Johns Hopkins Cytogenetics Laboratory
Optical Genome Mapping - Solid Tumor Gene List v1 (March 2025)

Regions of interest for analysis include the following gene regions. Genes indicated with * have no OGM label coverage; flanking labels will be evaluated.

ABL1	ATRX	CARD11	CEBPA *	DAXX	ERBB3
ABL2	AURKA	CARS1	CEBPD *	DCBLD1	ERBB4
ACSL3	AURKB *	CBFA2T3	CEBPE	DDIT3	ERC1
ACTB *	AXIN1	CBFB	CHCHD7	DDR2	ERG
ACVR1B	AXL	CBL	CHD1	DDX10	ESR1
ACVR2A	B2M *	CBLB	CHD2	DDX3X	ESRP1
ADD3	BAIAP2L1	CCDC170	CHEK1	DDX41 *	ESRRA *
ADGRA2	BAP1	CCDC28A	CHEK2	DEK	ETS1
ADGRF5	BARD1	CCDC6	CHIC2	DHH *	ETV1
AFAP1	BCL10	CCDC88C	CIC	DICER1	ETV4
AFDN	BCL11B	CCN6	CIITA	DMD	ETV5
AGK	BCL2	CCNB1IP1	CILK1	DNAJB1 *	ETV6
AGTRAP	BCL2L1	CCNB3	CKS1B	DNM2	EWSR1
AHRR	BCL2L2	CCND1	CLTC	DNMT3A	EXOSC6
AKAP9	BCL3	CCND2	COG5	DOT1L	EZH2
AKT1	BCL6	CCND3	COL1A1 *	DSTYK	EZHIP *
AKT2	BCL7A	CCNE1	COL6A3	DTX1	EZR
AKT3	BCOR	CCNY	COLCA2/POU2AF3	DUSP2 *	FAF1
ALK	BCORL1	CCT6B	COX6C	DUSP22	FAM118B
ANKRD28	BCR	CD22	CPS1	DUSP9 *	FAM131B
AP3B1	BICC1	CD274	CREB1	DUX4	FANCA
APC	BIRC3	CD36	CREB3L1	EBF1	FANCC
APH1A	BLM	CD58	CREB3L2	ECT2L	FANCD2
AR	BRAF	CD70	CREB3L3 *	EED	FANCE
ARAF	BRCA1	CD74	CREBBP	EGF	FANCF
ARFRP1	BRCA2	CD79A	CREM	EGFR	FANCG
ARHGAP26	BRD3	CD79B *	CRKL	EIF3E	FANCL
ARHGAP6	BRD4	CDC73	CRLF2 *	ELK4	FAS
ARID1A	BRIP1	CDH1	CRTC1	ELOC	FBXO11
ARID1B	BRSK1	CDH11	CRTC3	ELP2	FBXO31
ARID2	BTBD1	CDK12	CSF1	EML4	FBXW7
ASMTL	BTG2	CDK4 *	CSF1R	EP300	FEV
ASPSCR1	BTK	CDK6	CSF3R *	EP400	FGF1
ASXL1	BTLA	CDK8	CTCF	EPC1	FGF10
ATF1	C11orf95/ZFTA	CDKN1B *	CTNNA1	EPHA3	FGF14
ATG7	CAD	CDKN2A	CTNNB1	EPHA5	FGF19 *
ATIC	CALR	CDKN2B	CUX1	EPHA7	FGF23
ATM	CAMTA1	CDKN2C *	CXCR4	EPHB1	FGF3
ATP2B4	CANT1	CDKN2D	CYLD	EPOR	FGF4 *
ATR	CAPRIN1	CDX1	CYP2E1	ERBB2	FGF6

FGFR1
FGFR2
FGFR3 *
FGFR4
FGR
FH
FHIT
FIP1L1
FLCN
FLI1
FLT1
FLT3
FLT4
FLYWCH1
FN1
FOS
FOSB
FOXL2 *
FOXO1
FOXO3
FOXO4
FOXP1
FOXR2
FRS2
FUBP1
FUS
GAB1
GADD45B *
GALNT14
GATA1 *
GATA2
GATA3
GID4
GIT2
GLI1
GLIS2
GLIS3
GNA11 *
GNA12
GNA13
GNAQ
GNAS
GOLGA5
GOPC
GRB7
GRIN2A
GRM1
GSK3B
GTF2IRD1
GTSE1
GUCA2A *
H1-2 *
H1-3
H1-4 *
H2AC11 *
H2AC16 *
H2AC17 *
H2AC6 *
H2BC11 *
H2BC12
H2BC17 *
H2BC4
H3-3A
H3C2 *
HAS2
HDAC1
HDAC4
HDAC7
HEY1
HGF
HHEX
HIP1
HLF
HMGA2
HMGN2P46
HNF1A
HNRNPA2B1
HOOK3
HOXA10 *
HOXA11 *
HOXA13 *
HOXA9 *
HOXD11
HRAS *
HSP90AA1
HTN3
ID3 *
ID4
IDH1
IDH2
IGF1R
IGF2
IKBKE
IKZF1
IKZF2
IKZF3
IL7R
INHBA
INO80D
INPP4B
INPP5D
INSR
IQCG
IRF1
IRF2BP2 *
IRF4
IRF8
IRS2
JAK1
JAK2
JAK3
JARID2
JAZF1
JUN
KAT6A
KAT6B
KCNQ5
KDM2B
KDM4C
KDM5A
KDM5C
KDM6A
KDR
KEAP1
KIAA1549
KIF5B
KIT
KLF17
KLF4
KLHL6
KMT2A
KMT2B
KMT2D
KRAS
KTN1
LEF1
LIFR
LMNA
LMO1
LMO2
LPP
LRIG3
LRP1B
LRRK2
LYL1 *
MAF *
MAFB
MAGED1
MALT1
MAML1
MAML2
MAML3
MAMLD1
MAP2K1
MAP2K2
MAP2K4
MAP3K1
MAP3K14
MAP3K6
MAP3K7
MAPK1
MAST1
MAST2
MBTD1
MCL1
MDM2
MDM4
MEAF6
MECOM
MED12
MEF2B
MEF2C
MEIS1
MEN1
MERTK
MET
MIB1
MITF
MKI67
MLF1
MLH1
MLLT10
MN1
MORC3
MPL
MPRIP
MPST
MRE11
MRTFA
MRTFB
MSANTD3
MSH2
MSH3
MSH6
MSI2
MSMB
MTAP
MTG1
MTOR
MUC1
MUSK
MUTYH
MYB
MYBL1
MYC
MYCL
MYCN
MYD88 *
MYH11
MYH9
MYO18A
MYOD1 *
NAB2 *
NACC1
NACC2
NCOA1
NCOA2
NCOA3
NCOA4
NCOR2
NCSTN
NDE1
NDRG1
NF1
NF2
NFATC1
NFATC2
NFATC3
NFATC4
NFE2
NFE2L2
NFIB
NFKB2
NFKBIA
NIPBL
NKX2-1 *
NLRP1
NOD1
NONO
NOTCH1
NOTCH2
NPM1
NR1D1
NR4A3
NRAS
NRG1
NSD1
NSD2
NT5C2
NTRK1
NTRK2
NTRK3
NUMA1
NUMBL
NUP214
NUP93
NUP98
NUTM1
NUTM2A *
NUTM2B *
NUTM2E
NUTM2G *
OGA
OMD
P2RY8
P4HA2
PAG1
PAK3
PALB2
PAN3

PASK
PATZ1
PAX3
PAX5
PAX7
PAX8
PBRM1
PBX1
PBX3
PC
PCBP1 *
PCLO
PCM1
PDCD11
PDCD1LG2
PDE9A
PDGFB
PDGFD
PDGFRA
PDGFRB
PDK1
PGR
PHC3
PHF1 *
PHF6
PHKB
PICALM
PIGA
PIK3C2B
PIK3CA
PIK3CB
PIK3CG
PIK3R1
PIK3R2
PIM1 *
PKN1
PLAG1
PLCG2
PML
PMS2
POLD1
POLE
POT1
POU5F1
PPARG
PPFIBP1
PPM1D
PPP2R1A
PRCC
PRDM1
PRDM10
PRDM16
PRKACA
PRKACB
PRKAR1A
PRKCA
PRKCB
PRKCD
PRKD1
PRKD2
PRKD3
PRKDC
PRRX1
PRRX2
PRSS8
PSIP1
PTCH1
PTEN
PTPN11
PTPN2
PTPN6 *
PTPRK
PTPRO
PTPRZ1
QKI
RABEP1
RAD21
RAD50
RAD51
RAD51B
RAD51C
RAD51D
RAF1
RANBP2
RAP1GDS1
RARA
RASGEF1A
RB1
RBM15
RBM6
RECQL4 *
RELA
RELN
REPS2
RET
RHEBL1
RHOA
RHOH
RICTOR
RNF130
RNF43
ROS1
RPL22
RPN1
RPTOR
RREB1
RSPO2
RSPO3
RUNX1
RUNX1T1
S1PR2 *
SAMD9
SAMD9L
SCEL
SDC4
SDHA
SDHB
SDHC
SDHD *
SEC31A
SERP2
SERPINE1
SET *
SETBP1
SETD2
SF3B1
SFPQ
SGK1
SIK2
SLC34A2
SLC44A1
SLC45A3
SMAD2
SMAD3
SMAD4
SMARCA1
SMARCA4
SMARCA5
SMARCB1
SMC1A
SMC3
SMO
SND1
SOCS1 *
SOCS2
SOCS3 *
SOX10
SOX2
SOX9
SP3
SPECC1
SPEN
SPOP
SQSTM1
SRC
SRF
SRGAP3
SRSF2
SRSF7
SS18
SS18L1
SSX1
SSX2
SSX2B
SSX4
SSX4B
ST7
STAG2
STAT3
STAT4
STAT5A
STAT5B
STAT6
STIL
STK11
STK39
STRN
SUFU
SUZ12
SYK
SYNE1
TACC1
TACC3 *
TAF1
TAF12
TAF15
TAL1
TAX1BP1
TBL1XR1
TCF12
TCF3
TCL1A
TEK
TENT4A
TENT5C
TERT *
TET2
TFCP2
TFE3
TFEB
TFG
TFPT
TGFBR2
TGFBR3
THADA
THBS1
THRAP3
TLL2
TLX1 *
TLX3 *
TMEFF2
TMEM30A
TMPRSS2
TMPRSS6
TNFAIP3
TNFRSF11A
TNFRSF14 *
TNFRSF17
TOP1
TP53
TP53BP1
TP63
TPM1
TPM3
TPM4
TPR
TRAF2
TRAF3
TRAF5
TRAF7
TRIM11
TRIM24
TRIM27
TRIM33
TRIP11
TRPS1
TSC1
TSC2
TSHR
TUSC3
TYK2
U2AF1
U2AF2
UBA1
UBP1
USP6
VCL
VGLL2
VGLL3
VHL
WDFY2
WDR90 *
WT1
WWTR1
XBP1
XPO1
YAP1
YWHAE
YY1
YY1AP1
ZBTB7A
ZC3H7B
ZMYM3
ZNF217
ZNF24
ZNF384
ZNF444
ZNF703 *
ZRSR2