OnkoGenetiks®

CGP

Comprehensive Genomic Profiling

Next generation solutions in personalized cancer treatment

"OnkoGenetiks ™ Comprehensive Genomic Profiling (CGP)" test, offers a wide range of analysis opportunities in tumor tissue samples to provide personalized and targeted treatment in cancer patients.

TECHNICAL INFORMATION

Sample Type :	Tissue (DNA+RNA) 513 genes for DNA 49 genes for RNA (fusion)
Panel Size :	1.5 Mb
Turnaround Time :	14-21 business days
Required Sample Amount :	10 ng
Sensitivity :	99.5% and above
Specificity :	%97.6 and above

Biomarkers Analyzed

SNV
CNV
Insertion
Deletion
TMB
MSI
HRD (GIM)

Splice variants
Fusion

TEST FEATURES

Single gene biomarkers
Detects single nucleotide variants **(SNV), insertions** and **deletions**, known and novel **fusions**, copy number variants **(CNV)**.

Multigene biomarkers
Determines susceptibility to mutations with tumor mutation burden **(TMB)** and microsatellite instability **(MSI)** scoring and allows analyzing mutation signatures and potential responses to immunotherapies.

Simultaneous analysis of 49 fusion genes
Enables direct detection of 1311 known fusion isoforms and new unknown fusion isoforms.

Homologous recombination repair deficiency (HRD)
Detects loss of heterozygosity (LOH) at both gene and sample level to identify genomic instability in 46 key genes involved in homologous recombination repair pathways.

Ability to work with low amounts of samples
10 ng or more DNA/RNA sample isolated from tissue is sufficient for analysis. Thus, it makes it possible to perform with more analysis options with smaller amounts of tissue compared to conventional tests.

High test success
Increased success in results thanks to high sequencing success rates (up to 95%), allowing more samples to be tested without any problems.

Highly automated workflow
Automated and short run protocol helps increase laboratory efficiency and reduce potential user errors.

Distribution of genes examined in OnkoGenetiks CGP according to tumor type *

BREAST CARCINOMA	LUNG CARCINOMA	MELANOMA	COLON CARCINOMA	OVARIAN CARCINOMA	GASTRIC CARCINOMA	BLADDER CARCINOMA	LEUKEMIA	SARCOMA
AKT1	ALK	ALK	ALK	APC	APC	APC	ASXL1	ARID1A
ARID1A	APC	APC	APC	ARID1A	ARID1A	ARID1A	BCOR	ARID1B
BRBA2	ARID1A	ARID1A	ARID1A	ARID1B	ARID1B	ARID1B	CBL	ATM
BRCA1	ATM	ARID2	ARID1B	ATM	ARID2	ATM	DNMT3A	ATRX
BRIP1	ATRX	BRAF	ASXL1	ATRX	ATM	BRCA2	ETV6	BRCA2
CCND1	BRAF	CARD11	ATM	BCOR	BRCA2	CCND1	EZH2	CDK4
CDH1	CDKN2A	CDKN2A	BRAF	BRCA1	CCNE1	CDKN1A	FLT3	CDKN2A
CDK12	CDKN2B	CDKN2B	BRCA2	BRCA2	CDH1	CDKN2A	GATA2	CDKN2B
ERBB2	EGFR	ERBB4	CARD11	CCNE1	CDK12	CDKN2B	IDH1	FAT1
ESR1	ERBB2	FAT1	CREBBP	CDK12	CDKN2A	CREBBP	IDH2	GLI1
FGF19	ERBB4	FLT3	CTNNB1	CDKN2A	CREBBP	EP300	JAK2	KDR
FGF3	FAT1	IL7R	ERBB2	CREBBP	CTNNB1	ERBB2	KIT	KIT
FGF4	KEAP1	KDR	ERBB4	ERBB2	EGFR	ERBB3	KMT2A	KMT2D
FGFR1	KMT2D	KMT2A	FAT1	FAT1	ERBB2	ERCC2	KRAS	MDM2
GATA3	KRAS	KMT2D	FBXW7	FGFR1	ERBB3	FAT1	NF1	MYC
KMT2C	MET	MET	FLT3	JAK3	ERBB4	FBXW7	NRAS	NCOR1
KMT2D	NF1	NF1	GNAS	KMT2A	FBXW7	FGF4	PHF6	NF1
MAP2K4	NTRK3	NOTCH3	KMT2D	KMT2D	FGFR2	FGFR3	PTPN11	NOTCH1
MAP3K1	PIK3CA	NRAS	KRAS	KRAS	GNAS	KDM6A	RUNX1	PDGFRA
MYC	PTPRD	PDGFRA	MTOR	MYC	KMT2D	KMT2A	SETBP1	PIK3CA
NE1	RB1	PTEN	NOTCH1	NF1	KRAS	KMT2C	SF3B1	PTEN
PIK3CA	RBM10	PTPRD	PIK3CA	PIK3CA	NOTCH1	KMT2D	SRSF2	RB1
PTEN	SETD2	PTPRT	PTEN	PTEN	PBRM1	MDM2	STAG2	ROS1
RECQL4	SMARCA4	ROS1	RNF43	RB1	PIK3CA	NF1	TET2	SDHA
TP53	STK11	TET2	SMAD4	RECQL4	RHOA	PIK3CA	TP53	SETD2
	TERT	TP53	SMARCA4	ROS1	RNF43	RB1	U2AF1	TERT
	TP53		SOX9	SMARCA4	SMAD4	SMARCA4	WT1	TP53
			TCF7L2	TP53	SMARCA4	STAG2		
			TP53	TSC2	SOX9	TP53		
					TP53	TSC1		

*Panel scope is not limited to the tumors and genes given above. For the full list of genes examined, please see the back of the page.

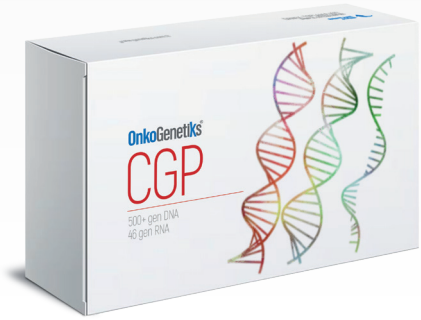
OnkoGenetiks CGP Gene List

A1CF
ABCB1*
ABL1*
ABL2*
ABRAXAS1*
ACSM2B
ACVR1
ACVR1B*
ACVR2A*
ADAM18
ADAMTS12*
ADAMTS2*
AKT1*
AKT2*
AKT3*
ALK*
AMER1*
ANO4
APC*
AR*
ARAF*
ARHGAP35*
ARID1A*
ARID1B*
ARID2*
ARID5B*
ARMC4
ASXL1*
ASXL2*
ATM*
ATP1A1
ATR *
ATRX*
AURKA*
AURKC*
AXIN1*
AXIN2*
AXL*
B2M*
BAP1*
BARD1 *
BCL2 *
BCL2L12*
BCL6*
BCOR*
BCR
BLM*
BMP5
BMPR2*
BRAF*
BRCA1*
BRCA2*
BRINP3
BRIP1*
BTK
C6
C8A
C8B
CACNA1D
CALR
CANX
CARD11*
CASP8*
CASR
CBFB*
CBL*
CCND1*
CCND2*
CCND3*
CCNE1*
CD163
CD274*
CD276*
CD79B
CDC73*
CDH1 *
CDH10*
CDK12*
CDK4*
CDK6*
CDKN1A*
CDKN1B*
CDKN2A*
CDKN2B*
CDKN2C*
CHD4*
CHEK1*
CHEK2*
CIC*
CIITA
CNTN6
CNTNAP4
CNTNAP5
COL11A1
CREBBP*
CSF1R
CSMD3*
CTCF*
CTLA4*
CTNNB1
CTNND2*
CUL1
CUL3*
CUL4A*
CUL4B*
CYLD*
CYP2C9*
CYP2D6
CYSLTR2
DAXX*
DCAF4L2
DCDC1
DDR1*
DDR2*
DDX3X*
DGCR8
DICER1*
DNMT3A*
DOCK3*
DPYD*
DROSHA
DSC1*
DSC3*
E2F1
EGFR*
EIF1AX*
ELF3*
EMSY*
ENO1*
EP300*
EPAS1
EPCAM*
EPHA2*
ERAP1*
ERAP2
ERBB2*
ERBB3*
ERBB4*
ERCC2*
ERCC4*
ERCC5
ERG
ERRFI1*
ESR1*
ETV1
ETV4
ETV5
ETV6*
EZH2*
FAM135B*
FANCA*
FANCC*
FANCD2*
FANCE*
FANCF*
FANCG*
FANCI*
FANCL*
FANCM*
FAS
FAT1*
FBXW7*
FGF19*
FGF23*
FGF3*
FGF4*
FGF7
FGF9*
FGFR1*
FGFR2*
FGFR3*
FGFR4*
FLT3*
FLT4*
FOXA1*
FOXL2
FOXO1
FUBP1*
FYN*
GALNT17
GATA2*
GATA3*
GLI1
GLI3*
GNA11
GNA13*
GNAQ
GNAS*
GPR158
GPS2*
GRID2
H2BC5
H3-3A*
H3-3B*
H3C2
HCN1
HDAC2*
HDAC9*
HIF1A
HLA-A*
HLA-B*
HLA-C
HNF1A*
HRAS
ID3
IDH1
IDH2*
IGF1R*
IKBKB*
IL6ST
IL7R*
INPP4B*
IRF4
IRS4
JAK1*
JAK2*
JAK3*
KCND2
KCNH7
KDM5C*
KDM6A*
KDR*
KEAP1*
KEL
KIR3DL1
KIT*
KLF4
KLF5*
KLHL13
KMT2A*
KMT2B*
KMT2C*
KMT2D*
KNSTRN
KRAS*
KRTAP2-1
KRTAP6-2
LARP4B*
LATS1*
LATS2*
LRRC7
MAGOH*
MAP2K1*
MAP2K2
MAP2K4*
MAP2K7*
MAP3K1*
MAP3K4*
MAP3K8*
MAPK1*
MAPK8
MARCO
MAX*
MCL1*
MDM2*
MDM4*
MECOM*
MED12
MEF2B*
MEN1*
MET*
MGA*
MITF*
MLH1*
MLH3*
MPL*
MRE11*
MSH2*
MSH3*
MSH6*
MTAP*
MTOR*
MTUS2
MUTYH*
MYB
MYBL1
MYC *
MYCL*
MYCN*
MYD88*
MYOD1
NBN*
NCOR1*
NF1*
NF2*
NFE2L2*
NLRC5
NOL4
NOTCH1*
NOTCH2*
NOTCH3*
NOTCH4*
NRAS*
NRG1
NRXN1
NSD2
NT5C2
NTRK1*
NTRK2
NTRK3*
NUP93
NUTM1
NYAP2
OR10G8
OR2G6
OR2L13
OR2L2
OR2L8
OR2M3
OR2T3
OR2T33
OR2T4
OR2W3
OR4A15
OR4C15
OR4C6
OR4M1
OR4M2
OR5D18
OR5F1
OR5L1
OR5L2
OR6F1
OR8H2
OR8I2
OR8U1
ORC4
PAK5
PALB2*
PARP1*
PARP2*
PARP3*
PARP4*
PAX5
PBRM1*
PCBP1*
PCDH17
PDCD1 *
PDCD1LG2*
PDE1A
PDE1C
PDGFRA*
PDGFRB*
PDIA3*
PGD*
PHF6*
PIK3C2B*
PIK3CA*
PIK3CB*
PIK3CD
PIK3CG
PIK3R1*
PIK3R2*
PIM1*
PLCG1*
PLXDC2
PMS1*
PMS2*
POLD1*
POLE*
POM121L12
POT1*
PPARG
PPFIA2
PPM1D*
PPP2R1A*
PPP2R2A*
PPP6C*
PRDM1*
PRDM9*
PRKACA*
PRKACB
PRKAR1A*
PSMB10
PSMB8
PSMB9
PTCH1*
PTEN*
PTPN11*
PTPRD
PTPRT*
PXDNL*
RAC1*
RAD50*
RAD51 *
RAD51B *
RAD51C*
RAD51D*
RAD52*
RAD54L*
RAF1*
RARA*
RASA1*
RASA2*
RB1*
RBM10*
RBP3
RECQL4*
REG1A
REG1B
REG3A
REG3G
RELA
RET*
RGS7
RHEB*
RHOA
RICTOR*
RIT1*
RNASEH2A*
RNASEH2B*
RNASEH2C
RNF43*
ROS1*
RPA1*
RPL10
RPL22
RPL5
RPS6KB1*
RPTN
RPTOR*
RSPO2
RSPO3
RUNDC3B
RUNX1 *
RUNX1T1
SDHA*
SDHB*
SDHC
SDHD*
SETBP1*
SETD2*
SF3B1*
SH3RF2
SIX1
SIX2
SLC15A2
SLC8A1
SLCO1B3*
SLX4*
SMAD2*
SMAD4*
SMARCA4*
SMARCB1*
SMC1A*
SMO*
SNCAIP
SOCS1
SOS1
SOX2
SOX9*
SPEN*
SPOP*
SRC*
SRSF2
STAG2*
STAT1
STAT3*
STAT5B
STAT6*
STK11*
SUFU*
SYT10
SYT16
TAF1
TAP1*
TAP2*
TAPBP
TBX3*
TCF7L2*
TERT*
TET2*
TFE3
TFEB
TGFBR1
TGFBR2*
TMEM132D
TNFAIP3*
TNFRSF14*
TOP1*
TP53*
TP63*
TPMT*
TPP2*
TPTE
TRHDE
TRIM48
TRIM51
TRRAP
TSC1*
TSC2*
TSHR
U2AF1*
UGT1A1
USP8*
USP9X*
VHL*
WAS
WT1*
XPO1*
XRCC2*
XRCC3*
YAP1*
YES1*
ZBTB20
ZFHX3*
ZIM3
ZMYM3*
ZNF217*
ZNF429*
ZNF479
ZNF536
ZRSR2*

Genes indicated in red refer to Fusion genes. * Refers to genes analyzed for Copy Number Variations (CNV).

HRD Gene List

ABRAXAS1
ATM
ATR
BAP1
BARD1
BLM
BRCA1
BRCA2
BRIP1
CDK12
CHEK1
CHEK2
FANCA
FANCC
FANCD2
FANCE
FANCF
FANCG
FANCI
FANCL
FANCM
MRE11
NBN
PALB2
PARP1
PARP2
PARP3
POLD1
POLE
PPP2R2A
PTEN
RAD50
RAD51
RAD51B
RAD51C
RAD51D
RAD52
RAD54L
RNASEH2A
RNASEH2B
RNASEH2C
RPA1
SLX4
TP53
XRCC2
XRCC3



GENETIKS®

ACCREDITATIONS

CALL CENTER 09:00 - 18:00
0(850) 210 49 73

+90 (212) 275 70 20
+90 (212) 275 70 08
info@genetiks.com.tr

GENETİKS
Genetiks Genetic Diseases
Diagnosis Center & Laboratries
Teşvikiye Mah. Hakkı Yeten Cad.
Terrace Fulya Center 2 No:13 Kat 4,
Şişli, 34365 İstanbul/Türkiye
www.genetiks.com.tr

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