ForeSENTIA®
tumor profile

ForeSENTIA GENES AND GENETIC ALTERATIONS TESTED PER PANEL

GENES TESTED

The following table indicates the genes tested per panel.

Pan-Cancer Core 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, MRE11, 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, TMPRSS2, 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, MRE11, 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, TMPRSS2, TP53

GENETIC ALTERATIONS TESTED

The following table shows the types of genetic alterations and coding 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_203500.2)	**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*	**MRE11** 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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