

ForeSENTIA GENES AND GENETIC ALTERATIONS TESTED PER PANEL

GENES TESTED

The following table indicates the genes tested per panel.

PAN-CANCER 80 genes	AKT1, ALK, APC, AR, ARAF, ATM, ATRX, BARD1, BRAF, BRCA1, BRCA2, BRIP1, CDH1, CDKN2A, CHEK2, CIC, CTNNB1, DDR2, DICER1, EGFR, ERBB2, ERBB3, ERBB4, ESR1, FBXW7, FGFR1, FGFR2, FGFR3, FLT3, FOXA1, FOXL2, FUBP1, GATA3, GNA11, GNAQ, GNAS, H3F3A, IDH1, IDH2, JAK2, KEAP1, KIT, KRAS, MAP2K1, MAP3K1, MET, MLH1, MRE11A, MSH2, MSH6, MTOR, MYC, MYCN, NBN, NF1, NPM1, NRAS, NTRK1, NTRK2, NTRK3, PALB2, PDGFRA, PIK3CA, PIK3CB, PMS2, POLE, PTEN, RAD51C, RAD51D, RAF1, RB1, RET, ROS1, RUNX1, SMAD4, SPOP, STK11, TERT, TMRSS2, TP53, 1p/19q codeletion
BREAST / GYNECOLOGICAL 48 genes	AKT1, ATM, BARD1, BRAF, BRCA1, BRCA2, BRIP1, CHEK2, CTNNB1, DICER1, EGFR, ERBB2, ERBB3, ESR1, FBXW7, FGFR1, FGFR2, FGFR3, FOXA1, FOXL2, GATA3, KIT, KRAS, MAP3K1, MET, MLH1, MRE11A, MSH2, MSH6, MTOR, NBN, NRAS, NTRK1, NTRK2, NTRK3, PALB2, PIK3CA, PIK3CB, PMS2, POLE, PTEN, RAD51C, RAD51D, RAF1, RET, RUNX1, SMAD4, TP53
COLORECTAL 34 genes	AKT1, APC, ATM, BRAF, BRCA1, BRCA2, CTNNB1, EGFR, ERBB2, FBXW7, FGFR1, FGFR2, FGFR3, GNAS, KRAS, MET, MLH1, MSH2, MSH6, MTOR, NRAS, NTRK1, NTRK2, NTRK3, PALB2, PDGFRA, PIK3CA, PIK3CB, PMS2, POLE, PTEN, RAF1, SMAD4, TP53
GLIOMA 22 genes	ATRX, BRAF, CDKN2A, CIC, CTNNB1, EGFR, FGFR3, FUBP1, H3F3A, IDH1, IDH2, MET, MYC, MYCN, NF1, NTRK1, NTRK2, NTRK3, POLE, PTEN, TERT, TP53, 1p/19q codeletion
LUNG (NSCLC) 36 genes	AKT1, ALK, APC, ARAF, ATM, BRAF, BRCA2, CTNNB1, DDR2, EGFR, ERBB2, ERBB3, ERBB4, FBXW7, FGFR1, FGFR2, FGFR3, JAK2, KEAP1, KRAS, MAP2K1, MET, NRAS, NTRK1, NTRK2, NTRK3, PDGFRA, PIK3CA, POLE, PTEN, RAF1, RET, ROS1, SMAD4, STK11, TP53
MELANOMA 22 genes	AKT1, ALK, BRAF, CTNNB1, ERBB2, GNA11, GNAQ, KIT, KRAS, MAP2K1, MYC, NF1, NRAS, NTRK1, NTRK2, NTRK3, PIK3CA, POLE, PTEN, RET, ROS1, TP53
PROSTATE 36 genes	AKT1, APC, AR, ATM, BARD1, BRAF, BRCA1, BRCA2, CHEK2, CTNNB1, ERBB2, FGFR1, FGFR2, FGFR3, FOXA1, MLH1, MSH2, MSH6, MYC, MYCN, NRAS, NTRK1, NTRK2, NTRK3, PALB2, PIK3CA, PIK3CB, PMS2, POLE, PTEN, RAD51C, RAD51D, RB1, SPOP, TMRSS2, TP53

GENETIC ALTERATIONS TESTED

The following table shows the types of genetic alterations and exon coverage for each gene.

AKT1 Exon 4 (NM_001382430.1) ▲	ALK Exons 18-20, 22-23 (NM_004304.5) Selected non-coding regions covered ▲ ■	APC Full exonic coverage (NM_000038.6) Selected non-coding regions covered ▲	AR Exons 1-2, 4-8 (NM_000044.6) Selected non-coding regions covered ▲ ●	ARAF Exon 7 (NM_001654.5) ▲	ATM Full exonic coverage (NM_000051.4) Selected non-coding regions covered ▲
ATRX Exons 5, 7, 9, 11, 13-14, 17, 20-22, 29-31, 35 (NM_000489.6) ▲	BARD1 Full exonic coverage (NM_000465.4) Selected non-coding regions covered ▲	BRAF Exons 9-12, 15 (NM_004333.6) Selected non-coding regions covered ▲ ■	BRCA1 Full exonic coverage (NM_007294.4) Selected non-coding regions covered ▲	BRCA2 Full exonic coverage (NM_000059.4) Selected non-coding regions covered ▲	BRIP1 Full exonic coverage (NM_032043.3) Selected non-coding regions covered ▲
CDH1 Full exonic coverage (NM_004360.5) Selected non-coding regions covered ▲	CDKN2A Full exonic coverage (NM_000077.5) (NM_058195.4) Selected non-coding regions covered ●	CHEK2 Exons 1-10 (NM_007194.4) Selected non-coding regions covered ▲	CIC Exon 19, 21 (NM_0015125.4) ▲	CTNNB1 Exon 3 (NM_001904.4) ▲	DDR2 Exon 17 (NM_006182.4) ▲
DICER1 Exons 2-26 (NM_177438.3) ▲	EGFR Exons 2-5, 8-10, 12, 14-15, 17-24, 27-28 (NM_005228.5) ▲ ●	ERBB2 Exons 3-4, 7-8, 10, 19-24 (NM_004448.4) Selected non-coding regions covered ▲ ●	ERBB3 Exons 3, 6-11, 20-21 (NM_001982.4) ▲	ERBB4 Exons 7, 15, 19, 23 (NM_005235.3) ▲	ESR1 Exons 2-5, 7-8 (NM_000125.4) Selected non-coding regions covered ▲ ●

Selected non-coding regions which are covered by the test are indicated above.

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▲ Single Nucleotide Variant / Indels ● Copy Number Alterations ■ Rearrangements

FBXW7 Exons 6-7, 9-14 (NM_001349798.2) ▲	FGFR1 Exon 5-9, 12-13, 16, 18 (NM_023110.3) Selected non-coding regions covered ●	FGFR2 Exons 2-9, 11, 13-18 (NM_000141.5) Selected non-coding regions covered ●	FGFR3 Exons 4, 7-8, 11-12, 16-18 (NM_000142.5) Selected non-coding regions covered ● ■	FLT3 Exon 20 (NM_004119.3) ▲	FOXA1 Exon 2 (NM_004496.5) ▲
FOXL2 Exon 1 (NM_023067.4) ▲	FUBP1 Exon 14 (NM_003902.5) ▲	GATA3 Exons 5-6 (NM_001002295.2) ▲	GNA11 Exons 4-5 (NM_002067.5) ▲	GNAQ Exons 5, 7 (NM_002072.5) ▲	GNAS Exon 8 (NM_000516.7) ▲
H3F3A Exon 2 (NM_002107.7) ▲	IDH1 Exon 4 (NM_005896.4) ▲	IDH2 Exon 4 (NM_002168.4) ▲	JAK2 Exon 14 (NM_004972.4) ▲	KEAP1 Exons 2-4 (NM_023500.2) ▲	KIT Exons 2-21 (NM_000222.3) ▲ ●
KRAS Exons 2-4 (NM_004985.5) ▲ ●	MAP2K1 Exons 2-3, 6-7 (NM_002755.4) ▲	MAP3K1 Exons 5-6, 16-18 (NM_005921.2) ▲	MET Exons 2-21 (NM_000245.4) ▲ ●	MLH1 Full exonic coverage (NM_000249.4) Selected non-coding regions covered ▲	MRE11A Exons 1-18, 20 (NM_005591.4) Selected non-coding regions covered ▲
MSH2 Full exonic coverage (NM_000251.3) Selected non-coding regions covered ▲	MSH6 Full exonic coverage (NM_000179.3) ▲	MTOR Exons 43, 47, 53, 56 (NM_004958.4) ▲	MYC Exons 1, 3 (NM_002467.6) ●	MYCN Exon 3 (NM_005378.6) ●	NBN Full exonic coverage (NM_002485.5) ▲
NF1 Exons 6, 12, 17-18, 21-22, 25, 27-28, 34, 37, 40, 44-47, 49, 53 (NM_001042492.3) ▲	NPM1 Exon 11 (NM_002520.7) ▲	NRAS Exons 2-4 (NM_002524.5) ▲	NTRK1 Exons 7-15 (NM_002529.4) Selected non-coding regions covered ▲ ■	NTRK2 Exons 10-11, 13-14 (NM_006180.6) Selected non-coding regions covered ■	NTRK3 Exons 14-15 (NM_001012338.3) Selected non-coding regions covered ■
PALB2 Full exonic coverage (NM_024675.4) Selected non-coding regions covered ▲	PDGFRA Exon 18 (NM_006206.6) ▲	PIK3CA Exons 2-6, 8, 10, 15-17, 19-21 (NM_006218.4) ▲ ●	PIK3CB Exons 13, 15, 24 (NM_006219.3) ▲	PMS2 Exons 6-8, 10 (NM_000535.7) ▲	POLE Exons 2-49 (NM_006231.4) Selected non-coding regions covered ▲
PTEN Full exonic coverage (NM_000314.8) Selected non-coding regions covered ▲ ●	RAD51C Full exonic coverage (NM_058216.3) Selected non-coding regions covered ▲	RAD51D Full exonic coverage (NM_002878.4) Selected non-coding regions covered ▲	RAF1 Exon 7 (NM_002880.4) ▲	RB1 Exons 1-13, 16-27 (NM_000321.3) Selected non-coding regions covered ●	RET Full exonic coverage (NM_020975.6) Selected non-coding regions covered ▲ ■
ROS1 Exons 32-37 (NM_001378902.1) Selected non-coding regions covered ■	RUNX1 Exon 5 (NM_001754.4) ▲	SMAD4 Full exonic coverage (NM_005359.6) Selected non-coding regions covered ▲	SPOP Exons 4-5 (NM_001007228.2) ▲	STK11 Full exonic coverage (NM_000455.5) Selected non-coding regions covered ▲	TERT Exon 1 (NM_198253.3) Selected non-coding regions covered ▲
TMPRSS2 Exons 2-4 (NM_005656.4) Selected non-coding regions covered ■	TP53 Full exonic coverage (NM_000546.6) Selected non-coding regions covered ▲ ●				

Selected non-coding regions which are covered by the test are indicated above.

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▲ Single Nucleotide Variant / Indels

● Copy Number Alterations

■ Rearrangements