10.1
	MAPK10	4.019	0.093	10.7
	RELA	7.966	0.03	33.3
	CREBBP	139.5	0.471	2.12
	ATF2	9.133	0.045	22.1
	APP	1.25	0.139	7.2
	MAPK10	4.019	0.093	10.7
	MAP2K4	2.703	0.068	14.8
MAPRE1-TM9SF4	YWHAZ	9.094	0.027	36.8
	FN1	105.5	4.587	0.22
	APP	1.25	0.139	7.2
	TUBB	4.334	0.02	50.1
	NTRK1	8.726	0.053	19
	VCAM1	110.8	0.251	3.99
	UNK	14.91	0.051	19.6
	COPS5	199	0.25	3.99
	CDK5RAP2	5.3	0.1	10
	PRKACA	8.583	0.067	14.9
	AKAP9	5.377	0.094	10.6
	PRKACB	3.854	0.066	15.1
	CLIP1	2.941	0.123	8.16
	TUBB	4.334	0.02	50.1
	TUBA1A	7.605	0.037	27.4
	HDAC6	3.869	0.027	37.5
	PDE4DIP	7.234	0.096	10.4
	PRKACA	8.583	0.067	14.9
	PRKACB	3.854	0.066	15.1
	CDK5RAP2	5.3	0.1	10
	AKAP9	5.377	0.094	10.6
	TERF1	15.75	0.051	19.5
	SPTAN1	4.962	0.033	30
	DST	4.014	0.074	13.5
	MAPRE1	6.158	0.039	25.3
NUMB-	TP53	240.5	0.25	4

ALDH6A1				
	NUMB	2.828	0.074	13.4
	ITCH	7.348	0.045	22.3
	MDM2	9.935	0.053	19
	EGFR	8.01	0.01	104
	EPS15	4.535	0.035	28.9
	EGFR	8.01	0.01	104
	AP2A1	2.521	0.03	33.7
	NUMB	2.828	0.074	13.4
	PRKCZ	4.7	0.059	16.8
	NUMB	2.828	0.074	13.4
	APP	1.25	0.139	7.2
	EGFR	8.01	0.01	104
PARD6B-CD48	PRKCI	4.328	0.063	15.9
	RASSF8	4.091	0.093	10.8
	PARD3	3.66	0.061	16.4
	PARD6G	1.663	0.098	10.2
	APP	1.25	0.139	7.2
	PARD6B	8.532	0.114	8.79
	PARD6A	4.967	0.09	11.1
	YWHAH	6.807	0.038	26.4
	PRKCZ	4.7	0.059	16.8
	WWC1	2.441	0.066	15.2
	PRKCI	4.328	0.063	15.9
	PARD3	3.66	0.061	16.4
	PARD6G	1.663	0.098	10.2
	APP	1.25	0.139	7.2
	PARD6B	8.532	0.114	8.79
	PARD6A	4.967	0.09	11.1
	YWHAH	6.807	0.038	26.4
	PRKCZ	4.7	0.059	16.8
	RAC1	13.31	0.088	11.4
	PARD6G	1.663	0.098	10.2
	PARD6B	8.532	0.114	8.79
	PARD6A	4.967	0.09	11.1
PPP1R12A-MGAT4C	KDM1A	32.43	0.154	6.48
	ELAVL1	5.706	0.027	37.3
	RPA1	116	0.251	3.99
	RPA2	11.88	0.053	19
	PPP1R12A	2.913	0.046	22
	CUL1	27.92	0.042	24
	KDM1A	32.43	0.154	6.48
	NUDT5	2.125	0.133	7.53
	TP53	240.5	0.25	4
	ELAVL1	5.706	0.027	37.3
	PUS1	3.795	0.108	9.22
	NUAK1	2.19	0.095	10.5
	AARSD1	2.984	0.063	15.8
	RPA1	116	0.251	3.99
	NTRK1	8.726	0.053	19
	RPA2	11.88	0.053	19
	RPRD1B	3.023	0.044	22.5
	PPP1R12A	2.913	0.046	22
	TRIM47	2.143	0.143	7

	PAXIP1	13.28	0.052	19.3
	ACTR3	2.425	0.03	33
	CUL1	27.92	0.042	24
RNF11-C8A	CBLB	3.457	0.079	12.7
	RNF11	4.744	0.052	19.4
	ITCH	7.348	0.045	22.3
	SMAD4	25.62	0.249	4.02
	EPN1	4	0.063	15.8
	RABGEF1	4.564	0.127	7.89
	UBE2E1	11.81	0.104	9.65
	UBE2D3	12.18	0.06	16.7
	UBE2E3	8.567	0.097	10.3
	HGS	11.27	0.056	17.8
	GGA1	4.433	0.089	11.3
	AKT1	2.106	0.035	28.5
	GGA3	2.646	0.08	12.5
	GGA2	3.152	0.096	10.5
	AP2A1	2.521	0.03	33.7
	EPN3	4.833	0.173	5.79
	UBE2D1	11.54	0.047	21.1
	AP2B1	3.636	0.039	25.9
	CSNK2A1	95.74	0.251	3.99
	SMURF1	7.662	0.03	32.9
	EPS15	4.535	0.035	28.9
	SMURF2	5.487	0.064	15.7
	UBQLN2	4.183	0.053	18.9
	STAM2	4.296	0.072	14
	NEDD4	18.77	0.067	15
	UBQLN4	16.78	0.091	11
	NEDD4L	15.54	0.089	11.2
	APP	1.25	0.139	7.2
	RNF11	4.744	0.052	19.4
	PSMD4	3.411	0.022	46.3
	PSMD7	2.016	0.019	51.6
	PSMD6	1.459	0.017	58.9
	PSMD11	2.596	0.02	49.7
	PSMD10	2.101	0.033	30.5
	PSMD3	2.201	0.018	55
	PSMD12	1.493	0.016	61.6
	PSMD13	1.499	0.017	59.4
	USP14	1.978	0.03	33.4
	PSMD14	1.925	0.018	55.1
	PSMD1	1.91	0.016	61.3
	PSMD2	3.15	0.02	51.1
	APP	1.25	0.139	7.2
	GGA1	4.433	0.089	11.3
	GGA3	2.646	0.08	12.5
	GGA2	3.152	0.096	10.5
	APP	1.25	0.139	7.2
	AKT1	2.106	0.035	28.5
	RNF11	4.744	0.052	19.4
	TBK1	4.968	0.045	22.3
	APP	1.25	0.139	7.2
	NEDD4	18.77	0.067	15

SIPA1L3- WDR62	MAPK10	4.019	0.093	10.7
	WDR62	3.977	0.114	8.8
	MAPK8	9.041	0.053	19
	MAPK9	8.342	0.086	11.6
	SFN	8.356	0.033	29.9
	YWHAB	5.302	0.017	58.7
	SIPA1L3	1.757	0.08	12.5
	YWHAQ	6.807	0.038	26.4
	YWHAB	5.302	0.017	58.7
	FBXW11	3.809	0.05	20
	MAPK10	4.019	0.093	10.7
	ELAVL1	5.706	0.027	37.3
	WDR62	3.977	0.114	8.8
	TBP	6.066	0.039	25.7
	MAPK8	9.041	0.053	19
	MAPK9	8.342	0.086	11.6
SLC26A6- PRKAR2A	AKAP7	1.25	0.139	7.2
	AKAP9	5.377	0.094	10.6
	PRKAR2A	3.894	0.081	12.3
	PRKAR2B	4.793	0.096	10.4
	PRKACA	8.583	0.067	14.9
	PRKACB	3.854	0.066	15.1
	PRKAR2A	3.894	0.081	12.3
	AKAP7	1.25	0.139	7.2
	PRKACA	8.583	0.067	14.9
	PRKACB	3.854	0.066	15.1
	PRKAR2B	4.793	0.096	10.4
	GCH1	6.08	0.203	4.93
ST14-APLP2	BRCA1	94.44	5.556	0.18
	APLP2	3.615	0.164	6.09
	ETS1	2.767	0.053	18.8
	JUN	6.184	0.029	34.1
	SFN	8.356	0.033	29.9
	HDAC5	7.535	0.022	45
	APLP2	3.615	0.164	6.09
	RPL26	1.144	0.012	80.4
	BRCA1	94.44	5.556	0.18
	JUNB	3.213	0.078	12.8
	JUN	6.184	0.029	34.1
	APBB1	5.343	0.066	15.2
	APBB2	3.937	0.146	6.86
	KAT5	32.43	0.154	6.48
	ETS1	2.767	0.053	18.8
	APLP2	3.615	0.164	6.09
	MAPK8	9.041	0.053	19
STRADB- NOP58	NIFK	3.255	0.023	43
	NOP56	3.419	0.014	72.8
	HNRNPU	126	0.251	3.99
	RUVBL2	5.408	0.024	41.2
	NOLC1	3.131	0.032	31
	SNU13	3.398	0.021	48.3
	NTRK1	8.726	0.053	19

	PUM3	1.326	0.02	49
	RPS15A	1.32	0.008	127
	RSL1D1	1.545	0.027	36.9
	KRR1	1.636	0.026	38.5
	DDX18	1.737	0.018	56.4
	EIF6	4.407	0.031	32.2
	DHX15	1.947	0.024	42.1
	RPS4X	1.488	0.007	134
	EED	197.6	2.994	0.33
	PRPF3	2.727	0.028	35.2
	TARDBP	3.859	0.013	77.5
	RPL11	1.378	0.008	127
	EIF2S2	3.9	0.06	16.7
	DDX27	1.525	0.026	38
	NOP58	1.809	0.018	55.8
	FN1	105.5	4.587	0.22
	DDX24	2.62	0.023	43.9
	U2AF1	2.213	0.019	51.5
	RPL30	1.104	0.008	119
	ESR1	28.12	1.222	0.82
	DDX56	1.947	0.024	42.1
	FTSJ3	2.13	0.022	46.5
	DDX47	2.772	0.06	16.6
	KPNA6	3.831	0.07	14.4
	GTPBP4	1.916	0.022	45.4
	WDR36	2.158	0.038	26.4
	KPNA1	4.85	0.048	20.8
	DKC1	2.607	0.027	37.6
	RRP12	1.834	0.031	32.7
	BOP1	2.56	0.053	18.8
	FBL	4.035	0.018	56.3
	TBL3	1.752	0.037	26.8
	WDR36	2.158	0.038	26.4
	NOP58	1.809	0.018	55.8
	DHX15	1.947	0.024	42.1
	NOP56	3.419	0.014	72.8
STX16-RAE1	FBXW11	3.809	0.05	20
	NXF1	1.244	0.02	49
	FAF1	5.636	0.045	22
	RAE1	6.302	0.053	19
	ILF3	1.727	0.027	37.6
	CUL1	27.92	0.042	24
	HNRNPUL1	3.25	0.029	34.5
	CUL3	3.375	0.048	20.7
	NXF1	1.244	0.02	49
	CUL1	27.92	0.042	24
	ILF3	1.727	0.027	37.6
	CUL3	3.375	0.048	20.7
TANC2-CHD6	ZFYVE9	4.194	0.108	9.3
	PPP1CC	11.62	0.042	23.6
	PPP1CA	9.653	0.034	29.5
	TANC2	1.637	0.205	4.89
	ZFYVE9	4.194	0.108	9.3
	PPP1CC	11.62	0.042	23.6

	PPP1CA	9.653	0.034	29.5
	TANC2	1.637	0.205	4.89
	MAEA	1.425	0.079	12.6
	RANBP9	6.682	0.06	16.6
	MKLN1	2.003	0.08	12.5
	MMP7	1.84	0.08	12.5
	RMND5A	2.158	0.065	15.3
	MAEA	1.425	0.079	12.6
	RANBP9	6.682	0.06	16.6
	MKLN1	2.003	0.08	12.5
	RANBP10	3.066	0.123	8.15
	MMP7	1.84	0.08	12.5
	RMND5A	2.158	0.065	15.3
TMPRSS2-ERG	CDC5L	145.2	0.25	3.99
	DDX3X	3.219	0.022	45.4
	ELAVL1	5.706	0.027	37.3
	CAD	2.517	0.025	39.7
	NEDD4	18.77	0.067	15
	SF3B1	3.067	0.017	57.7
	PARP1	88.81	0.406	2.47
	PRKDC	5.478	0.023	42.7
	PRPF8	2.684	0.018	57
	SFPQ	3.346	0.021	48.4
	ERG	2.976	0.038	26.6
	POLR2A	101.3	0.404	2.48
	TOP1	3.021	0.021	48.3
	CLTC	6.885	0.025	40.2
	SF3B2	1.773	0.068	14.7
	XRCC5	152.1	0.576	1.74
	XRCC6	232.4	0.88	1.14
	DDX23	2.608	0.038	26.5
	SNRNP200	2.819	0.019	53.9
	DDX21	2.554	0.023	43.5
	TUBB	4.334	0.02	50.1
	NONO	4.27	0.03	33.7
	JUN	6.184	0.029	34.1
	HNRNPU	126	0.251	3.99
	PRPF40A	4.985	0.028	35.7
	AR	2.106	0.035	28.5
	NCL	3.53	0.015	64.6
	HNRNPM	3.043	0.013	78.9
	HNRNPC	3.27	0.02	50.1
	TOP2B	2.37	0.038	26.2
	ILF3	1.727	0.027	37.6
	ILF2	2.535	0.039	25.6
	PRPF8	2.684	0.018	57
	ERG	2.976	0.038	26.6
	SF3B2	1.773	0.068	14.7
	SF3B1	3.067	0.017	57.7
	PARP1	88.81	0.406	2.47
	PRKDC	5.478	0.023	42.7

Table S11: Communities as predicted using scores

LK,LY,ME,GL	
	Community
BCR-ABL1	
RUNX1-RUNX1T1	HDAC1 BRCA1 KMT2A SMARCC1 HDAC2 CREBBP CTBP1 EP300 SMARCA4 NCOR2 NCOR1
	VDR EP300 SMARCA4 CREBBP
KMT2A-MLLT10	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1 POLR2A SMARCA2 CREBBP SIN3A CTBP1 KMT2A CREBBP
IGH-BCL2	TP53 CASP3 PARP1 CASP8 HIF1A BCL2 BAG3 PARP1 BCL2
KMT2A-AFF1	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1 POLR2A SMARCA2 CREBBP SIN3A CTBP1 KMT2A CREBBP
PICALM-MLLT10	FN1 EEF1A1 EGFR NTRK1 PLCG1 DNM2 ILVBL PICALM HNRNPD FUS FN1 DDX1 SEC24D PICALM NTRK1 SEC24C
PML-RARA	NCOA2 NR3C1 NR4A1 KAT2B RXRA PPARG TP53 MDM2 EP300 SMARCA4 RELA RARA NCOA3 NCOA1 STAT3 ARNT NPAS2 PARP1 NFKB1 TRIP4 CREBBP NFKB1 EP300 PARP1
KMT2A-MLLT3	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1 POLR2A SMARCA2 CREBBP SIN3A CTBP1 KMT2A CREBBP
KMT2A-AFDN	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1 POLR2A SMARCA2 CREBBP SIN3A CTBP1 KMT2A CREBBP
CBFB-MYH11	ACTA2 MYH11 MYO1E RPA1 RPA2 ACTB RPA1 ELAVL1 RPA2
IGH-MYC	
NUP98-DDX10	SIRT7 DDX10 APP DDX56 NTRK1 DDX54 PUM3 PWP1 CSNK2A1 HDAC1 CTNNB1 MAPK8 EP300 CREBBP PUM3 NXF1 EED KPNB1 HNRNPUL1 HDAC1 CREBBP APC CSNK2A1 CTNNB1 APC CREBBP USP7 NTRK1 CDC37
PCM1-JAK2	ERBB2 ERBB3 VAV1 TEC EGFR INSR PLCG1 JAK2 STAT5A JAK2 INSR
KMT2A-SEPT9	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1 POLR2A SMARCA2 CREBBP SIN3A CTBP1 KMT2A CREBBP
FUS-ERG	RPA1 SF3B2 PRKDC PRPF8 SF3A2 DHX15 RPA2 CUL3 ABL1 PARP1 PRKDC
NUP98-HOXA9	HDAC1 TP53 SMAD4 CTNNB1 CSNK2A1 MAPK8 EP300 CREBBP CTNNB1 APC CREBBP
ETV6-ABL1	ERBB2 CBLB UBASH3B SOS1 ERBB4 SRC VAV1 EGFR CBL PLCG1 PIK3R2 PIK3R1 ABL1 ABL1 ABL2 JAK1

SET-NUP214	NXF1 FAF1 SUPT5H GART CUL2 CUL3
	NXF1 CUL2 RANBP2
MNX1-ETV6	HDAC3 ETV6 HDAC9 PIN1 NCOR1 SIN3A
	L3MBTL1 ETV7 ETV6
KMT2A-MLLT1	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1 POLR2A
	SMARCA2 CREBBP SIN3A
KMT2A-MLLT6	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1 POLR2A
	SMARCA2 CREBBP SIN3A
	CTBP1 KMT2A CREBBP
ETV6-ACSL6	HDAC3 ETV6 HDAC9 PIN1 NCOR1 SIN3A
	L3MBTL1 ETV7 ETV6
ETV6-MECOM	HDAC1 UBE2I HDAC3 EHMT2 ELAVL1
	SMAD3 KAT2B SUV39H1 NCOR1 CTBP1
	MECOM SMAD1 SMAD2
	CREBBP MECOM SUV39H1 HDAC4
KMT2A-EPS15	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1
	POLR2A SMARCA2 CREBBP SIN3A
	CTBP1 KMT2A CREBBP
KMT2A-GAS7	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1
	POLR2A SMARCA2 CREBBP SIN3A
	CTBP1 KMT2A CREBBP
KMT2A-ABL1	SMARCC2 KMT2A SMARCC1 CHD3 POLR2A
	SMARCA2 CREBBP ABL1 CBLB CBL
KMT2A-MLLT11	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1
	POLR2A SMARCA2 CREBBP SIN3A
	CTBP1 KMT2A CREBBP
MN1-ETV6	HDAC3 ETV6 HDAC9 PIN1 EP300 NCOR1 SIN3A
	HDAC3 EP300 KAT5
KMT2A-MAML2	SMARCC2 KMT2A SMARCC1 CHD3 SMARCA2 CREBBP
	SMARCA2 EP300 CREBBP
KMT2A-FOXO4	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1
	POLR2A SMARCA2 CREBBP SIN3A
	CTBP1 KMT2A CREBBP
DEK-NUP214	ESR1 KAT2B SMAD2 SMAD3 CDK2 DEK EP300 CREBBP
	NXF1 DHX15 CUL2 CUL3
RUNX1-CBFA2T3	KMT2A SMARCC1 SMARCA4 CREBBP
	EP300 CREBBP
NUP98-PSIP1	HDAC1 KMT2A ESR1 CTNNB1 EP300 CREBBP
	NXF1 EIF4A3 SON
NUP98-HOXC13	HDAC1 CTNNB1 MAPK8 EP300 CREBBP
	NXF1 HNRNPAB EED KPNB1 HNRNPUL1
	HDAC1 CREBBP APC CSNK2A1
	CTNNB1 APC CREBBP
NUP98-HOXC11	HDAC1 STAT3 SP1 SMAD3 CTNNB1 MAPK8 EP300 CREBBP
	CTNNB1 APC CREBBP
PAX5-ETV6	UBE2I HDAC3 TBP KAT5 RB1 PAX5 RUNX1 PIN1 EP300 NCOR1
	MAPK1 EP300 HDAC6
NUP98-HOXA11	HDAC1 HDAC2 YY1 CTNNB1 CSNK2A1 MAPK8 EP300 CREBBP

	CTNNB1 APC CREBBP
BCR-PDGFR1	TGFBR2 PDGFRA SHC1 CRKL EGFR PLCG1 FES CRK ABL1
	HCK PTPN6 BCR UBASH3B INPP5D SOS1 GRB2 NTRK1
	CBL KIT DOK1 PIK3R2 PIK3R1
	ABL1 TP53 RB1 BCR
BCR-FGFR1	SRC ITK SOS1 ERBB3 VAV1 CBL PLCG1 ABL1
	ABL1 HCK BCR CBL
NPM1-RARA	
KMT2A-CBL	
IGH-BCL6	HDAC1 TP53 CTBP1 EP300 NCOR2 CREBBP
	HDAC2 SMARCA4 CREBBP
LCP1-BCL6	HDAC1 TP53 CTBP1 EP300 NCOR2 CREBBP
	HDAC2 SMARCA4 CREBBP
CREBBP-KAT6A	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1 POLR2A SMARCA2
	CREBBP SIN3A
	CTBP1 KMT2A CREBBP
KMT2A-ARHGAP26	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1 POLR2A SMARCA2
	CREBBP SIN3A
	CTBP1 KMT2A CREBBP
FOXO3-KMT2A	SMARCC2 KMT2A SMARCC1 CHD3 SMARCA2 CREBBP
	SMARCA2 EP300 CREBBP
KMT2A-DCPS	SMARCC2 KMT2A HDAC2 CHD3 SMARCC1 POLR2A SMARCA2
	CREBBP SIN3A
	CTBP1 KMT2A CREBBP
KMT2A-EP300	
IGH-CEBPE	UBE2I BATF DDIT3 CEBPG CEBPE FOS JUN STAT6
	RB1 PIAS1 FOSL1 BATF3 BATF2 ATF4 MYB ATF3
HSP90AA1-BCL6	
SC	
ASPSCR1-TFE3	
	XXXXXXXXXXXXXXXXXXXX
ASTN2-CNOT2	CNOT6L AURKA CNOT8 TNRC6C TNRC6B CNOT3 CNOT2 CNOT1
	CNOT7 AGO2
	XXXXX
	HDAC3 GPS2 CNOT2 NCOR2 NCOR1
	XXXXXXXXXXXXXXXXXXXX
BCOR-ZC3H7B	HDAC3 HDAC4 SP1 CTBP1 NACC1 NCOR2
	XXXXX
	HDAC1 CTBP1 NCOR2
	XXXXXXXXXXXXXXXXXXXX
BCOR-CCNB3	HDAC3 HDAC4 SP1 CTBP1 NACC1 NCOR2
	HDAC1 CTBP1 NCOR2

	XXXXXXXXXXXXXXXXXX
CDX1-IRF2BP2	ELAVL1 NTRK1 IRF2BPL IRF2BP2 RBM39
	XXXXXXXXXXXXXXXXXX
CIC-DUX4	
	XXXXXXXXXXXXXXXXXX
CREB1-EWSR1	BRCA1 EPAS1 MYOD1 ESR1 JUN POLR2A EP300 SMARCA4 EWSR1 CREBBP
	XXXXX
	NR3C1 EP300 SMARCA4 CREBBP
	XXXXX
	NONO SMARCA4 CUL3
	XXXXXXXXXXXXXXXXXX
CTDSP2-FAM19A2	SETD1A POLR2A INTS6 CTDSP1 CTDSP2
	XXXXXXXXXXXXXXXXXX
CXorf67-MBTD1	
	XXXXXXXXXXXXXXXXXX
EPC1-PHF1	HDAC1 DHX9 TP53 ELAVL1 E2F6 RBBP7 RBBP4 EZH1 EZH2 EED XRCC6 XRCC5 PHF1
	XXXXX
	HDAC1 TP53 YEATS4 TRIM27 KAT5 TRIM23 HIST1H2BA DMAP1 MYC XRCC6 MORF4L1 ING3
	XXXXXXXXXXXXXXXXXX
ERG-EWSR1	TP53 ESR1 PARP1 EP300 CREBBP XRCC6
	XXXXX
	EPAS1 EP300 CREBBP
	XXXXXXXXXXXXXXXXXX
ETV6-NTRK3	PDGFRB SHC1 CRKL GAB2 NTRK1 PLCG1 GRB2
	XXXXX
	HDAC3 PIN1 ETV6
	XXXXXXXXXXXXXXXXXX
EWSR1-ATF1	PDGFRB SHC1 CRKL GAB2 NTRK1 PLCG1 GRB2
	XXXXX
	HDAC3 PIN1 ETV6
	XXXXXXXXXXXXXXXXXX
EWSR1-FLI1	BRCA1 POLR2A ESR1 EP300 KAT2B CREBBP
	XXXXX
	EPAS1 EP300 CREBBP
	XXXXXXXXXXXXXXXXXX
EWSR1-NR4A3	TSG101 DHX9 HDAC3 TRIM28 FUS RAD23A JUN PRMT1 ILK BMI1 ELK1 POLR2A CHERP ATXN3 EP300 IRF3 EPAS1 TP53 ESR1 NONO RPA1 NTRK1 RPA2 CUL4A CUL4B FASN CREBBP HBP1 CUL5 HLTF EWSR1 YBX1 CUL1 CUL2 CUL3
	XXXXX
	HDAC2 CREBBP ESR1
	XXXXX
	NONO FXR2 CUL3
	XXXXXXXXXXXXXXXXXX
EWSR1-ETV4	TSG101 DHX9 HDAC3 RFWD2 FUS RAD23A JUN PRMT1 ILK SMAD2 BMI1 ELK1 POLR2A CHERP ATXN3 EP300 IRF3 EPAS1 TP53 ESR1 NONO RPA1 NTRK1 RPA2 CUL4A CUL4B FASN CREBBP HBP1 CUL5 HLTF EWSR1 YBX1 CUL1 CUL2 CUL3
	XXXXX

	HDAC2 CREBBP ESR1
	xxxxx
	NONO FXR2 CUL3
	xxxxxxxxxxxxxxxxxxxxx
EWSR1-PATZ1	TSG101 DHX9 HDAC3 RFWD2 FUS RAD23A JUN PRMT1 ILK SMAD2 BMI1 ELK1 POLR2A CHERP ATXN3 EP300 IRF3 EPAS1 TP53 ESR1 NONO RPA1 NTRK1 RPA2 CUL4A CUL4B FASN CREBBP HBP1 CUL5 HLTf EWSR1 YBX1 CUL1 CUL2 CUL3
	xxxxx
	HDAC2 CREBBP ESR1
	xxxxx
	NONO FXR2 CUL3
	xxxxxxxxxxxxxxxxxxxxx
EWSR1-DDIT3	HDAC1 EPAS1 HDAC3 DDIT3 CEBPB ESR1 FOS JUN HBP1 POLR2A IRF3 TP53 EP300 EWSR1 CREBBP
	xxxxx
	DHX9 CUL4A CUL4B CUL5 CUL1 CUL2 CUL3
	xxxxxxxxxxxxxxxxxxxxx
EWSR1-POU5F1	IRF3 EPAS1 HDAC3 TP53 ESR1 JUN HBP1 ETS2 CTNNB1 POLR2A EP300 EWSR1 CREBBP
	xxxxx
	NONO CUL2 CUL3
	xxxxxxxxxxxxxxxxxxxxx
EWSR1-SP3	HDAC1 EPAS1 HDAC3 CEBPB ESR1 JUN HBP1 POLR2A IRF3 TP53 RELA EP300 EWSR1 CREBBP
	xxxxx
	DHX9 CUL4A CUL4B CUL5 CUL1 CUL2 CUL3
	xxxxxxxxxxxxxxxxxxxxx
FOXO4-CIC	XPO1 CTNNB1 VDR ESR1 SMAD4 SMAD3 SFN AKT1 FOXO4 MDM2 NLK CREBBP
	xxxxxxxxxxxxxxxxxxxxx
FUS-ERG	RPA1 SF3B2 PRKDC PRPF8 SF3A2 DHX15 RPA2 CUL3
	ABL1 PARP1 PRKDC
	xxxxxxxxxxxxxxxxxxxxx
FUS-CREB3L1	NONO CUL4A CUL4B DHX15 CUL5 CUL1 CUL2 CUL3
	VCP FBXW11 CUL1
	xxxxxxxxxxxxxxxxxxxxx
FUS-DDIT3	HDAC1 DDX17 EPAS1 RELA ESR1 JUN TP73 EWSR1 CTNNB1 DDX5 CDK2 DDIT3 MDM2 EP300 TRIP4 CREBBP
	VCP FBXW11 CUL1
	xxxxxxxxxxxxxxxxxxxxx
FUS-ATF1	HDAC1 DDX17 EPAS1 RELA ESR1 JUN TP73 EWSR1 CTNNB1 DDX5 CDK2 DDIT3 MDM2 EP300 TRIP4 CREBBP
	VCP FBXW11 CUL1
	xxxxxxxxxxxxxxxxxxxxx
FUS-CREB3L2	NONO CUL4A CUL4B DHX15 CUL5 CUL1 CUL2 CUL3
	VCP FBXW11 CUL1
	xxxxxxxxxxxxxxxxxxxxx
HEY1-NCOA2	BRCA1 RARA NR3C1 VDR STAT6 HNF4A PRMT1 CARM1 RXRA PPARG PPARG AR PPARA ESR2 EP300 NCOA2 NCOA3 NCOA1 TP53 ESR1 AHR ARNT THRB THRA NR1I3 NR1I2 PGR CREBBP PIAS3

	NCOA2 NCOA1 UBR5
	XXXXXXXXXXXXXXXXXXXX
IRX2-TERT	YWHAZ AKT1 RPS6KB1 ENO1 MTOR MDM2 TERT XRCC6
	TERF1 STUB1 TERT POT1
	TERT MTOR YWHAQ RUVBL2
	TPP1 TERT POT1
	XXXXXXXXXXXXXXXXXXXX
JAZF1-SUZ12	DHX9 RBM5 FBXW11 DDX3X NXF1 SF3B4 PRMT1 SF3B1 SF3B2 PRPF8 EED CRNKL1 RNPS1 UBE2I SNRNP200 SRSF7 SNRPD3 RALY DDX5 PRPF19 RNF2 SNRPA1 SON EFTUD2 U2AF1 SF3A1 EPRS ILF2 EIF4A3 CDC40 ILF3 RANBP2
	DNMT3B HDAC1 HDAC2 TRIM28 CHD4 UHRF1 DNMT1 MTA1 NR2C2 EZH2 GATAD2B EED CBX5 RBBP4 CBX3 SETDB1
	VCP BRCA1 MTOR NXF1 RUVBL2
	VCP FBXW11 SKP1 BTRC EZH2
	DHX9 ADAR EZH2 FBXW11
	HDAC2 NXF1 JARID2 SETDB1
	RELA FBXW11 BTRC
	BTRC CSNK2B NXF1
	XXXXXXXXXXXXXXXXXXXX
JAZF1-PHF1	DHX9 EZH1 PPARG EZH2 EED XRCC6 XRCC5 PHF1
	HDAC1 PPARG EZH2 PHF1
	PHF1 TP53 XRCC6
	XXXXXXXXXXXXXXXXXXXX
LMNA-NTRK1	
	XXXXXXXXXXXXXXXXXXXX
MEAF6-TRERF1	HDAC1 TRERF1 KAT5 ING3 CREBBP YEATS4 EP300 MORF4L1 HIST1H2BA
	ELAVL1 TRERF1 KAT6A CREBBP NR5A1
	SOX2 HDAC1 TRERF1
	XXXXXXXXXXXXXXXXXXXX
MEAF6-PHF1	DHX9 EZH1 EZH2 EED XRCC6 XRCC5 PHF1
	PHF1 TP53 XRCC6
	KAT6A TP53 ELAVL1
	HDAC1 EZH2 PHF1
	XXXXXXXXXXXXXXXXXXXX
NR4A3-TAF15	TRIM28 FUS PRMT1 COPS6 COPS5 POLR2C POLR2A TAF15 SF1 NEDD8 POLR2E RPA1 RPA2 CUL4A CUL4B CUL5 CUL1 CUL2 CUL3
	EZH2 TRIM28 CUL1
	XXXXXXXXXXXXXXXXXXXX
NR4A3-TFG	CUL4A CUL4B CUL5 CUL1 CUL2 CUL3
	TRIM28 CUL1 CUL3
	XXXXXXXXXXXXXXXXXXXX
NR6A1-TRHDE	
	XXXXXXXXXXXXXXXXXXXX
NUP107-LGR5	NUP153 KPNB1 NTRK1 CUL3
	NUP153 EIF4B CUL3
	EED KPNB1 TP53BP1
	XXXXXXXXXXXXXXXXXXXX
PAPPA-NUP107	NUP153 ELAVL1 KPNB1 NTRK1 SMAD3 VCP CUL3 EIF4B
	SMAD9 SKIL PAPPA SMAD2 SMAD3
	TP53BP1 ELAVL1 EED KPNB1

	NUP214 SMAD2 SMAD3
	XXXXXXXXXXXXXXXXXXXX
PAX3-FOXO1	NCOA1 ESR1 PARP1 AR EP300 CREBBP
	TRIM28 PARP1 CREBBP
	XXXXXXXXXXXXXXXXXXXX
PAX7-FOXO1	RARA NCOA1 MYOD1 ESR1 HNF4A PARP1 SMAD3 FOXO1 AR
	MDM2 EP300 CREBBP
	AKT1 EP300 CREBBP
	XXXXXXXXXXXXXXXXXXXX
SS18-SSX2	DPF2 SMARCC2 SMARCC1 PHF10 ELAVL1 DPF3 ARID2 DPF1
	SMARCD3 SMARCE1 SMARCD1 EED SMARCA2 EP300 SMARCA4
	HDAC1 ARID1B ARID1A ACTL6A HDAC2 CUL3 RNF2 SMARCD2
	GRB2 YWHAG CUL3
	XXXXXXXXXXXXXXXXXXXX
SS18-SSX1	SMARCC2 DPF2 SMARCC1 PHF10 ELAVL1 DPF3 DPF1 ARID2
	HDAC2 SMARCD3 SMARCE1 SMARCD1 EED SMARCA2 EP300
	SMARCA4 HDAC1 ARID1B ARID1A ACTL6A CUL3 SMARCD2
	GRB2 YWHAG CUL3
	XXXXXXXXXXXXXXXXXXXX
SS18L1-SSX1	SMARCC1 STAT3 BMI1 WHSC1L1 SMAD3 HDAC2 SMAD1 EP300
	SMARCA4 CREBBP
	DPF2 SMARCC1 SMARCE1 SMARCA4 CUL3
	XXXXXXXXXXXXXXXXXXXX
SSX1-SYT4	
	XXXXXXXXXXXXXXXXXXXX
TGFB3-MGEA5	MAST1 RNF32 PAXIP1
	CBX8 CSNK2B PAXIP1
	XXXXXXXXXXXXXXXXXXXX
TRIO-TERT	YWHAZ AKT1 RPS6KB1 ENO1 MTOR MDM2 TERT XRCC6
	TERF1 STUB1 TERT POT1
	TERT MTOR YWHAQ RUVBL2
	XXXXXXXXXXXXXXXXXXXX
WDR70-RCOR1	SMARCC2 HDAC1 HDAC3 HDAC2 KDM1A RCOR1 NR2C1 SMARCE1
	CTBP1 NR2E1 SMARCA4 CTBP2 KDM5B MTA3
	KDM1A HDAC3 CTBP1
	XXXXXXXXXXXXXXXXXXXX
YWHAZ-NUTM2B	LARP1 NOS2 YWHAQ YWHAG HUWE1 MAST2 NTRK1 VCP AKT1
	MAP2K1 FBXW11 ARAF CUL3 PARK2 RAF1 YWHAZ UBXN1 TP53
	RUVBL2 BTRC TUBB CDC37 YWHAH MAST3 BRAF YWHAB KSR1
	YWHAZ CUL1 MAPK7
	YWHAZ IGF1R IRS1 YWHAQ MST1R NTRK1 CBL TUBB YWHAB
	YWHAH GRB2 ABL1 SORBS2 BCAR1 YWHAZ
	VCP CDK2 CUL1
	CDC37 LRRK2 YWHAZ
	XXXXXXXXXXXXXXXXXXXX
YWHAZ-NUTM2A-AS1	LARP1 NOS2 YWHAQ YWHAG HUWE1 MAST2 NTRK1 VCP AKT1
	MAP2K1 FBXW11 ARAF CUL3 PARK2 RAF1 YWHAZ UBXN1 TP53
	RUVBL2 BTRC TUBB CDC37 YWHAH MAST3 BRAF YWHAB KSR1
	YWHAZ CUL1 MAPK7
	YWHAZ IGF1R IRS1 YWHAQ MST1R NTRK1 CBL TUBB YWHAB
	YWHAH GRB2 ABL1 SORBS2 BCAR1 YWHAZ

	VCP CDK2 CUL1
	CDC37 LRRK2 YWHAE
	XXXXXXXXXXXXXXXXXXXX
YWHAE-NUTM2A	LARP1 NOS2 YWHAQ YWHAG HUWE1 MAST2 NTRK1 VCP AKT1 MAP2K1 FBXW11 ARAF CUL3 PARK2 RAF1 YWHAZ UBXN1 TP53 RUVBL2 BTRC TUBB CDC37 YWHAH MAST3 BRAF YWHAB KSR1 YWHAE CUL1 MAPK7
	YWHAZ IGF1R IRS1 YWHAQ MST1R NTRK1 CBL TUBB YWHAB YWHAH GRB2 ABL1 SORBS2 BCAR1 YWHAE
	VCP CDK2 CUL1
	CDC37 LRRK2 YWHAE
	XXXXXXXXXXXXXXXXXXXX
CA	
ANK3-USP9Y	
ARGLU1-CXCR4	APP CHERP SNRNP70 SRPK1 SRPK2
	PTK2 JAK2 SOCS3 PTPN11 NTRK1
	PTK2 ELAVL1 SRPK1 NTRK1
	PTK2 JAK2 JAK3 SOCS3 PTPN11 STAM
ATXN10-FBLN1	FN1 ATXN10 EGFR GSTK1
	ATXN10 VCP BSG CUL3
	VCP ABCE1 ATXN10 APP YWHAQ CUL3
BCAS3-NFS1	CTBP1 CTBP2 BCAS3 KAT2B
	CTBP1 CTBP2 CDC23 KAT2B BCAS3
BCAS4-BCAS3	CTBP1 CTBP2 BCAS3 KAT2B
	CTBP1 CTBP2 CDC23 KAT2B BCAS3
BCL2L12-PRMT1	NCOA2 NCOA3 NCOA1 TP53 ESR1 BRCA1 PRMT1 THRB CARM1 NR1H2 AR PPARA EP300
	NCOA2 NCOA3 NCOA1 EP300 PARP1
CAPNS1-WDR62	YWHAZ FBXW11 FN1 HUWE1 YWHAQ GAPDH FERMT2 YWHAH VCAM1 YWHAB PAFAH1B1 YWHAG PAK2 YWHAE
	OGFOD1 MYO1E ASNS TBCB CAPN2 PROSC YWHAE
CCDC6-ANK3	HDAC1 NR3C1 TRIM28 SF3A1 HNRNPR BRCC3
	HDAC1 NR3C1 TRIM28 ELAVL1 SKP1 HNRNPR PPP1CA BRCC3 NTRK1 SF3A1 CUL1 FBXW7
CCDC9-DHX34	EIF4A3 SNIP1 CCDC9 PRPF40A
CDC27-ST7L	CDC16 CDC27 MDC1 CDC20 CREBBP ANAPC2 ANAPC7
	CREBBP E2F1 RB1 TFD1
	CDC16 CDC27 MDC1 SMAD2 TP53BP1 CREBBP UBE2S ANAPC2 ANAPC7
CDK7-RIN3	BRCA1 TP53 RUVBL2 SUPT5H ESR1 RPA1 HNRNPU RPA2 CDK2 POLR2A
	GTF2H1 RPA1 RPA2 POLR2A CCNH
	HDAC2 TP53 ESR1 MTA1
	GTF2H1 ERCC3 POLR2A ERCC5
	BRCA1 POLR2A RUVBL2 GTF2H1 RPA1 RPA2
	PRKCI APP CDK7 CDC37

CHERP-CPAMD8	DHX8 U2AF1 RPA1 PRPF40A RPA2 CHERP SF3A2 RBM39 EWSR1
	DHX8 AGGF1 RNPS1 SNIP1 SF3B4 NTRK1 CHERP SRPK1 SRPK2 U2AF1 U2AF2 RPA1 APBB1 PRPF40A RPA2 TTC14 RBM23 SF3A2 SNRNP70 RBM39 EWSR1 WBP4
CPD-PIGW	
CYTH1-PRPSAP1	DDX17 DDX5 ILK COPS5
	CYTH1 ARRB2 ARF6 ARRB1
	DDX5 FBXW11 DDX17 ILK ITGB2 COPS5
DLG1-CRYBG3	DLG1 LIN7A LIN7C APBA1 CASK
	DLG1 NTRK1 CASK EPB41
	DLG1 KHDRBS1 LCK NTRK1
	MAPK1 ARRB2 ARRB1
DTX4-CCDC102B	MCM7 CDK18 LENG1 TRIM54 TRIM27 KIFC3
	SFN MARK1 CCDC102B
EHD4-FSIP1	EHD4 CTPS2 EHD1 EGFR NTRK1 WARS PLCG1 UBA2 ADSL UQCRC2
	PLCG1 EHD4 EGFR NTRK1
ELK4-SLC26A9	BRCA1 MAPK3 MAPK1 ELK4
	BRCA1 MAPK3 MAPK1 ELK4 BLM
EMID1-CBY1	xx
EPHA6-CNTN6	xx
ERAL1-DIDO1	HNRNPDL RPA1 RPA2 HNRNPK RBM15 CUL3 DIDO1 FUS
	FUS APP RPA1 RPA2 RBM15 CUL3 DIDO1 SRPK2
GMDS-CCND3	PCNA PPP1CC RBL2 PPP1CA CCND3 RB1 POLD1 CDK2 CDK4 CDK6 CREBBP
	GMDS NSFL1C CTH CAPN2 ATIC
	RARA NCOA2 VDR CCND3 CREBBP
	MCM10 RBX1 CCND3 APP
	NCOA2 RARA VDR CCND3 CREBBP
HJURP-EIF4E2	FBXW11 TP53 GIGYF2 APP HUWE1 EIF4E2 YWHAB SHMT2 YWHAE
INTS4-GAB2	SRC PLCG1 GRB2 ZAP70 NTRK1 SHC1
	PIK3CB PIK3R2 PIK3R1
KCNQ5-RIMS1	
KDM5A-ANO2	HDAC1 HDAC2 RBL1 TBP RB1 VDR KDM5A MORF4L1
	HDAC2 EZH2 KDM5A ESR1
LAMA5-C12orf28	
MAPK10-FAM13A	HDAC1 TP53 HDAC9 JUN DDX5 ELK1 MAPK10 RELA CREBBP ATF2
	APP MAPK10 MAP2K4
MAPRE1-TM9SF4	YWHAZ FN1 APP TUBB NTRK1 VCAM1DR/PAK COPS5
	CDK5RAP2 PRKACA AKAP9 PRKACB
	CLIP1 TUBB TUBA1A HDAC6
	PDE4DIP PRKACA PRKACB CDK5RAP2 AKAP9
	TERF1 SPTAN1 DST MAPRE1
NCKAP5-MZT2A	
NUMB-ALDH6A1	TP53 NUMB ITCH MDM2 EGFR
	EPS15 EGFR AP2A1 NUMB
	PRKCZ NUMB APP EGFR
PARD6B-CD48	PRKCI RASSF8 PARD3 PARD6G APP PARD6B PARD6A YWHAH

	PRKCZ WWC1
	PRKCI PARD3 PARD6G APP PARD6B PARD6A YWHAH PRKCZ
	RAC1 PARD6G PARD6B PARD6A
PPP1R12A-MGAT4C	KDM1A ELAVL1 RPA1 RPA2 PPP1R12A CUL1
	KDM1A NUDT5 TP53 ELAVL1 PUS1 NUA1 AARSD1 RPA1 NTRK1 RPA2 RPRD1B PPP1R12A TRIM47 PAXIP1 ACTR3 CUL1
RNF11-C8A	CBLB RNF11 ITCH SMAD4 EPN1 RABGEF1 UBE2E1 UBE2D3 UBE2E3 HGS GGA1 AKT1 GGA3 GGA2 AP2A1 EPN3 UBE2D1 AP2B1 CSNK2A1 SMURF1 EPS15 SMURF2 UBQLN2 STAM2 NEDD4 UBQLN4 NEDD4L APP
	RNF11 PSMD4 PSMD7 PSMD6 PSMD11 PSMD10 PSMD3 PSMD12 PSMD13 USP14 PSMD14 PSMD1 PSMD2 APP
	GGA1 GGA3 GGA2 APP
	AKT1 RNF11 TBK1 APP NEDD4
SIPA1L3-WDR62	MAPK10 WDR62 MAPK8 MAPK9
	SFN YWHAB SIPA1L3 YWHAQ
	YWHAB FBXW11 MAPK10 ELAVL1 WDR62 TBP MAPK8 MAPK9
SLC26A6-PRKAR2A	AKAP7 AKAP9 PRKAR2A PRKAR2B PRKACA PRKACB
	PRKAR2A AKAP7 PRKACA PRKACB PRKAR2B GCH1
ST14-APLP2	BRCA1 APLP2 ETS1 JUN
	SFN HDAC5 APLP2 RPL26
	BRCA1 JUNB JUN APBB1 APBB2 KAT5 ETS1 APLP2 MAPK8
STRADB-NOP58	NIFK NOP56 HNRNPU RUVBL2 NOLC1 SNU13 NTRK1 PUM3 RPS15A RSL1D1 KRR1 DDX18 EIF6 DHX15 RPS4X EED PRPF3 TARDBP RPL11 EIF2S2 DDX27 NOP58 FN1 DDX24 U2AF1 RPL30 ESR1 DDX56 FTSJ3 DDX47 KPNA6 GTPBP4 WDR36 KPNA1 DKC1 RRP12 BOP1 FBL TBL3
	WDR36 NOP58 DHX15 NOP56
STX16-RAE1	FBXW11 NXF1 FAF1 RAE1 ILF3 CUL1 HNRNPUL1 CUL3
	NXF1 CUL1 ILF3 CUL3
TANC2-CHD6	ZFYVE9 PPP1CC PPP1CA TANC2
THSD7B-DARS	ZFYVE9 PPP1CC PPP1CA TANC2
TMEM123-MMP7	MAEA RANBP9 MKLN1 MMP7 RMND5A
	MAEA RANBP9 MKLN1 RANBP10 MMP7 RMND5A
TMPRSS2-ERG	CDC5L DDX3X ELAVL1 CAD NEDD4 SF3B1 PARP1 PRKDC PRPF8 SFPQ ERG POLR2A TOP1 CLTC SF3B2 XRCC5 XRCC6 DDX23 SNRNP200 DDX21 TUBB NONO JUN HNRNPU PRPF40A AR NCL HNRNPM HNRNPC TOP2B ILF3 ILF2
	PRPF8 ERG SF3B2 SF3B1 PARP1 PRKDC
TOX3-CNTN5	
UBR2-XPO5	
UVRAG-INTS4	
WNT11-TSPAN8	

XRCC5-ACADL	
ZCCHC7-PRSS3	
ZFP91-NOX4	

Table S12: OG and TS predicted by NBC, MutsigCV and 20/20+

Tools	Number of predicted driver genes	Percentage in TCGA
NBC	2750	0.68
RFS	870	0.18
DeepLearning	560	0.2
Wrzeszczynski2011	430	0.22
MutSigCV	1080	0.38
OncodriveCLUST	430	0.095
OncodriveFM	210	0.06
20/20+	940	0.45
ActiveDriver	230	0.08
MuSiC	580	0.06
TUSON	900	0.4
OncodriveFML	810	0.14

Table S13: Prediction rate of unique OG and TS by NBC, MuSiC, OncodriveCLUST, OncodriveFM, 20/20+

Tools	Percentage of predicted OG/TS in TSGene, Kumar et al, TissGDB	Actual number of predicted OG/TS
NBC	610	93.05
RFS	465	70
DeepLearning	180	58
Wrzeszczynski2011	210	59
MutSigCV	370	68
OncodriveCLUST	490	72.25
OncodriveFM	501	79.75
20/20+	520	89
ActiveDriver	160	57
MuSiC	510	87
TUSON	300	61
OncodriveFML	320	63

Table S14. Comparison of NBC with others with respect to p-value

Method	Test to TS	Test to OG	DR/PA to TS	DR/PA to OG
NBC	0.925	0.942	0.912	0.943
RFS	0.91	0.94	0.88	0.93
DeepLearning	0.6	0.58	0.67	0.62
Wrzeszczynski2011	0.63	0.65	0.68	0.69
MutSigCV	0.71	0.88	0.61	0.71
OncodriveCLUST	0.72	0.75	0.81	0.61
OncodriveFM	0.83	0.91	0.74	0.71
20/20+	0.86	0.83	0.89	0.88
ActiveDriver	0.71	0.73	0.68	0.70
MuSiC	0.65	0.61	0.69	0.66
TUSON	0.63	0.67	0.61	0.62
OncodriveFML	0.82	0.88	0.76	0.75