

### AMPK Pathway

ACACA	ADRA2A	AKT3	CPT1C	FOXO3	INSR	PFKFB3	PPP2R1B	PRKACB	RB1CC1	STRADB
ACACB	ADRA2B	ATG13	CPT2	GAPDH	LEPR	PFKFB4	PPP2R2B	PRKAG1	RPS6KB1	TP53
ACTB	ADRA2C	CAMKK1	CRTC2	GPAM	LIPE	PNPLA2	PPP2R4	PRKAG2	RPS6KB2	TSC1
ADIPOR1	AK1	CAMKK2	CRY1	GPAT2	MLYCD	PPARGC1A	PRKAA1	PRKAG3	RPTOR	TSC2
ADIPOR2	AK2	CHRNA1	EEF2K	GYS1	MTOR	PPARGC1B	PRKAA2	PRKAR1A	SLC2A4	ULK1
ADRA1A	AK3	CHRNB1	EIF4EBP1	GYS2	PDPK1	PPP2CA	PRKAB1	PRKAR1B	SREBF1	
ADRA1B	AKT1	CPT1A	ELAVL1	HMGCR	PFKFB1	PPP2CB	PRKAB2	PRKAR2A	STK11	
ADRA1D	AKT2	CPT1B	FASN	HNF4A	PFKFB2	PPP2R1A	PRKACA	PRKAR2B	STRADA	

### Angiogenesis

ACTB	BMP2	CSF3	CXCL6	F3	GAPDH	IL12A	LECT1	NRP2	PROK1	SPHK1	TIMP1
AGGF1	BTG1	CTGF	CXCL9	FGF1	GRN	IL12B	LEP	PDGFA	PROK2	SPINK5	TIMP2
AKT1	CCL11	CXCL1	EDIL3	FGF13	GRP	IL17F	MDK	PDGFB	PTGS1	STAB1	TIMP3
AMOT	CCL15	CXCL10	EDN1	FGF2	HGF	IL1B	MMP14	PDGFD	PTN	TEK	TNF
ANG	CCL2	CXCL11	EFNA1	FGFBP1	HIF1A	IL6	MMP2	PECAM1	RHOB	TGFA	TNNI2
ANGPT1	CD55	CXCL12	EFNB2	FGFR3	HPSE	ITGAV	MMP9	PF4	RNH1	TGFB1	TNNI3
ANGPT2	CD59	CXCL13	EGF	FIGF	ID1	ITGB3	NOS3	PGF	RUNX1	TGFB2	TYMP
ANGPTL1	CDH5	CXCL14	ENG	FLT1	IFNB1	JAG1	NOTCH4	PLAU	S1PR1	TGFBR1	VEGFA
ANGPTL4	CHGA	CXCL2	EPHB4	FN1	IFNG	KDR	NPPB	PLG	SERPINC1	THBS1	VEGFB
ANPEP	COL18A1	CXCL3	ERBB2	FOXO4	IGF1	KITLG	NPR1	PPBP	SERPINE1	THBS2	VEGFC
BAI1	COL4A3	CXCL5	EREG	FST	IL10	KLK3	NRP1	PRL	SERPINF1	TIE1	

### Apoptosis

ACTB	BCL10	BNIP3	CASP4	COMMD4	FAF1	HTT	JPH3	NAIP	PPIA	SQSTM1	TNFSF15
AIFM1	BCL2	BNIP3L	CASP5	CRADD	FAS	IFNG	JUN	NFKB1	PPID	SYCP2	TNFSF8
AKT1	BCL2A1	BOK	CASP6	CTSB	FASLG	IGF1	KCNIP1	NFKBIA	PRF1	TMEM123	TP53
APAF1	BCL2L1	BRAF	CASP7	CTSS	FEM1B	IGF1R	LTA	NFKBIE	PVR	TMEM57	TP53BP2
APP	BCL2L10	C1orf159	CASP8	CYBB	FOXI1	IGF2	LTBR	NGF	PYCARD	TNF	TP63
ATG12	BCL2L11	CAPN1	CASP8AP2	CYCS	FUS	IKKB	MADD	NGFR	PYGL	TNFRSF10A	TP73
ATG16L1	BCL2L2	CAPN2	CASP9	CYLD	GAA	IKBKG	MAG	NGFRAP1	RAB25	TNFRSF10B	TRADD
ATG3	BECN1	CAPN3	CCDC103	DAPK1	GADD45A	IL10	MAP1LC3A	NOD1	RELA	TNFRSF11B	TRAF2
ATG5	BFAR	CAPN5	CD27	DEFB1	GALNT5	INS	MAP2K4	NOL3	RIPK1	TNFRSF14	TRAF3
ATG7	BID	CAPN6	CD40	DENND4A	GAPDH	IRF1	MAP3K1	NOX1	RIPK2	TNFRSF17	TXNL4B
ATP6V1G2	BIK	CAPN7	CD40LG	DFFA	GLUD1	IRF2	MAPK10	NOX4	RIPK3	TNFRSF1B	ULK1
BAD	BIRC2	CAPNS1	CD70	DIABLO	GLUL	IRF3	MAPK8	OR10J3	RPS6KB1	TNFRSF21	XIAP
BAG1	BIRC3	CASP1	CDKN2A	DPYSL4	GRB2	IRF4	MCL1	PARP1	S100A7A	TNFRSF25	
BAG3	BIRC5	CASP10	CFLAR	EDA2R	GZMB	IRF5	MDM2	PARP2	SLC25A4	TNFRSF4	
BAK1	BIRC6	CASP14	CHUK	EIF5B	HELLS	IRF6	MGEA5	PIK3C3	SNCA	TNFRSF8	
BAX	BMF	CASP2	CIDEA	ESR1	HRK	IRF7	MYC	PIK3R1	SP1	TNFRSF9	
BBC3	BNIP2	CASP3	CIDEB	FADD	HSPBAP1	IRGM	MYD88	PMAIP1	SPATA2	TNFSF10	

### Cardio Toxicity

ABHD2	BCAT1	CD14	FOSL1	IGFBP5	PLAU	PVR	TCF4	TXNIP	WIP1	
ADRA2A	BTG2	COL3A1	GJA1	IL6	PPBP	RPS6KB1	TGFB2	UBXN2A		
AIFM1	CCL7	DUSP8	HSPA2	MCM6	PRKAB2	SERPINE1	TIAM1	VCAN		
AK3	CCR1	EGR1	HSPH1	PLA2G4A	PSMD7	SPP1	TIMP1	VEGFA		

### Cell Cycle

ANAPC2	BRCA2	CCND1	CDC14A	CDK2	CDKN2B	CSNK1E	EP300	HDAC8	LIN9	MCM7	MYC
ATM	BTRC	CCND2	CDC16	CDK4	CDKN2C	CSNK2A1	FBXO5	HIST1H3H	MAD2L1	MDM2	NBN
ATR	BUB1	CCND3	CDC20	CDK5R1	CDKN2D	CSNK2B	FBXW11	HJURP	MAPK1	MKI67	NCAPD3
AURKA	BUB1B	CCNE1	CDC25A	CDK5RAP1	CDKN3	CUL2	FEN1	HSP90AA1	MAPK3	MLH1	NDC80
AURKB	CASP3	CCNE2	CDC25B	CDK6	CENPF	CUL3	FGFR10P	HSPA2	MAX	MLH3	NEK2
BCCIP	CCNA1	CCNF	CDC25C	CDK7	CENPN	DKC1	GADD45A	HUS1	MCM2	MNAT1	NPM1
BCL2	CCNA2	CCNG1	CDC34	CDK8	CHEK1	DMC1	GTSE1	KIF2C	MCM3	MRE11A	NUF2
BIRC5	CCNB1	CCNG2	CDC6	CDKN1A	CHEK2	E2F1	H2AFX	KNTC1	MCM4	MSH4	NUP62
BLM	CCNB2	CCNH	CDC7	CDKN1B	CKS1B	E2F3	H3F3A	KPNA2	MCM5	MSH5	ORC6
BRCA1	CCNC	CCNT1	CDK1	CDKN2A	CKS2	E2F5	HDAC1	LIG1	MCM6	MYBL2	PCNA

# Gene List

## HTG EdgeSeq

### Oncology Biomarker Panel

#### Cell Cycle Continued

PKMYT1	POLE2	PRKCA	RAD21	RBL1	RRM2	SMC4	TERT	TYMS
PLK1	PPP2CA	PRKCB	RAD50	RBL2	RUVBL1	SPC25	TFDP1	UBB
PLK4	PPP2CB	PSMD2	RAD51	RFC1	SERTAD1	STAG2	TFDP2	UBE2C
POLD1	PPP2R1A	PSMD7	RAD51C	RFC3	SKP2	STMN1	TINF2	UBE2I
POLD2	PPP2R1B	PTTG1	RAD9A	RFC4	SMC1A	SYCP2	TOP2A	WEE1
POLD3	PRKACA	RAD1	RB1	RPA1	SMC1B	TERF1	TOP3A	
POLD4	PRKAR2B	RAD17	RBBP8	RPA3	SMC3	TERF2IP	TP53	

#### Cluster of Differentiation

ABCG2	CCR7	CD33	CD70	CXCR1	FCER2	IL10RA	ITGA2	KLRD1	PDCD1	TLR1	TNFRSF21
ACKR1	CCR8	CD34	CD74	CXCR2	FCGR1A	IL10RB	ITGA3	L1CAM	PDCD1LG2	TLR2	TNFRSF4
ACKR3	CCR9	CD38	CD79A	CXCR3	FGFR1	IL13RA2	ITGA4	LAG3	PDGFRA	TLR3	TNFRSF8
ADAM17	CD14	CD3D	CD80	CXCR4	FGFR2	IL1R1	ITGA5	LEPR	PDGFRB	TLR4	TNFRSF9
ALCAM	CD160	CD4	CD83	CXCR5	FGFR3	IL1R2	ITGA6	LIFR	PECAM1	TLR6	TNFSF10
ALK	CD163	CD40	CD86	CXCR6	FGFR4	IL2RA	ITGAM	MME	PLAUR	TLR8	TNFSF11
ANPEP	CD19	CD40LG	CD8A	DDR1	FLT3	IL2RB	ITGAV	MPL	PROM1	TLR9	TNFSF13B
BMPR1B	CD2	CD44	CDH1	ENG	FZD10	IL2RG	ITGB1	MSA1	PTPRC	TNFRSF10A	TNFSF14
C5AR1	CD209	CD47	CDH2	ENTPD1	FZD4	IL3RA	ITGB2	MSR1	PVR	TNFRSF10B	TNFSF8
CCR1	CD22	CD5	CDH5	EPCAM	FZD9	IL4R	ITGB3	MST1R	S1PR1	TNFRSF10C	TSPAN7
CCR2	CD24	CD52	CEACAM3	ERBB2	ICAM1	IL5RA	ITGB4	MUC1	SELE	TNFRSF10D	VCAM1
CCR3	CD27	CD55	CEACAM5	F11R	ICOS	IL6R	JAG1	NCAM1	SLAMF7	TNFRSF12A	
CCR4	CD274	CD59	CSF1R	F3	IFNGR1	IL6ST	KDR	NGFR	SLC7A5	TNFRSF14	
CCR5	CD276	CD63	CSF3R	FAS	IGF1R	IL7R	KIT	NRP1	TEK	TNFRSF17	
CCR6	CD28	CD68	CTLA4	FASLG	IGF2R	INSR	KLRB1	NT5E	THY1	TNFRSF18	

#### DMPK

ABCA2	ABCC10	ABCD3	CYP1B1	CYP3A5	SLC10A2	SLC22A2	SLC28A1	SLC38A2	SLC7A5	SLC02B1	UGT1A6
ABCA3	ABCC11	ABCD4	CYP2A6	CYP4A22	SLC15A1	SLC22A3	SLC28A2	SLC38A5	SLC7A6	SLC03A1	UGT2B7
ABCA4	ABCC12	ABCF1	CYP2B6	CYP7A1	SLC15A2	SLC22A6	SLC28A3	SLC39A6	SLC7A7	SLC04A1	
ABCA5	ABCC2	ABCG8	CYP2C19	FM03	SLC16A1	SLC22A7	SLC29A1	SLC3A1	SLC7A8	SULT1A1	
ABCA9	ABCC3	AHR	CYP2C8	FM05	SLC16A2	SLC22A8	SLC29A2	SLC3A2	SLC7A9	SULT1B1	
ABCB11	ABCC4	AHRR	CYP2C9	FYN	SLC19A1	SLC22A9	SLC2A13	SLC45A3	SLC01A2	SULT2A1	
ABCB4	ABCC5	CYP19A1	CYP2D6	GSTM1	SLC19A2	SLC25A13	SLC2A14	SLC5A1	SLC01B1	TBP	
ABCB6	ABCC6	CYP1A1	CYP2U1	GSTM3	SLC19A3	SLC25A3	SLC2A2	SLC5A4	SLC01B3	UGT1A1	
ABCC1	ABCD1	CYP1A2	CYP3A4	SLC10A1	SLC22A1	SLC26A2	SLC31A1	SLC7A11	SLC02A1	UGT1A4	

#### DNA Repair

APEX1	CDK7	DNAJB13	DNAJC11	DNAJC4	ERCC3	MGMT	MSH6	PMS1	RAD23B	RPA3	XPC
APEX2	DDB2	DNAJB14	DNAJC12	DNAJC5	ERCC4	MLH1	MUTYH	PMS2	RAD50	SLK	XRCC1
ATM	DMC1	DNAJB2	DNAJC13	DNAJC5B	ERCC5	MLH3	NEIL1	PNKP	RAD51	SMUG1	XRCC2
ATR	DNAJA1	DNAJB5	DNAJC14	DNAJC5G	ERCC6	MMS19	NEIL2	POLB	RAD51B	TDG	XRCC3
ATXN3	DNAJA2	DNAJB6	DNAJC15	DNAJC6	ERCC8	MPG	NEIL3	POLD3	RAD51C	TOP3A	XRCC4
BRCA1	DNAJA3	DNAJB7	DNAJC16	DNAJC7	EXO1	MRE11A	NTHL1	POLL	RAD51D	TOP3B	XRCC5
BRCA2	DNAJA4	DNAJB8	DNAJC17	DNAJC8	FEN1	MSH2	OGG1	PRKDC	RAD52	TREX1	XRCC6
BRIP1	DNAJB1	DNAJB9	DNAJC18	DNAJC9	LIG1	MSH3	PARP1	RAD18	RAD54L	UNG	XRCC6BP1
CCNH	DNAJB11	DNAJC1	DNAJC21	ERCC1	LIG3	MSH4	PARP2	RAD21	RFC1	XAB2	
CCNO	DNAJB12	DNAJC10	DNAJC3	ERCC2	LIG4	MSH5	PARP3	RAD23A	RPA1	XPA	

#### EGF/PDGF Pathway

ACTR2	BAD	CCND1	DUSP6	FASLG	GSK3B	KRAS	MAPK10	NFATC3	PDPK1	PRKCA	RPS6KB1
AKT1	BCAR1	CHUK	EGF	FN1	HBEGF	LTA	MAPK3	NFKB1	PIK3CA	PTEN	SHC1
AKT2	BCL2	COL1A1	EGFR	FOS	HRAS	MAP2K1	MAPK8	NRAS	PIK3R1	RAF1	SRC
AKT3	BRAF	CREB1	EGR1	FOXO3	IKBKB	MAP2K4	MAPK9	NUP62	PIK3R2	RAP1A	STAT1
ARAF	CASP3	CSNK2A1	EIF4E	GAB1	IL2	MAP2K7	MKMK1	PDGFA	PLAT	RASA1	STAT3
ATF1	CASP9	CSNK2B	ELK1	GRB2	JAK1	MAP3K2	MMP7	PDGFB	PLCG1	RHOA	STAT5A
ATF2	CBL	DUSP1	EPS8	GSK3A	JUN	MAPK1	NCK2	PDGFRA	PPP2CA	RPS6KA5	TP53

## EGFR/HER Pathway

AKT1	CTNNB1P1	HEY1	IGFBP2	KRAS	MAPK12	MTOR	PDK1	PIK3R5	PRKCG	SHC3
AKT1S1	CTNND2	HEY2	IGFBP3	MAP2K1	MAPK13	NRAS	PIK3C2A	PLCB1	PRKCZ	SHC4
AKT2	EGF	HEYL	IGFBP4	MAP2K2	MAPK14	NRG1	PIK3C3	PLCB4	RAC1	STAT1
AKT3	EGFR	HGF	IGFBP5	MAP2K4	MAPK3	NRG2	PIK3CA	PLCE1	RAC2	STAT2
ARAF	EPGN	HRAS	IGFBP6	MAP2K7	MAPK6	NRG3	PIK3CB	PLCG1	RAC3	STAT3
AREG	ERBB2	IGF1	IGFBP7	MAP3K1	MAPK7	NRG4	PIK3CD	PLCG2	RAF1	STAT4
BRAF	ERBB3	IGF1R	ITPKB	MAP3K2	MAPK8	PAK1	PIK3CG	PRKCA	RASGRP1	STAT5A
BTC	ERBB4	IGF2	JAK1	MAPK1	MAPK9	PAK11P1	PIK3R1	PRKCB	RASGRP2	STAT5B
CDH1	EREG	IGF2R	JAK2	MAPK10	MDM2	PAK3	PIK3R2	PRKCD	SHC1	STAT6
CTNNB1	HBEGF	IGFBP1	JAK3	MAPK11	MET	PAK7	PIK3R3	PRKCE	SHC2	TGFA

## FGFR Pathway

AKT1	CDH13	FGF16	FGF5	GAB1	KLB	MAPK10	NRAS	PIK3R1	PRKCD	RHOB	SRC
AKT1S1	CDH2	FGF17	FGF6	GRB2	KRAS	MAPK11	PAK1	PIK3R2	PRKCE	RHOU	TCF4
AKT2	CDH3	FGF18	FGF7	HEY1	MAP2K1	MAPK12	PAK11P1	PIK3R3	PRKCG	SHC1	
AKT3	CDH5	FGF19	FGF8	HEY2	MAP2K2	MAPK13	PAK3	PIK3R5	PRKCZ	SHC2	
ARAF	CRK	FGF2	FGF9	HEYL	MAP2K3	MAPK14	PAK7	PLCB1	RAC1	SHC3	
BRAF	FGF1	FGF20	FGFBP1	HRAS	MAP2K4	MAPK3	PIK3C2A	PLCB4	RAC2	SHC4	
CADM1	FGF10	FGF21	FGFR1	ITPKB	MAP2K5	MAPK6	PIK3C3	PLCE1	RAC3	SOS1	
CBL	FGF11	FGF22	FGFR10P	JUN	MAP2K6	MAPK7	PIK3CA	PLCG1	RAF1	SOS2	
CBLC	FGF12	FGF23	FGFR2	JUNB	MAP2K7	MAPK8	PIK3CB	PLCG2	RASGRP1	SPRY1	
CDC42	FGF13	FGF3	FGFR3	JUND	MAP3K1	MAPK9	PIK3CD	PRKCA	RASGRP2	SPRY2	
CDH1	FGF14	FGF4	FGFR4	KL	MAPK1	MTOR	PIK3CG	PRKCB	RHOA	SPRY4	

## Hedgehog Pathway

BCL2	BOC	DISP1	FKBP8	GREM1	LATS1	NPC1	PTCHD1	SMO	WNT1	WNT3	WNT7B
BMP2	BTRC	DISP2	FOXE1	GSK3B	LATS2	NUMB	PTCHD2	STK3	WNT10A	WNT3A	WNT8A
BMP4	CDON	ERBB4	FRMD6	HHAT	LRP2	OTX2	PTCHD3	STK36	WNT10B	WNT4	WNT8B
BMP5	CSNK1A1	FAT4	GAS1	HHIP	MAPK1	PRKACA	RAB23	SUFU	WNT11	WNT5A	WNT9A
BMP6	CSNK1E	FBXW11	GLI1	IFT52	MOB1B	PRKACB	RUNX2	TP53	WNT16	WNT5B	WNT9B
BMP7	CTNNB1	FGF9	GLI2	IHH	MTSS1	PTCH1	SFRP1	VEGFA	WNT2	WNT6	ZIC1
BMP8B	DHH	FGFR3	GLI3	KCTD11	NF2	PTCH2	SHH	WIF1	WNT2B	WNT7A	ZIC2

## Housekeepers

ACTB	DDX5	GAPDH	OAZ1	RPL38	RPS7	SOD1	YWHAZ				
ATP5F1	EEF1G	NCL	PPIA	RPL6	SLC25A3	TBP					

## Hypoxia

ADM	ARNT	CCNG2	EGLN2	F3	HIF1AN	JMJD6	MXI1	P4HA1	PGF	SLC2A1	VEGFA
ADORA2B	ATR	COPS5	EGR1	FAM162A	HIF3A	LGALS3	NAMPT	P4HB	PIM1	SLC2A3	
ALDOC	BHLHE40	CTSA	EIF4EBP1	FOS	HK2	LOX	NCOA1	PDK1	PKM	TP53	
ANGPTL4	BLM	DDIT4	ENO1	GBE1	HMOX1	MAP3K1	NDRG1	PER1	PLAU	TP1	
ANKRD37	BNIP3	DNAJC5	EPO	GPI	HNF4A	MET	NFKB1	PFKFB3	RBPJ	TXNIP	
ANXA2	BNIP3L	EDN1	ERO1L	GYS1	IER3	MIF	NOS3	PFKFB4	SERPINE1	USF2	
APEX1	CA9	EGLN1	F10	HIF1A	IGFBP3	MMP9	ODC1	PFKL	SLC16A3	VDAC1	

# Gene List

## HTG EdgeSeq

### Oncology Biomarker Panel

#### Immuno-Oncology

ACKR2	CCL21	CD274	CRP	EDA2R	ID4	IL1RN	IRAK1	MAGEB1	NOD2	STAT5A	TNFRSF4
ACKR3	CCL22	CD276	CSF1	EOMES	IDO1	IL2	IRF1	MAGEB2	NODAL	STAT5B	TNFRSF8
ACKR4	CCL23	CD28	CSF1R	FADD	IFNA2	IL20	IRF2	MAGEB3	NOS2	STAT6	TNFRSF9
ADIPOQ	CCL24	CD38	CSF2	FAF1	IFNAR1	IL20RA	IRF3	MAGEC1	NR3C1	STC2	TNFSF10
APCS	CCL25	CD3D	CSF3	FAS	IFNB1	IL20RB	IRF4	MAGEC2	OMD	TBX21	TNFSF11
APOL3	CCL26	CD4	CSF3R	FASLG	IFNG	IL21	IRF5	MAGED1	OSM	TGFB1	TNFSF13B
AREG	CCL27	CD40	CTLA4	FGL2	IFNGR1	IL22	IRF6	MAGED2	PDCD1	TGFB2	TNFSF14
BCL2	CCL28	CD40LG	CX3CL1	FOS	IFNL3	IL22RA1	IRF7	MAGEE1	PDCD1LG2	THPO	TNFSF15
BCL6	CCL3	CD47	CX3CR1	FOXP3	IL10	IL22RA2	IRF8	MAGEF1	PF4V1	TICAM1	TNFSF8
BMP2	CCL4	CD68	CXADR	FPR1	IL10RA	IL23A	IRF9	MAGEL2	PIAS1	TIRAP	TNFSF9
BMP4	CCL5	CD70	CXCL1	GATA3	IL10RB	IL23R	ITGAM	MAPK1	PIAS2	TLR1	TNNC2
BMP6	CCL7	CD80	CXCL10	GBP1	IL11	IL24	ITGB2	MAPK8	PIAS3	TLR2	TNNI2
BMP7	CCL8	CD86	CXCL11	GBP2	IL11RA	IL27	ITM2A	MBL2	PPARG	TLR3	TNNI3
C3	CCR1	CD8A	CXCL12	GNLY	IL12A	IL2RA	JAK2	MIF	PPBP	TLR4	TOLLIP
C3AR1	CCR10	CEACAM3	CXCL13	GPI	IL12B	IL2RB	KIT	MMP9	PRDM1	TLR5	TRADD
C5	CCR2	CEACAM5	CXCL14	GPR17	IL12RB2	IL2RG	KITLG	MPO	PRF1	TLR6	TRAF6
C5AR1	CCR3	CEACAM7	CXCL16	GZMA	IL13	IL3	KNG1	MS4A1	PTCRA	TLR7	TSLP
CA9	CCR4	CEBPB	CXCL2	GZMB	IL13RA2	IL33	LAG3	MSTN	PTGS2	TLR8	TYK2
CASP1	CCR5	CEBPD	CXCL3	GZMH	IL15	IL3RA	LIF	MX1	RAG1	TLR9	TYMP
CCL1	CCR6	CHI3L1	CXCL5	HAVCR2	IL16	IL4	LTA	MYD88	RIPK1	TNF	VEGFA
CCL11	CCR7	CKLF	CXCL6	HIF1A	IL17A	IL4R	LTB	NFAT5	RIPK2	TNFRSF10A	VTCN1
CCL13	CCR8	CKMT1A	CXCL9	HLA-A	IL17F	IL5	LTBR	NFATC1	RORC	TNFRSF10B	XCL1
CCL14	CCR9	CKMT2	CXCR1	HLA-B	IL17RB	IL5RA	LY96	NFATC3	SELE	TNFRSF10C	XCL2
CCL15	CCRL2	CMKLR1	CXCR2	HLA-E	IL18	IL6	LYZ	NFATC4	SLC11A1	TNFRSF10D	XCR1
CCL16	CCT2	CMTM1	CXCR3	HPGD	IL19	IL6R	MADCAM1	NFKB1	SLIT2	TNFRSF11B	
CCL17	CD14	CMTM2	CXCR4	ICAM1	IL1A	IL6ST	MAF	NFKBIA	SPP1	TNFRSF14	
CCL18	CD160	CMTM3	CXCR5	ICOS	IL1B	IL7	MAGEA1	NGFR	STAT1	TNFRSF17	
CCL19	CD19	CMTM4	CXCR6	ID1	IL1R1	IL7R	MAGEA11	NGFRAP1	STAT2	TNFRSF1B	
CCL2	CD209	CNTF	CXXC4	ID2	IL1R2	IL9	MAGEA2	NLRP3	STAT3	TNFRSF21	
CCL20	CD27	CRLF2	DDX58	ID3	IL1RAP	ILK	MAGEA4	NOD1	STAT4	TNFRSF25	

#### JAK/STAT Pathway

A2M	CRK	F2R	IFNAR1	IL4	JAK1	MPL	PDGFRA	PTPN11	SMAD5	SPI1	STAT5A
AKT1	CRP	FAS	IFNG	IL4R	JAK2	MYC	PIAS1	PTPRC	SOCS1	SRC	STAT5B
BCL2L1	CSF1R	FCER2	IFNGR1	IL6ST	JAK3	NFKB1	PIAS2	SH2B1	SOCS2	STAM	STAT6
CCND1	CXCL9	FCGR1A	IL10RA	INSR	JUN	NOS2	PIAS3	SMAD1	SOCS3	STAT1	STUB1
CDKN1A	EGFR	GATA3	IL20	IRF1	JUNB	NR3C1	PRL	SMAD2	SOCS4	STAT2	TYK2
CEBPB	EPOR	GHR	IL2RA	IRF9	LRG1	OAS1	PRLR	SMAD3	SOCS5	STAT3	USF1
CEBPD	F2	GRB2	IL2RG	ISG15	MCL1	OSM	PTPN1	SMAD4	SP1	STAT4	YY1

#### MAP Kinase Pathway

ARAF	CCND1	CDK6	CDKN2D	EGFR	HRAS	MAP2K1	MAP3K1	MAPK11	MAPK8	MKNK1	PRDX6
ATF2	CCND2	CDKN1A	CHUK	EGR1	HSPA5	MAP2K2	MAP3K2	MAPK12	MAPK8IP2	MOS	RAC1
BRAF	CCND3	CDKN1B	COL1A1	ELK1	HSPB1	MAP2K3	MAP3K3	MAPK13	MAPK9	MST1	RAF1
CCNA1	CCNE1	CDKN1C	CREB1	ETS1	JUN	MAP2K4	MAP3K4	MAPK14	MAPKAP2	MYC	RB1
CCNA2	CDC42	CDKN2A	CREBBP	ETS2	KRAS	MAP2K5	MAP4K1	MAPK3	MAPKAP3	NFATC4	SFN
CCNB1	CDK2	CDKN2B	DLK1	FOS	KSR1	MAP2K6	MAPK1	MAPK6	MAX	NRAS	SMAD4
CCNB2	CDK4	CDKN2C	E2F1	GRB2	LAMTOR3	MAP2K7	MAPK10	MAPK7	MEF2C	PAK1	TP53

#### NFkB Pathway

AGT	BIRC3	CD40	CXCL2	FOS	IL1A	LTA	NFKBIA	RELB	TIFA	TLR9	TRADD
AKT1	CARD11	CD83	CXCL3	HMOX1	IL1B	LTBR	NFKBIE	RHOA	TIMP1	TNF	TRAF2
ATF1	CASP1	CFLAR	EGFR	ICAM1	IL1R1	MALT1	NOD1	RIPK1	TLR1	TNFAIP2	TRAF3
BCL2A1	CASP8	CHUK	EGR1	IFNG	IRAK1	MAP3K1	PSIP1	STAT1	TLR2	TNFAIP3	TRAF6
BCL2L1	CCL2	CSF1	ELK1	IKKBK	IRAK2	MYD88	RAF1	STX11	TLR3	TNFRSF10A	
BCL3	CCL20	CSF2	FADD	IKBKG	IRF1	NFKB1	REL	TBK1	TLR4	TNFRSF10B	
BIRC2	CCL5	CSF3	FASLG	IL10	JUN	NFKB2	RELA	TICAM1	TLR6	TNFSF10	

## Other

ACADS	BLVRA	CLDN3	EBF4	FUT8	HSF2	LAMP5	MTDH	PCSK6	RAB27B	SGK1	TNR
ACLY	BMP8A	CLIC1	ECI2	GABBR2	HSF4	LAT	MTMR2	PDGFC	RALA	SGK2	TNXB
ACTR1B	BTG3	CMC2	EFNA2	GAL	HSPA1A	LCN1	MVP	PDIA4	RAMP2	SH3PXD2A	TOMM40
ACVR1B	C17orf53	CNIH4	EFNA3	GALNT3	HSPA1B	LCN2	MYBL1	PDLIM7	RAMP3	SIL1	TOR1A
ACVR1C	C19orf40	CNPY1	EFNA5	GAMT	HSPA1L	LETMD1	MYCL	PDPN	RARB	SIN3A	TP53I3
ACVR2A	C1orf106	CNPY2	EFNB1	GAS6	HSPA8	LGALS1	NAB2	PELP1	RASA4	SIN3B	TPD52
ADAM23	C1orf86	CNPY4	EGR3	GATA4	HSPB2	LINC00886	NAP1L1	PEX12	RASAL1	SIRT2	TRAF7
ADAMTS1	C1QA	CNTFR	EI24	GATA5	HSPB3	LMO2	NASP	PFDN1	RASD1	SIRT3	TRIB1
ADCK3	C5orf55	COL11A2	EIF4A1	GBP7	HSPB6	LOXL1	NAT1	PFDN2	RASGRF1	SIRT4	TRIM72
ADORA2A	CA12	COL17A1	EIF6	GDAP1	HSPB8	LPL	NAT2	PGR	RASSF1	SIX1	TRIP13
AFF1	CACNA1C	COL1A2	ELL2	GDF6	IDH1	LRP12	NAT8L	PHB	RASSF7	SMAD7	TRIP4
AGFG1	CACNA1D	COL4A2	ELMO1	GEMIN2	IDO2	LRP1B	NCOA3	PHB2	RBM10	SMAD9	TSC22D3
AHNAK	CACNA1E	COL4A4	EML4	GFRA1	IFI27	LRRFIP2	NCOR1	PHF6	RBX1	SMARCB1	TSPYL5
AHNAK2	CACNA1H	COL4A5	ENDOD1	GLIS3	IFNA5	LTF	NCOR2	PHGDH	RECQL5	SNAI2	TTC9
AIMP2	CACNA2D1	COL5A1	ENDOG	GM2A	IFNW1	LTN1	NF1	PIAS4	REST	SNAI3	TTF1
AKR1C3	CACNA2D3	COL5A2	EPHA2	GML	INFA Family	LYVE1	NFE2L2	PIDD1	RET	SORT1	TUBB3
ALDH2	CACNA2D4	COL6A6	ERG	GMPS	INHBA	MACC1	NFE2L3	PIM3	RGS2	SOST	U2AF1
ALDH4A1	CACNB2	COL9A3	ESM1	GNAI3	INHBB	MAFF	NFKBIZ	PIN1	RIN1	SOX10	UBE2Z
ALKBH2	CACNB4	COMP	ESR2	GNAQ	INPP5J	MAGEA10-	NKX2-1	PINX1	RIT1	SOX9	UBE3A
ALKBH3	CACNG1	COX7B	ETV4	GNAZ	INTS7	MAGEA5	NME1	PIR	RND2	SPARC	UCRFS1
AMER1	CACNG6	CREB3L1	ETV5	GNG11	IRAK3	MAML2	NME7	PITRM1	RNF43	SPEF1	USMG5
AMFR	CACYBP	CRLS1	ETV7	GNG12	IRS2	MAOA	NMU	PLA2G10	ROS1	SPOP	UTY
AMH	CAD	CRTAC1	EVL	GNG4	ITGA7	MAOB	NNMT	PLA2G2A	RPL13	SRM	VAMP8
ANLN	CALD1	CRYAB	EXOC3	GNG7	ITGA9	MAP1B	NOG	PLA2G2A	RPL13	SSX1	VAPA
ANXA1	CALML3	CTNNA1	EXT1	GNGT1	ITGB6	MAP3K13	NOLC1	PLA2G4C	RPRM	STEAP4	VASH1
ANXA3	CALML6	CTPS1	EYA1	GNL3	ITGB8	MAP3K14	NPM2	PLA2G4E	RPS4X	STK32A	VDAC2
ANXA8	CAMK2B	CTSC	EZR	GPC4	ITLN2	MAP3K8	NROB2	PLA2G4F	RPS6KA6	STK39	VDR
AP2B1	CARM1	CTSD	F8	GRP2	JAG2	MAP7D1	NR1H3	PLD1	RND2	STX3	VHL
APBB1	CASP12	CTSH	FABP4	GPBR1	KAT2B	MAPKAPK5	NR1H4	PLEK2	RRM2B	SUV39H2	VIPR1
APBP2	CAV1	CTSL	FAM105A	GPNCB	KATNBL1	MAPKAPK5-AS1	NR1I2	PLK2	RSP02	SWAP70	VPS13A
AR	CBX5	CTSV	FAM133A	GPR160	KCNK5	MAPRE2	NR4A1	PLK3	RTN1	SYNCRIP	WWOX
ARHGAP44	CCBL2	CXCL8	FAM213A	GPR180	KDM1A	MAPT	NRIP1	PMEPA1	RTN4RL1	SYP	XBP1
ARHGEF16	CCNB3	CYR61	FAM64A	GPSM2	KDM3A	MAT2A	NSD1	PMS2P3	RUNDC1	TADA3	YBX3
ARID1B	CCS	DAPL1	FAM83B	GRIN1	KDM3B	MAZ	NTF3	POLR2H	RXRG	TAP1	ZAK
ARMC1	CCT3	DAXX	FANCA	GRIN2B	KDM5B	MCCC1	NTN3	POLR2J	S100A4	TAP2	ZBTB10
ARNT2	CCT4	DABI	FANCB	GSN	KDM5C	MDC1	NTRK1	PPAP2B	S100A6	TBL1X	ZBTB16
ASB13	CCT5	DDX17	FANCC	GSTA2	KDM6A	MECOM	NTRK2	PPAT	S100A8	TBL1XR1	ZBTB32
ASB16-AS1	CCT6A	DDX39B	FANCE	GTF2H3	KDM7A	MED1	NUDT13	PPIB	S100B	TBL1Y	ZFP36L1
ASB9	CCT7	DDX59	FANCF	GUCY1A3	KEAP1	MED12	NUMBL	PPM1D	SACS	TCL1B	ZHX2
ASNS	CDC14B	DEPDC1	FANCG	H3F3C	KIF3A	MED23	NUPR1	PPP1R15A	SAFB	TEP1	ZNF189
ASPM	CDC42BPA	DES1	FANCL	HDAC10	KIF3B	MED24	OASL	PPP2R2C	SAP30	TESC	ZNF385B
ASXL1	CDH15	DHCR24	FBN1	HDAC11	KIF5B	MELK	OCLN	PPP3CB	SCAPER	TET2	ZNF420
ATP5G1	CDK5	DHX58	FCGR1B	HDAC3	KLK12	MEN1	OPCML	PPP3CC	SCN3A	TFE3	ZNF502
ATP7A	CDK9	DIAPH3	FES	HDAC4	KLK4	MGA	ORM2	PPP3R2	SCUBE1	TGFB3	ZNF552
ATP7B	CDKL5	DICER1	FGFRL1	HDAC5	KLK4	MGAT4A	PA2G4	PRAME	SEC22C	TGFB1	ZNF589
ATRX	CDX2	DKK2	FHIT	HECTD4	KMT2B	MGST1	PAG1	PRKACG	SEC61G	TGFBR2	ZNF805
AURKC	CEBPE	DKK4	FKBP5	HERC3	KMT2C	MIA	PALB2	PRKX	SELM	THBS4	
B3GNT8	CECR6	DMD	FLJ10474	HIC1	KMT2D	MLLT3	PALM2-AKAP2	PRMT1	SERPINA3	THEM4	
BAG4	CELSR2	DNAJC22	FLNA	HMG2	KRT18	MLLT4	PARK7	PRR15L	SERPINA9	TIPARP	
BAG5	CEP55	DSC2	FLNC	HMGXB3	KRT19	MLPH	PARP4	PTDSS1	SERPINB2	TK1	
BAIAP3	CHI3L2	DTX1	FLRT1	HNF1A	KRT6A	MMP11	PAX3	PTHLH	SERPINB5	TMEFF1	
BAP1	CHMP4B	DTX3	FLRT2	HNRNPA1	KRT7	MMP3	PAX5	PTP4A1	SERPINH1	TMEM132A	
BATF	CIC	DUSP2	FOXC2	HNRNPU	KRT8	MRPL13	PBRM1	PTPRR	SETBP1	TMEM74B	
BBS4	CIRBP	DUSP4	FOXO3	HOXA10	LAMA1	MSI1	PBX3	PTTG2	SETD2	TMSB10	
BCOR	CITED2	DUSP5	FOXRED1	HOXD1	LAMA5	MT1X	PCK1	PUS1	SF3A1	TNKS	
BDNF	CKB	EAF2	FRS2	HSD17B12	LAMB4	MT2A	PCNX	QDPR	SF3B5	TNKS2	
BIRC7	CLCF1	EBAG9	FRS3	HSF1	LAMC3	MTA1	PCOLCE	QSOX2	SFRP2	TNN	

# Gene List

## HTG EdgeSeq

### Oncology Biomarker Panel

#### PI3K/AKT Pathway

ADAR	CASP9	CTNNB1	FASLG	GRB2	IRAK1	MAPK3	PABPC1	PIK3CG	PTK2	RHOA	TIRAP
AKT1	CCND1	EIF2AK2	FKBP1A	GSK3B	IRS1	MAPK8	PAK1	PIK3R1	PTPN11	RPS6KA1	TLR4
AKT2	CD14	EIF4B	FOS	HRAS	ITGB1	MTCP1	PDGFRA	PIK3R2	RAC1	RPS6KB1	TOLLIP
AKT3	CDC42	EIF4E	FOXO1	HSPB1	JUN	MTOR	PDK1	PRKCA	RAF1	SHC1	TSC1
APC	CDKN1B	EIF4EBP1	FOXO3	IGF1	MAP2K1	MYD88	PDK2	PRKCB	RASA1	SOS1	TSC2
BAD	CHUK	EIF4G1	GJA1	IGF1R	MAPK1	NFKB1	PDPK1	PRKCZ	RBL2	SRF	WASL
BTK	CSNK2A1	ELK1	GRB10	ILK	MAPK14	NFKBIA	PIK3CA	PTEN	RHEB	TCL1A	YWHAH

#### Receptors, Ligands and Cell Signaling

ACSL3	BBC3	CDH1	FOSL1	HEYL	MAP2K1	MAPK7	PAK3	PLCB1	RAC1	SLC2A1	WNT3A
ACSL4	BCL2	CDKN1A	FTH1	HMOX1	MAP2K2	MAPK8	PAK7	PLCB4	RAC2	SOCS3	WNT5A
ACSL5	BCL2A1	CDKN1B	GADD45A	HRAS	MAP2K4	MAPK9	PCNA	PLCE1	RAC3	SORBS1	WNT6
ADM	BCL2L1	CEBPD	GADD45B	ICAM1	MAP2K7	MCL1	PIK3C2A	PLCG1	RAF1	SQSTM1	
AKT1	BIRC3	CPT2	GATA3	ID1	MAP3K1	MMP7	PIK3C3	PLCG2	RASGRP1	STAT1	
AKT1S1	BMP2	CSF1	GCLC	IFNG	MAPK1	MTOR	PIK3CA	PPARD	RASGRP2	TNF	
AKT2	BMP4	DAB2	GCLM	IFRD1	MAPK10	MYC	PIK3CB	PRKCA	RB1	TNFSF10	
AKT3	BRAF	EGFR	GSR	IRF1	MAPK11	NOTCH1	PIK3CD	PRKCB	SERPINE1	TXN	
ARAF	BTG2	EMP1	HERPUD1	ITPKB	MAPK12	NQO1	PIK3CG	PRKCD	SHC1	TXNRD1	
ARNT	CA9	EPO	HES1	JAG1	MAPK13	NRAS	PIK3R1	PRKCE	SHC2	VEGFA	
ATF4	CCL5	FABP1	HES5	KRAS	MAPK14	OLR1	PIK3R2	PRKCG	SHC3	WISP1	
AXIN2	CCND1	FAS	HEY1	LFNG	MAPK3	PAK1	PIK3R3	PRKCZ	SHC4	WNT1	
BAX	CCND2	FCER2	HEY2	LRG1	MAPK6	PAK1IP1	PIK3R5	PTCH1	SLC27A4	WNT2B	

#### Stem Cells

ABC85	CD24	DLL1	ETV2	GFAP	JAG1	MIXL1	NOTCH2	PROM1	SOX17	TEK	ZEB2
ABC62	CD34	DLL4	FGF2	GSC	JAK2	MS4A1	NR0B1	PTCH1	SOX2	TERT	ZFP42
ACTA2	CD38	DNMT1	FGF5	GSK3B	KAT5	MUC1	NR5A2	PTPRC	SOX3	TGFBR1	ZFX
AICDA	CD44	DPPA2	FGFR2	HAND1	KIT	MYBL2	NR6A1	RIF1	SOX7	THAP11	
ALB	CD42	DPPA3	FLII	HDAC1	KITLG	MYC	NT5E	SALL4	STAT3	THY1	
ALCAM	CDK1	DPPA4	FLOT2	HNF4A	KLF17	MYCN	OLIG2	SAV1	T	TRIM28	
ALDH1A1	CHD1	DPPA5	FOXA2	HSPA9	KLF4	MYOD1	OTX2	SCN1A	TAGLN	TWIST1	
ALPL	CHD7	EGF	FOXP1	ID1	LATS1	NANOG	PAF1	SIRT1	TAL1	TWIST2	
ATM	CHEK1	EN2	FZD7	IKBKB	LIN28A	NCAM1	PAX6	SMAD1	TAT	UTF1	
ATXN1	CNOT3	ENG	GATA1	ISL1	LIN28B	NES	PECAM1	SMAD2	TAZ	WEE1	
AXL	DACH1	EPCAM	GATA2	ITGA2	MAML1	NFKB1	PLAT	SMAD3	TBX3	WNT1	
BMI1	DDR1	ERBB2	GATA3	ITGA4	MEIS1	NKX2-5	PLAUR	SMO	TCF3	WWC1	
BMP7	DES	ESRRB	GATA6	ITGA6	MERTK	NOS2	POU5F1	SNAI1	TCL1A	YAP1	
CCNA2	DKK1	ETFA	GDF3	ITGB1	MESP1	NOTCH1	PRDM14	SOX15	TDGF1	ZEB1	

#### Stress Toxicity

ADM	ATF6	BBC3	CCL2	DDB2	GADD45A	HMOX1	IFNG	NBN	RAD9A	TNF	ULK1
AKR1B1	ATF6B	BECN1	CD40LG	DDIT3	GADD45G	HSP90AA1	IL1A	NFAT5	RIPK1	TNFRSF10A	VEGFA
AQP1	ATG12	BID	CDKN1A	DNAJC3	GCLC	HSP90B1	IL1B	NQO1	SERPINE1	TNFRSF10B	XPC
AQP2	ATG5	BNIP3L	CFTR	EDN1	GCLM	HSPA4	IL6	PARP1	SLC2A1	TP53	
AQP4	ATG7	CA9	CHEK1	EPO	GRB2	HSPA4L	MCL1	PVR	SLC5A3	TXN	
ARNT	ATM	CALR	CHEK2	FAS	GSR	HSPA5	MMP9	RAD17	SQSTM1	TXNL4B	
ATF4	ATR	CASP1	CRP	FTH1	GSTP1	HUS1	MRE11A	RAD51	TLR4	TXNRD1	

#### Tissue Specific Genes

ABCA3	ACSL3	AIFM1	APCS	ARID2	BCL2L1	BNIP3L	CACNB3	CASP2	CCL2	CCNC	CD160
ABCB11	ACSL5	AKAP1	APEX1	ATAD2	BCL6	BTG1	CACNG4	CASP8	CCL20	CCND3	CD19
ABCB4	ACTR3B	AKR1B1	APH1B	ATP5A1	BCR	BUB1B	CALML5	CASP8AP2	CCL22	CCR1	CD2
ABCC4	ADAR	AKT1	APOC2	ATP5F1	BID	C1S	CALR	CASP9	CCL25	CCR2	CD22
ABCC6	ADIPOQ	ALAS1	APOC4	ATP6VOC	BIRC2	C5	CAMK2N1	CAV2	CCL28	CCR3	CD27
ABCD3	ADIPOR1	ALB	AQP7	ATP6V1G2	BIRC5	C5AR1	CAMKK2	CBL	CCL5	CCR7	CD28
ABCG8	ADRA1D	ALDH1A3	AQP9	BAG1	BMF	CA9	CAPN1	CBX3	CCNA2	CCR9	CD33
ABHD2	ADRA2A	ALPL	AREG	BAG2	BMP1	CACNA1G	CAPN6	CCL16	CCNB1	CCT2	CD3D
ACACB	AGER	ANG	ARID1A	BAMBI	BNIP3	CACNA2D2	CASP1	CCL19	CCNB2	CCT6B	CD4

Tissue Specific Genes Continued

CD40	CSF1R	ECT2	GHR	IGFBP3	LAMA3	MSL2	PLG	RFC4	SLCO1B3	TLR1	XCL1
CD40LG	CSF3	EGFR	GNA11	IGFBP5	LAMB3	MSN	PLK1	RNF149	SLCO2A1	TLR2	XRCC5
CD52	CSF3R	EGLN2	GNAS	IL10RA	LAMC2	MTHFD1	PLK4	RNF4	SLCO2B1	TLR5	YWHAH
CD55	CST6	EIF4B	GNGT2	IL10RB	LEFTY1	MUC1	PML	RPA1	SMARCA4	TLR8	YY1
CD8A	CSTB	EIF4EBP1	GNLY	IL17RB	LEFTY2	MUTYH	POLL	RPA3	SMC3	TLX1	ZIC2
CDC25A	CTSB	EIF5B	GPAM	IL17RD	LEP	MX11	POLR2D	RPL5	SMC4	TMEM116	
CDC25B	CTSS	EMP3	GPI	IL1A	LEPR	MYB	PORCN	RPS6KA1	SMPDL3B	TMEM45A	
CDC34	CX3CR1	EN2	GPR126	IL1B	LFNG	MYD88	PPAP2A	RPS6KA5	SMS	TMEM45B	
CDCA7	CXCL1	ENO1	GRB10	IL1RAP	LIG4	MYLIP	PPBP	RPS7	SNCA	TMPPRSS2	
CDH2	CXCL12	EOMES	GRB2	IL1RN	LIPA	NAMPT	PPID	RRM1	SNRPB	TNC	
CDH3	CXCL13	ERO1L	GRIA3	IL20RB	LPCAT1	NANOG	PPP2R1B	RRM2	SOC5	TNFAIP2	
CDH5	CXCL14	ERRFI1	GRIN2A	IL22RA1	LRG1	NCAPD3	PPP3CA	RSP01	SOD1	TNFRSF10C	
CDK1	CXCL16	ETV1	GSTM1	IL2RB	LRIG1	NCOA2	PPP3R1	RUNX1T1	SOD2	TNFRSF11B	
CDK16	CXCL6	EXOSC8	GSTP1	IL2RG	LRMP	NCOA4	PRC1	RUNX3	SORD	TNFRSF1B	
CDK4	CXCR1	EZH2	GUK1	IL3RA	LRP2	NEIL3	PRDM2	S100A2	SOS1	TNFSF13B	
CDK6	CXCR2	F10	GYS2	IL6	LRRK2	NFATC3	PRF1	SALL4	SOX15	TNFSF14	
CDKN2C	CXCR4	F2	GZMA	IL6R	LTA	NKX3-1	PRKAG2	SCUBE2	SOX3	TNNC2	
CDKN2D	CXXC5	FABP1	GZMB	IL7R	LTA4H	NLK	PRKAR1B	SEC14L2	SP1	TNNI2	
CDKN3	CYBA	FABP7	GZMH	INS	LTB	NOV	PRKCA	SENP1	SPDEF	TNNI3	
CDON	CYBB	FAM117B	H2AFX	INSR	LTBP1	NOX4	PRKCG	SERPINC1	SP11	TOLLIP	
CEBPA	CYP19A1	FASN	HDAC2	IRF1	LYN	NPM1	PRKG1	SERPINE1	SPINK1	TOP1	
CENPF	CYP1A1	FBP1	HDAC6	IRF2	MAD2L1	NPPB	PRL	SF3B1	SPINK5	TOP2A	
CENPN	CYP1A2	FBX05	HDAC7	IRF3	MADD	NQO1	PRMT8	SFN	SRA1	TOP2B	
CES1	CYP2A6	FBXW7	HELLS	IRF4	MAGED2	NR4A3	PROK1	SHC3	SRSF1	TP53AIP1	
CES2	CYP2C19	FCER2	HGF	IRF7	MAP2K3	NUSAP1	PROK2	SHMT1	SRSF2	TP63	
CFLAR	CYP2C8	FEN1	HHEX	IRF8	MAP3K12	OAZ1	PSG2	SHAH1	STAB1	TP0	
CFTR	CYP2C9	FGF14	HJURP	IRF9	MAP3K2	OLR1	PSIP1	SLA	STAG2	TPX2	
CHAD	CYP2D6	FGF18	HLA-E	ITGA4	MAP3K3	ORM1	PSMD7	SLC10A1	STAT4	TREX1	
CHD1	CYP2U1	FGF19	HMGA1	ITGA8	MAP3K5	P4HB	PSMG1	SLC10A2	STAT5B	TRIM28	
CHD7	CYP4A22	FGFBP1	HMGB1	ITGAM	MAP4K1	PAICS	PSRC1	SLC11A1	STAT6	TRRAP	
CHDH	CYP4V2	FGFR4	HMGB2	ITGB2	MAPK1	PAK1	PTCRA	SLC15A1	STC1	TSC22D1	
CHEK1	DAB2	FGL2	HMGB3	ITGB7	MAPK10	PAK11P1	PTEN	SLC16A3	STC2	TSHR	
CHPT1	DAB2IP	FIGF	HMGCR	ITM2A	MAPK14	PAX6	PTGR1	SLC19A1	STEAP1	TSPAN13	
CIDEB	DAPK1	FKBP1A	HMGCS2	JAK1	MAPK9	PAX8	PTGS1	SLC22A1	STK36	TSPAN14	
CKLF	DCK	FKBP8	HMOX1	JAK3	MAPKAPK2	PBX1	PTPN5	SLC22A2	STMN1	TSPAN7	
CKMT2	DDX10	FLOT2	HNF1B	JMJD1C	MAPKAPK3	PCNA	PTPRC	SLC22A6	STRADB	TTK	
CKS1B	DDX5	FLRT3	HNF4A	KCND2	MAX	PDGFRA	PYCARD	SLC22A7	STX1A	TXNL1	
CKS2	DEGS1	FLT1	HNRNPA2B1	KCNP1	MBL2	PDGFRB	PYCR1	SLC22A8	SULT2A1	TXNRD1	
CLCA2	DISP2	FLT3LG	HOXA11	KDM4B	MCL1	PDPK1	PYGL	SLC22A9	SUMO1	TYK2	
CLIC3	DKK1	FLT4	HOXA9	KIF14	MCM2	PDZK1	RAB4A	SLC25A13	SYK	TYMP	
CMTM1	DKK3	FMO3	HOXB13	KIF2C	MCM3	PECAM1	RAB6B	SLC25A3	T	TYMS	
CMTM2	DLC1	FMO5	HPN	KIT	MCM4	PFKFB4	RAC2	SLC27A4	TAL1	UBB	
CNPY3	DLGAP5	FOXA1	HSD17B4	KL	MCM6	PGC	RACGAP1	SLC28A2	TAT	UBE2C	
COL11A1	DLK1	FOXC1	HSPA12A	KLB	MCM7	PGF	RAD23A	SLC2A13	TBK1	UBE2I	
COL18A1	DLL3	FOXE1	HSPA14	KLK1	MDM4	PIAS1	RAD54L	SLC2A2	TBX21	UBE2T	
COL1A1	DNAJB13	FOXL2	HSPA6	KLK2	MFNG	PIAS2	RAD9A	SLC31A1	TCF4	ULK1	
COL27A1	DNAJC12	FOXO3	HSPB7	KLK3	MGEA5	PIK3CD	RAF1	SLC38A5	TCF7	UNG	
COL2A1	DNAJC9	FPR1	HSPD1	KLK5	MGMT	PIK3R3	RAG1	SLC39A6	TCL1A	VCAM1	
COL4A6	DNMT1	FRZB	HSPF1	KLRB1	MKI67	PIK3R5	RAMP1	SLC3A1	TCP1	VEGFC	
COX5A	DNMT3A	FUBP1	IBSP	KLRD1	MKNK1	PIM1	RARA	SLC3A2	TDG	VGLL4	
CP	DNTT	FZD4	ICAM1	KLRG1	MLF1	PIM2	RASA1	SLC45A3	TFDP2	VSNL1	
CRADD	DPPA4	GAB1	ICOS	KNG1	MLYCD	PKP1	RASGRF2	SLC5A1	TFE1	VTCN1	
CREB3L3	DSG3	GAS1	ID2	KPNA2	MME	PLA1A	RASGRP1	SLC5A3	TFPI2	WHSC1	
CREB3L4	DSP	GATA1	IDH2	KRT13	MMP9	PLA2G5	RASGRP2	SLC7A6	TGFB1	WHSC1L1	
CREB5	DST	GATA2	IFIT2	KRT14	MPO	PLAUR	RBP1	SLC7A7	THBS1	WISP2	
CRP	DTX4	GCLC	IFNGR1	KRT16	MS4A1	PLCB1	RBPMS2	SLC7A8	THPO	WNT6	
CRYAA	DUSP10	GCLM	IGF2R	KRT17	MSH2	PLCG1	RELN	SLC7A9	TIAM1	WT1	
CSDE1	E2F3	GGH	IGFBP1	KRT5	MSH6	PLCG2	RFC3	SLCO1B1	TINF2	WWC1	



# Gene List

## HTG EdgeSeq

### Oncology Biomarker Panel

#### WNT Pathway

APC	CCND2	DAAM1	FBXW11	FZD4	HSPA12A	MMP7	NKD1	RHOA	TCF7L1	WNT2	WNT6
AXIN1	CHSY1	DAB2	FGF4	FZD5	JUN	MT1A	NLK	RUVBL1	VANGL2	WNT2B	WNT7A
AXIN2	CSNK1A1	DKK1	FOSL1	FZD6	KREMEN1	MTFP1	PITX2	SFRP1	WIF1	WNT3	WNT7B
BOD1	CTNNB1	DKK3	FRZB	FZD7	LEF1	MTSS1	PORCN	SFRP4	WISP1	WNT3A	WNT8A
BTRC	CTNNBIP1	DVL1	FZD1	FZD8	LRP5	MYC	PPARD	SKP2	WNT1	WNT4	WNT
CALM1	CXADR	DVL2	FZD2	FZD9	LRP6	NAV2	PRICKLE1	SOX17	WNT10A	WNT5A	
CCND1	CYP4V2	EP300	FZD3	GSK3B	MAPK8	NFATC1	PRMT6	TCF7	WNT11	WNT5B	

#### OBP Probes

A2M	ADCK3	AMH	ASXL1	BCCIP	BTG3	CAPN3	CCL5	CD276	CDK5RAP1	CIDEB	COX5A
ABCA2	ADIPOQ	AMOT	ATAD2	BCL10	BTK	CAPN5	CCL7	CD28	CDK6	CIRBP	COX7B
ABCA3	ADIPOR1	ANAPC2	ATF1	BCL2	BTRC	CAPN6	CCL8	CD33	CDK7	CITED2	CP
ABCA4	ADIPOR2	ANG	ATF2	BCL2A1	BUB1	CAPN7	CCNA1	CD34	CDK8	CKB	CPT1A
ABCA5	ADM	ANGPT1	ATF4	BCL2L1	BUB1B	CAPNS1	CCNA2	CD38	CDK9	CKLF	CPT1B
ABCA9	ADORA2A	ANGPT2	ATF6	BCL2L10	C17orf53	CARD11	CCNB1	CD3D	CDKL5	CKMT1A	CPT1C
ABCB11	ADORA2B	ANGPTL1	ATF6B	BCL2L11	C19orf40	CARM1	CCNB2	CD4	CDKN1A	CKMT2	CPT2
ABCB4	ADRA1A	ANGPTL4	ATG12	BCL2L2	C1orf106	CASP1	CCNB3	CD40	CDKN1B	CKS1B	CRADD
ABCB5	ADRA1B	ANKRD37	ATG13	BCL3	C1orf159	CASP10	CCNC	CD40LG	CDKN1C	CKS2	CREB1
ABCB6	ADRA1D	ANLN	ATG16L1	BCL6	C1orf86	CASP12	CCND1	CD44	CDKN2A	CLCA2	CREB3L1
ABCC1	ADRA2A	ANPEP	ATG3	BCOR	C10A	CASP14	CCND2	CD47	CDKN2B	CLCF1	CREB3L3
ABCC10	ADRA2B	ANXA1	ATG5	BCR	C1S	CASP2	CCND3	CD5	CDKN2C	CLDN3	CREB3L4
ABCC11	ADRA2C	ANXA2	ATG7	BDNF	C3	CASP3	CCNE1	CD52	CDKN2D	CLIC1	CREB5
ABCC12	AFF1	ANXA3	ATM	BECN1	C3AR1	CASP4	CCNE2	CD55	CDKN3	CLIC3	CREBBP
ABCC2	AGER	ANXA8	ATP5A1	BFAR	C5	CASP5	CCNF	CD59	CDON	CMC2	CRK
ABCC3	AGFG1	AP2B1	ATP5F1	BHLHE40	C5AR1	CASP6	CCNG1	CD63	CDX2	CMKLR1	CRLF2
ABCC4	AGGF1	APAF1	ATP5G1	BID	C5orf55	CASP7	CCNG2	CD68	CEACAM3	CMTM1	CRLS1
ABCC5	AGT	APBB1	ATP6VOC	BIK	CA12	CASP8	CCNH	CD70	CEACAM5	CMTM2	CRP
ABCC6	AHNAK	APC	ATP6V1G2	BIRC2	CA9	CASP8AP2	CCNO	CD74	CEACAM7	CMTM3	CRTRAC1
ABCD1	AHNAK2	APCS	ATP7A	BIRC3	CACNA1C	CASP9	CCNT1	CD79A	CEBPA	CMTM4	CRTC2
ABCD3	AHR	APEX1	ATP7B	BIRC5	CACNA1D	CAV1	CCR1	CD80	CEBPB	CNIH4	CRY1
ABCD4	AHRR	APEX2	ATR	BIRC6	CACNA1E	CAV2	CCR10	CD83	CEBPD	CNOT3	CRYAA
ABCF1	AICDA	APH1B	ATRX	BIRC7	CACNA1G	CBL	CCR2	CD86	CEBPE	CNPY1	CRYAB
ABCG2	AIFM1	APOC2	ATXN1	BLM	CACNA1H	CBLC	CCR3	CD8A	CECR6	CNPY2	CSDE1
ABCG8	AIMP2	APOC4	ATXN3	BLVRA	CACNA2D1	CBX3	CCR4	CDC14A	CELSR2	CNPY3	CSF1
ABHD2	AK1	APOL3	AURKA	BMF	CACNA2D2	CBX5	CCR5	CDC14B	CENPF	CNPY4	CSF1R
ACACA	AK2	APP	AURKB	BM1	CACNA2D3	CCBL2	CCR6	CDC16	CENPN	CNTF	CSF2
ACACB	AK3	APPBP2	AURKC	BMP1	CACNA2D4	CCDC103	CCR7	CDC20	CEP55	CNTFR	CSF3
ACADS	AKAP1	AQP1	AXIN1	BMP2	CACNB2	CCL1	CCR8	CDC25A	CES1	COL11A1	CSF3R
ACKR1	AKR1B1	AQP2	AXIN2	BMP4	CACNB3	CCL11	CCR9	CDC25B	CES2	COL11A2	CSNK1A1
ACKR2	AKR1C3	AQP4	AXL	BMP5	CACNB4	CCL13	CCRL2	CDC25C	CFLAR	COL17A1	CSNK1E
ACKR3	AKT1	AQP7	B3GNT8	BMP6	CACNG1	CCL14	CCS	CDC34	CFTR	COL18A1	CSNK2A1
ACKR4	AKT1S1	AQP9	BAD	BMP7	CACNG4	CCL15	CCT2	CDC42	CHAD	COL1A1	CSNK2B
ACLY	AKT2	AR	BAG1	BMP8A	CACNG6	CCL16	CCT3	CDC42BPA	CHD1	COL1A2	CST6
ACSL3	AKT3	ARAF	BAG2	BMP8B	CACYBP	CCL17	CCT4	CDC6	CHD7	COL27A1	CSTB
ACSL4	ALAS1	AREG	BAG3	BMPR1B	CAD	CCL18	CCT5	CDC7	CHDH	COL2A1	CTGF
ACSL5	ALB	ARHGAP44	BAG4	BNIP2	CADM1	CCL19	CCT6A	CDCA7	CHEK1	COL3A1	CTLA4
ACTA2	ALCAM	ARHGEF16	BAG5	BNIP3	CALD1	CCL2	CCT6B	CDH1	CHEK2	COL4A2	CTNNA1
ACTB	ALDH1A1	ARID1A	BAI1	BNIP3L	CALM1	CCL20	CCT7	CDH13	CHGA	COL4A3	CTNNB1
ACTR1B	ALDH1A3	ARID1B	BAIAP3	BOC	CALML3	CCL21	CD14	CDH15	CHI3L1	COL4A4	CTNNBIP1
ACTR2	ALDH2	ARID2	BAK1	BOD1	CALML5	CCL22	CD160	CDH2	CHI3L2	COL4A5	CTNND2
ACTR3B	ALDH4A1	ARMC1	BAMBI	BOK	CALML6	CCL23	CD163	CDH3	CHMP4B	COL4A6	CTPS1
ACVR1B	ALDOC	ARNT	BAP1	BRAF	CALR	CCL24	CD19	CDH5	CHPT1	COL5A1	CTSA
ACVR1C	ALK	ARNT2	BATF	BRCA1	CAMK2B	CCL25	CD2	CDK1	CHRNA1	COL5A2	CTSB
ACVR2A	ALKBH2	ASB13	BAX	BRCA2	CAMK2N1	CCL26	CD209	CDK16	CHRNB1	COL6A6	CTSC
ADAM17	ALKBH3	ASB16-AS1	BBC3	BRIP1	CAMKK1	CCL27	CD22	CDK2	CHSY1	COL9A3	CTSD
ADAM23	ALPL	ASB9	BBS4	BTC	CAMKK2	CCL28	CD24	CDK4	CHUK	COMMD4	CTSH
ADAMTS1	AMER1	ASNS	BCAR1	BTG1	CAPN1	CCL3	CD27	CDK5	CIC	COMP	CTSL
ADAR	AMFR	ASPM	BCAT1	BTG2	CAPN2	CCL4	CD274	CDK5R1	CIDEA	COP55	CTSS



OBP Probes Continued

CTSV	DDIT3	DNAJC15	EGF	ERG	FCGR1A	FOXA2	GCLM	GSTA2	HMGCS2	IDH2	IL21
CUL2	DDIT4	DNAJC16	EGFR	ERO1L	FCGR1B	FOXC1	GDAP1	GSTM1	HMGXB3	IDO1	IL22
CUL3	DDR1	DNAJC17	EGLN1	ERRF1	FEM1B	FOXC2	GDF3	GSTM3	HMOX1	IDO2	IL22RA1
CX3CL1	DDX10	DNAJC18	EGLN2	ESM1	FEN1	FOXO3	GDF6	GSTP1	HNF1A	IER3	IL22RA2
CX3CR1	DDX17	DNAJC21	EGR1	ESR1	FES	FOXO1	GEMIN2	GTF2H3	HNF1B	IFIT2	IL23A
CXADR	DDX39B	DNAJC22	EGR3	ESR2	FGF1	FOXI1	GFAP	GTSE1	HNF4A	IFIT2	IL23R
CXCL1	DDX5	DNAJC3	EI24	ESRRB	FGF10	FOXO2	GFRA1	GUCY1A3	HNRNPA1	IFNA2	IL24
CXCL10	DDX58	DNAJC4	EIF2AK2	ETFA	FGF11	FOXO1	GGH	GUK1	HNRNPA2B1	IFNA5	IL27
CXCL11	DDX59	DNAJC5	EIF4A1	ETS1	FGF12	FOXO3	GHR	GYS1	HNRNPU	IFNAR1	IL2RA
CXCL12	DEFB1	DNAJC5B	EIF4B	ETS2	FGF13	FOXO4	GJA1	GYS2	HOXA10	IFNB1	IL2RB
CXCL13	DEGS1	DNAJC5G	EIF4E	ETV1	FGF14	FOXP1	GLI1	GZMA	HOXA11	IFNG	IL2RG
CXCL14	DENND4A	DNAJC6	EIF4EBP1	ETV2	FGF16	FOXP3	GLI2	GZMB	HOXA9	IFNGR1	IL3
CXCL16	DEPDC1	DNAJC7	EIF4G1	ETV4	FGF17	FOXRED1	GLI3	GZMH	HOXB13	IFNL3	IL33
CXCL2	DES	DNAJC8	EIF5B	ETV5	FGF18	FPR1	GLIS3	H2AFX	HOXD1	IFNW1	IL3RA
CXCL3	DESI1	DNAJC9	EIF6	ETV7	FGF19	FRMD6	GLUD1	H3F3A	HPGD	IFRD1	IL4
CXCL5	DFFA	DNMT1	ELAVL1	EVL	FGF2	FRS2	GLUL	H3F3C	HPN	IFT52	IL4R
CXCL6	DHCR24	DNMT3A	ELK1	EXO1	FGF20	FRS3	GM2A	HAND1	HPSE	IGF1	IL5
CXCL8	DHH	DNMT3B	ELL2	EXOC3	FGF21	FRZB	GML	HAVCR2	HRAS	IGF1R	IL5RA
CXCL9	DHX58	DPPA2	ELMO1	EXOSC8	FGF22	FST	GMPS	HBEGF	HRK	IGF2	IL6
CXCR1	DIABLO	DPPA3	EML4	EXT1	FGF23	PTH1	GNA11	HDAC1	HSD17B12	IGF2R	IL6R
CXCR2	DIAPH3	DPPA4	EMP1	EYA1	FGF3	FUBP1	GNAI3	HDAC10	HSD17B4	IGFBP1	IL6ST
CXCR3	DICER1	DPPA5	EMP3	EZH2	FGF4	FUS	GNAQ	HDAC11	HSF1	IGFBP2	IL7
CXCR4	DISP1	DPYSL4	EN2	EZR	FGF5	FUT8	GNAS	HDAC2	HSF2	IGFBP3	IL7R
CXCR5	DISP2	DSC2	ENDOD1	F10	FGF6	FYN	GNAZ	HDAC3	HSF4	IGFBP4	IL9
CXCR6	DKC1	DSG3	ENDOG	F11R	FGF7	FZD1	GNG11	HDAC4	HSP90AA1	IGFBP5	ILK
CXXC4	DKK1	DSP	ENG	F2	FGF8	FZD10	GNG12	HDAC5	HSP90B1	IGFBP6	INFA-Family
CXXC5	DKK2	DST	ENO1	F2R	FGF9	FZD2	GNG4	HDAC6	HSPA12A	IGFBP7	INHBA
CYBA	DKK3	DTX1	ENTPD1	F3	FGFBP1	FZD3	GNG7	HDAC7	HSPA14	IHH	INHBB
CYBB	DKK4	DTX3	EOMES	F8	FGFR1	FZD4	GNGT1	HDAC8	HSPA1A	IKKBK	INPP5J
CYCS	DLC1	DTX4	EP300	FABP1	FGFR10P	FZD5	GNGT2	HECTD4	HSPA1B	IKBKG	INS
CYLD	DLGAP5	DUSP1	EPCAM	FABP4	FGFR2	FZD6	GNL3	HELLS	HSPA1L	IL10	INSR
CYP19A1	DLK1	DUSP10	EPGN	FABP7	FGFR3	FZD7	GPLY	HERC3	HSPA2	IL10RA	INTS7
CYP1A1	DLL1	DUSP2	EPHA2	FADD	FGFR4	FZD8	GPAM	HERPUD1	HSPA4	IL10RB	IRAK1
CYP1A2	DLL3	DUSP4	EPHB4	FAF1	FGFRL1	FZD9	GPAT2	HES1	HSPA4L	IL11	IRAK2
CYP1B1	DLL4	DUSP5	EPO	FAM105A	FGL2	GAA	GPC4	HES5	HSPA5	IL11RA	IRAK3
CYP2A6	DMC1	DUSP6	EPOR	FAM117B	FHIT	GAB1	GPD2	HEY1	HSPA6	IL12A	IRF1
CYP2B6	DMD	DUSP8	EPS8	FAM133A	FIGF	GABBR2	GPER1	HEY2	HSPA8	IL12B	IRF2
CYP2C19	DNAJA1	DVL1	ER-013	FAM162A	FKBP1A	GADD45A	GPI	HEYL	HSPA9	IL12RB2	IRF3
CYP2C8	DNAJA2	DVL2	ER-028	FAM213A	FKBP5	GADD45B	GNPMB	HGF	HSPB1	IL13	IRF4
CYP2C9	DNAJA3	E2F1	ER-067	FAM64A	FKBP8	GADD45G	GPR126	HHAT	HSPB2	IL13RA2	IRF5
CYP2D6	DNAJA4	E2F3	ER-099	FAM83B	FLII	GAL	GPR160	HHEX	HSPB3	IL15	IRF6
CYP2U1	DNAJB1	E2F5	ER-109	FANCA	FLJ10474	GALNT3	GPR17	HHIP	HSPB6	IL16	IRF7
CYP3A4	DNAJB11	EAF2	ER-120	FANCB	FLNA	GALNT5	GPR180	HIC1	HSPB7	IL17A	IRF8
CYP3A5	DNAJB12	EBAG9	ER-147	FANCC	FLNC	GAMT	GPSM2	HIF1A	HSPB8	IL17F	IRF9
CYP4A22	DNAJB13	EBF4	ER-154	FANCE	FLOT2	GAPDH	GRB10	HIF1AN	HSPBAP1	IL17RB	IRGM
CYP4V2	DNAJB14	ECI2	ER-160	FANCF	FLRT1	GAS1	GRB2	HIF3A	HSPD1	IL17RD	IRS1
CYP7A1	DNAJB2	ECT2	ER-171	FANCG	FLRT2	GAS6	GREM1	HIST1H3H	HSPF1	IL18	IRS2
CYR61	DNAJB5	EDA2R	ERBB2	FANCL	FLRT3	GATA1	GRIA3	HJURP	HSPH1	IL19	ISG15
DAAM1	DNAJB6	EDIL3	ERBB3	FAS	FLT1	GATA2	GRIN1	HK2	HTT	IL1A	ISL1
DAB2	DNAJB7	EDN1	ERBB4	FASLG	FLT3	GATA3	GRIN2A	HLA-A	HUS1	IL1B	ITGA2
DAB2IP	DNAJB8	EEF1G	ERCC1	FASN	FLT3LG	GATA4	GRIN2B	HLA-B	IBSP	IL1R1	ITGA3
DACH1	DNAJB9	EEF2K	ERCC2	FAT4	FLT4	GATA5	GRN	HLA-E	ICAM1	IL1R2	ITGA4
DAPK1	DNAJC1	EFNA1	ERCC3	FBN1	FMO3	GATA6	GRP	HMGA1	ICOS	IL1RAP	ITGA5
DAPL1	DNAJC10	EFNA2	ERCC4	FBP1	FMO5	GBE1	GSC	HMGA2	ID1	IL1RN	ITGA6
DAXX	DNAJC11	EFNA3	ERCC5	FBXO5	FN1	GBP1	GSK3A	HMGB1	ID2	IL2	ITGA7
DBI	DNAJC12	EFNA5	ERCC6	FBXW11	FOS	GBP2	GSK3B	HMGB2	ID3	IL20	ITGA8
DCK	DNAJC13	EFNB1	ERCC8	FBXW7	FOSL1	GBP7	GSN	HMGB3	ID4	IL20RA	ITGA9
DDB2	DNAJC14	EFNB2	EREG	FCER2	FOXA1	GCLC	GSR	HMGR	IDH1	IL20RB	ITGAM

# Gene List

## HTG EdgeSeq

### Oncology Biomarker Panel

#### OBP Probes Continued

ITGAV	KLRD1	LMO2	MAP2K3	MEN1	MTHFD1	NFKBIZ	NTRK2	PDGFC	PLA2G10	PPP2R1A	PTCHD1
ITGB1	KLRG1	LOX	MAP2K4	MERTK	MTMR2	NGF	NUDT13	PDGFD	PLA2G2A	PPP2R1B	PTCHD2
ITGB2	KMT2B	LOXL1	MAP2K5	MESP1	MTOR	NGFR	NUF2	PDGFRA	PLA2G3	PPP2R2B	PTCHD3
ITGB3	KMT2C	LPCAT1	MAP2K6	MET	MTSS1	NGFRAP1	NUMB	PDGFRB	PLA2G4A	PPP2R2C	PTCRA
ITGB4	KMT2D	LPL	MAP2K7	MFNG	MUC1	NKD1	NUMBL	PDIA4	PLA2G4C	PPP2R4	PTDSS1
ITGB6	KNG1	LRG1	MAP3K1	MGA	MUTYH	NKX2-1	NUP62	PDK1	PLA2G4E	PPP3CA	PTEN
ITGB7	KNTC1	LRIG1	MAP3K12	MGAT4A	MVP	NKX2-5	NUPR1	PDK2	PLA2G4F	PPP3CB	PTGR1
ITGB8	KPNA2	LRMP	MAP3K13	MGEA5	MX1	NKX3-1	NUSAP1	PDLIM7	PLA2G5	PPP3CC	PTGS1
ITLN2	KRAS	LRP12	MAP3K14	MGMT	MXI1	NLK	OAS1	PDPK1	PLAT	PPP3R1	PTGS2
ITM2A	KREMEN1	LRP1B	MAP3K2	MGST1	MYB	NLRP3	OASL	PDPN	PLAU	PPP3R2	PTHLH
ITPKB	KRT13	LRP2	MAP3K3	MIA	MYBL1	NME1	OAZ1	PDZK1	PLAUR	PRAME	PTK2
JAG1	KRT14	LRP5	MAP3K4	MIF	MYBL2	NME7	OCLN	PECAM1	PLCB1	PRC1	PTN
JAG2	KRT16	LRP6	MAP3K5	MIXL1	MYC	NMU	ODC1	PELP1	PLCB4	PRDM1	PTP4A1
JAK1	KRT17	LRRFIP2	MAP3K8	MKI67	MYCL	NNMT	OGG1	PER1	PLCE1	PRDM14	PTPN1
JAK2	KRT18	LRRK2	MAP4K1	MKNK1	MYCN	NOD1	OLIG2	PEX12	PLCG1	PRDM2	PTPN11
JAK3	KRT19	LTA	MAP7D1	MLF1	MYD88	NOD2	OLR1	PF4	PLCG2	PRDX6	PTPN5
JMJ1C	KRT5	LTA4H	MAPK1	MLH1	MYLIP	NODAL	OMD	PF4V1	PLD1	PRF1	PTPRC
JMJ1D6	KRT6A	LTB	MAPK10	MLH3	MYOD1	NOG	OPCML	PFDN1	PLEK2	PRICKLE1	PTPRR
JPH3	KRT7	LTBP1	MAPK11	MLL23	NAB2	NOL3	OR10J3	PFDN2	PLG	PRKAA1	PTTG1
JUN	KRT8	LTBR	MAPK12	MLL24	NAIP	NOLC1	ORC6	PFKFB1	PLK1	PRKAA2	PTTG2
JUNB	KSR1	LTF	MAPK13	MLPH	NAMPT	NOS2	ORM1	PFKFB2	PLK2	PRKAB1	PUS1
JUND	L1CAM	LTN1	MAPK14	MLYCD	NANOG	NOS3	ORM2	PFKFB3	PLK3	PRKAB2	PVR
KAT2B	LAG3	LY96	MAPK3	MME	NAP1L1	NOTCH1	OSM	PFKFB4	PLK4	PRKACA	PYCARD
KAT5	LAMA1	LYN	MAPK6	MMP11	NASP	NOTCH2	OTX2	PFKL	PMAP1	PRKACB	PYCR1
KATNB1	LAMA3	LYVE1	MAPK7	MMP14	NAT1	NOTCH4	P4HA1	PGC	PMEPA1	PRKACG	PYGL
KCND2	LAMA5	LYZ	MAPK8	MMP2	NAT2	NOV	P4HB	PGF	PML	PRKAG1	QDPR
KCNIP1	LAMB3	MACC1	MAPK8IP2	MMP3	NAT8L	NOX1	PA2G4	PGR	PMS1	PRKAG2	QSOX2
KCNK5	LAMB4	MAD2L1	MAPK9	MMP7	NAV2	NOX4	PABPC1	PHB	PMS2	PRKAG3	RAB23
KCTD11	LAMC2	MADCAM1	MAPKAPK2	MMP9	NBN	NPC1	PAF1	PHB2	PMS2P3	PRKAR1A	RAB25
KDM1A	LAMC3	MADD	MAPKAPK3	MMS19	NCAM1	NPM1	PAG1	PHF6	PNKP	PRKAR1B	RAB27B
KDM3A	LAMP5	MAF	MAPKAPK5	MNAT1	NCAPD3	NPM2	PAICS	PHGDH	PNPLA2	PRKAR2A	RAB4A
KDM3B	LAMTOR3	MAFF	MAPKAPK5-AS1	MOB1B	NCK2	NPPB	PAK1	PIAS1	POLB	PRKAR2B	RAB6B
KDM4B	LAT	MAG	MAPRE2	MOS	NCL	NPR1	PAK1IP1	PIAS2	POLD1	PRKCA	RAC1
KDM5B	LATS1	MAGEA1	MAPT	MPG	NCOA1	NQO1	PAK3	PIAS3	POLD2	PRKCB	RAC2
KDM5C	LATS2	MAGEA10/	MAT2A	MPL	NCOA2	NROB1	PAK7	PIAS4	POLD3	PRKCD	RAC3
KDM6A	LCN1	MAGEA5	MAX	MPO	NCOA3	NROB2	PALB2	PIDD1	POLD4	PRKCE	RACGAP1
KDM7A	LCN2	MAGEA11	MAZ	MRE11A	NCOA4	NR1H3	PALM2(AKAP2)	PIK3C2A	POLE2	PRKCG	RAD1
KDR	LECT1	MAGEA2	MBL2	MRPL13	NCOR1	NR1H4	PARK7	PIK3C3	POLL	PRK CZ	RAD17
KEAP1	LEF1	MAGEA4	MCCC1	MS4A1	NCOR2	NR1I2	PARP1	PIK3CA	POLR2D	PRKDC	RAD18
KIF14	LEFTY1	MAGEB1	MCL1	MSH2	NDC80	NR3C1	PARP2	PIK3CB	POLR2H	PRKG1	RAD21
KIF2C	LEFTY2	MAGEB2	MCM2	MSH3	NDRG1	NR4A1	PARP3	PIK3CD	POLR2J	PRKX	RAD23A
KIF3A	LEP	MAGEB3	MCM3	MSH4	NEIL1	NR4A3	PARP4	PIK3CG	PORCN	PRL	RAD23B
KIF3B	LEPR	MAGEC1	MCM4	MSH5	NEIL2	NR5A2	PAX3	PIK3R1	POU5F1	PRLR	RAD50
KIF5B	LETMD1	MAGEC2	MCM5	MSH6	NEIL3	NR6A1	PAX5	PIK3R2	PPAP2A	PRMT1	RAD51
KIT	LFNG	MAGED1	MCM6	MSI1	NEK2	NRAS	PAX6	PIK3R3	PPAP2B	PRMT6	RAD51B
KITLG	LGALS1	MAGED2	MCM7	MSL2	NES	NRG1	PAX8	PIK3R5	PPARD	PRMT8	RAD51C
KL	LGALS3	MAGEE1	MDC1	MSN	NF1	NRG2	PBRM1	PIM1	PPARG	PROK1	RAD51D
KLB	LIF	MAGEF1	MDK	MSR1	NF2	NRG3	PBX1	PIM2	PPARGC1A	PROK2	RAD52
KLF12	LIFR	MAGEL2	MDM2	MST1	NFAT5	NRG4	PBX3	PIM3	PPARGC1B	PROM1	RAD54L
KLF17	LIG1	MALT1	MDM4	MST1R	NFATC1	NRIP1	PCK1	PIN1	PPAT	PRR15L	RAD9A
KLF4	LIG3	MAML1	MECOM	MSTN	NFATC3	NRP1	PCNA	PINX1	PPBP	PSG2	RAF1
KLHDC10	LIG4	MAML2	MED1	MT1A	NFATC4	NRP2	PCNX	PIR	PPIA	PSIP1	RAG1
KLK1	LIN28A	MAOA	MED12	MT1X	NFE2L2	NSD1	PCOLCE	PITRM1	PPIB	PSMD2	RALA
KLK2	LIN28B	MAOB	MED23	MT2A	NFE2L3	NT5E	PCSK6	PITX2	PPID	PSMD7	RAMP1
KLK3	LIN9	MAP1B	MED24	MTA1	NFKB1	NTF3	PDCD1	PKM	PPM1D	PSMG1	RAMP2
KLK4	LINC00886	MAP1LC3A	MEF2C	MTCP1	NFKB2	NTHL1	PDCD1LG2	PKMYT1	PPP1R15A	PSRC1	RAMP3
KLK5	LIPA	MAP2K1	MEIS1	MTDH	NFKBIA	NTN3	PDGFA	PKP1	PPP2CA	PTCH1	RAP1A
KLRB1	LIPE	MAP2K2	MELK	MTFP1	NFKBIE	NTRK1	PDGFB	PLA1A	PPP2CB	PTCH2	RARA

## OBP Probes Continued

RARB	RPS6KA1	SF3B5	SLC2A2	SORD	STUB1	THAP11	TNFSF13B	TWIST2	WNT11
RASA1	RPS6KA5	SFN	SLC2A3	SORT1	STX11	THBS1	TNFSF14	TXN	WNT16
RASA4	RPS6KA6	SFRP1	SLC2A4	SOS1	STX1A	THBS2	TNFSF15	TXNIP	WNT2
RASAL1	RPS6KB1	SFRP2	SLC31A1	SOS2	SUFU	THBS4	TNFSF8	TXNL1	WNT2B
RASD1	RPS6KB2	SFRP4	SLC38A2	SOST	SULT1A1	THEM4	TNFSF9	TXNL4B	WNT3
RASGRF1	RPS7	SGK1	SLC38A5	SOX10	SULT1B1	THPO	TNKS	TXNRD1	WNT3A
RASGRF2	RPTOR	SGK2	SLC39A6	SOX15	SULT2A1	THY1	TNKS2	TYK2	WNT4
RASGRP1	RRAS2	SH2B1	SLC3A1	SOX17	SUMO1	TIAM1	TNN	TYMP	WNT5A
RASGRP2	RRM1	SH3PXD2A	SLC3A2	SOX2	SUSD3	TICAM1	TNNC2	TYMS	WNT5B
RASSF1	RRM2	SHC1	SLC45A3	SOX3	SUV39H2	TIE1	TNNI2	U2AF1	WNT6
RASSF7	RRM2B	SHC2	SLC5A1	SOX7	SWAP70	TIFA	TNNI3	UBB	WNT7A
RB1	RSP01	SHC3	SLC5A3	SOX9	SYCP2	TIMP1	TNR	UBE2C	WNT7B
RB1CC1	RSP02	SHC4	SLC5A4	SP1	SYK	TIMP2	TNXB	UBE2I	WNT8A
RBBP8	RTN1	SHH	SLC7A11	SPARC	SYNCRIP	TIMP3	TOLLIP	UBE2T	WNT8B
RBL1	RTN4RL1	SHMT1	SLC7A5	SPATA2	SYP	TINF2	TOMM40	UBE2Z	WNT9A
RBL2	RUNDC1	SIAH1	SLC7A6	SPC25	T	TIPARP	TOP1	UBE3A	WNT9B
RBM10	RUNX1	SIL1	SLC7A7	SPDEF	TADA3	TIRAP	TOP2A	UBXN2A	WT1
RBP1	RUNX1T1	SIN3A	SLC7A8	SPEF1	TAGLN	TK1	TOP2B	UGT1A1	WWC1
RBPJ	RUNX2	SIN3B	SLC7A9	SPHK1	TAL1	TLR1	TOP3A	UGT1A4	WWOX
RBPMS2	RUNX3	SIRT1	SLC01A2	SPH1	TAP1	TLR2	TOP3B	UGT1A6	XAB2
RBX1	RUVBL1	SIRT2	SLC01B1	SPINK1	TAP2	TLR3	TOR1A	UGT2B7	XBP1
RECQL5	RXRG	SIRT3	SLC01B3	SPINK5	TAT	TLR4	TP53	ULK1	XCL1
REL	S100A2	SIRT4	SLC02A1	SPOP	TAZ	TLR5	TP53AIP1	UNG	XCL2
RELA	S100A4	SIX1	SLC02B1	SPP1	TBK1	TLR6	TP53BP2	UQCRCF51	XCR1
RELB	S100A6	SKP2	SLC03A1	SPRY1	TBL1X	TLR7	TP53I3	USF1	XIAP
RELN	S100A7A	SLA	SLC04A1	SPRY2	TBL1XR1	TLR8	TP63	USF2	XPA
REST	S100A8	SLAMF7	SLIT2	SPRY4	TBL1Y	TLR9	TP73	USMG5	XPC
RET	S100B	SLC10A1	SLK	SQSTM1	TBP	TLX1	TPD52	UTF1	XRCC1
RFC1	S1PR1	SLC10A2	SMAD1	SRA1	TBX21	TMEFF1	TP11	UTY	XRCC2
RFC3	SACS	SLC11A1	SMAD2	SRC	TBX3	TMEM116	TP0	VAMP8	XRCC3
RFC4	SAFB	SLC15A1	SMAD3	SREBF1	TCF3	TMEM123	TPX2	VANGL2	XRCC4
RGS2	SALL4	SLC15A2	SMAD4	SRF	TCF4	TMEM132A	TRADD	VAPA	XRCC5
RHEB	SAP30	SLC16A1	SMAD5	SRM	TCF7	TMEM45A	TRAF2	VASH1	XRCC6
RHOA	SAV1	SLC16A2	SMAD7	SRSF1	TCF7L1	TMEM45B	TRAF3	VCAM1	XRCC6BP1
RHOB	SCAPER	SLC16A3	SMAD9	SRSF2	TCL1A	TMEM57	TRAF6	VCAN	YAP1
RHOU	SCN1A	SLC19A1	SMARCA4	SSX1	TCL1B	TMEM74B	TRAF7	VDAC1	YBX3
RIF1	SCN3A	SLC19A2	SMARCB1	STAB1	TCP1	TMPPRS2	TREX1	VDAC2	YWHAH
RIN1	SCUBE1	SLC19A3	SMC1A	STAG2	TDG	TMSB10	TRIB1	VDR	YWHAZ
RIPK1	SCUBE2	SLC22A1	SMC1B	STAM	TGDF1	TNC	TRIM28	VEGFA	YY1
RIPK2	SEC14L2	SLC22A2	SMC3	STAT1	TEK	TNF	TRIM72	VEGFB	ZAK
RIPK3	SEC22C	SLC22A3	SMC4	STAT2	TEP1	TNFAIP2	TRIP13	VEGFC	ZBTB10
RIT1	SEC61G	SLC22A6	SMO	STAT3	TERF1	TNFAIP3	TRIP4	VGLL4	ZBTB16
RND2	SELE	SLC22A7	SMPDL3B	STAT4	TERF2IP	TNFRSF10A	TRRAP	VHL	ZBTB32
RNF149	SELM	SLC22A8	SMS	STAT5A	TERT	TNFRSF10B	TSC1	VIPR1	ZEB1
RNF4	SENP1	SLC22A9	SMUG1	STAT5B	TESC	TNFRSF10C	TSC2	VPS13A	ZEB2
RNF43	SERPINA3	SLC25A13	SNAI1	STAT6	TET2	TNFRSF10D	TSC2D1	VSNL1	ZFP36L1
RNH1	SERPINA9	SLC25A3	SNAI2	STC1	TFDP1	TNFRSF11B	TSC2D3	VTCN1	ZFP42
RORC	SERPINB2	SLC25A4	SNAI3	STC2	TFDP2	TNFRSF12A	TSHR	WASL	ZFX
ROS1	SERPINB5	SLC26A2	SNCA	STEAP1	TFF1	TNFRSF14	TSLP	WEE1	ZHX2
RPA1	SERPINC1	SLC27A4	SNRPB	STEAP4	TFF3	TNFRSF17	TSPAN13	WHSC1	ZIC1
RPA3	SERPINE1	SLC28A1	SOCS1	STK11	TGF1	TNFRSF1B	TSPAN14	WHSC1L1	ZIC2
RPL13	SERPINF1	SLC28A2	SOCS2	STK3	TGFA	TNFRSF21	TSPAN7	WIF1	ZNF189
RPL35	SERPINH1	SLC28A3	SOCS3	STK32A	TGFB1	TNFRSF25	TSPYL5	WIP1	ZNF385B
RPL38	SERTAD1	SLC29A1	SOCS4	STK36	TGFB2	TNFRSF4	TTC9	WISP1	ZNF420
RPL5	SETBP1	SLC29A2	SOCS5	STK39	TGFB3	TNFRSF8	TTF1	WISP2	ZNF502
RPL6	SETD2	SLC2A1	SOD1	STMN1	TGFB1	TNFRSF9	TTK	WNT1	ZNF552
RPRM	SF3A1	SLC2A13	SOD2	STRADA	TGFBR1	TNFSF10	TUBB3	WNT10A	ZNF589
RPS4X	SF3B1	SLC2A14	SORBS1	STRADB	TGFBR2	TNFSF11	TWIST1	WNT10B	ZNF805

