

OmniSeq INSIGHTSM is a comprehensive genomic profiling test that uses next generation sequencing and hybrid capture-based technology which targets the full coding regions of 523 genes to detect single nucleotide variants (SNVs), insertion-deletions (indels), copy number alterations (gains and losses), and assess microsatellite instability (MSI) and tumor mutational burden (TMB). INSIGHT uses hybrid capture methodology to sequence RNA for detection of fusions (rearrangements), splice variants, and RNA expression of 64 immune related genes. PD-L1 protein expression is evaluated using immunohistochemistry.

| DNA-Sequencing of 523 genes (full coding exonic regions) for the detection of substitutions, indels, MSI and TMB | | | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------|----------|---------|---------|-----------|----------|---------|----------|----------|---------|----------|----------|
| ABL1 | BLM | CRLF2 | ERCC4 | FLI1 | HIST1H3I | KDR | MRE11A | PAX3 | PTCH1 | SDHD | TCF7L2 |
| ABL2 | BMPR1A | CSF1R | ERCC5 | FLT1 | HIST1H3J | KEAP1 | MSH2 | PAX5 | PTEN | SETBP1 | TERC |
| ACVR1 | BRAF | CSF3R | ERG | FLT3 | HIST2H3A | KEL | MSH3 | PAX7 | PTPN11 | SETD2 | TERT |
| ACVR1B | BRCA1 | CSNK1A1 | ERRF1 | FLT4 | HIST2H3C | KIF5B | MSH6 | PAX8 | PTPRD | SF3B1 | TET1 |
| AKT1 | BRCA2 | CTCF | ESR1 | FOXA1 | HIST2H3D | KIT | MST1 | PBRM1 | PTPRS | SH2B3 | TET2 |
| AKT2 | BRD4 | CTLA4 | ETS1 | FOXL2 | HIST3H3 | KLF4 | MST1R | PDCD1 | PTPRT | SH2D1A | TFE3 |
| AKT3 | BRIP1 | CTNNA1 | ETV1 | FOXO1 | HLA-A | KLHL6 | MTOR | PDCD1LG2 | QKI | SHQ1 | TFRC |
| ALK | BTG1 | CTNNB1 | ETV4 | FOXP1 | HLA-B | KMT2A | MUTYH | PDGFRA | RAB35 | SLIT2 | TGFBR1 |
| ALOX12B | BTK | CUL3 | ETV5 | FRS2 | HLA-C | KMT2B | MYB | PDGFRB | RAC1 | SLX4 | TGFBR2 |
| AMER1 | C11orf30 | CUX1 | ETV6 | FUBP1 | HNF1A | KMT2C | MYC | PDGFRA | RAD21 | SMAD2 | TMEM127 |
| ANKRD11 | CALR | CXCR4 | EWSR1 | FYN | HNRNPK | KMT2D | MYCL | PDPK1 | RAD50 | SMAD3 | TMPRSS2 |
| ANKRD26 | CARD11 | CYLD | EZH2 | GABRA6 | HOXB13 | KRAS | MYCN | PGR | RAD51 | SMAD4 | TNFAIP3 |
| APC | CASP8 | DAXX | FAM175A | GATA1 | HRAS | LAMP1 | MYD88 | PHF6 | RAD51B | SMARCA4 | TNFRSF14 |
| AR | CBFB | DCUN1D1 | FAM46C | GATA2 | HSD3B1 | LATS1 | MYO10 | PHOX2B | RAD51C | SMARCB1 | TOP1 |
| ARAF | CBL | DDR2 | FANCA | GATA3 | HSP90AA1 | LATS2 | NAB2 | PIK3C2B | RAD51D | SMARCD1 | TOP2A |
| ARFRP1 | CCND1 | DDX41 | FANCC | GATA4 | ICOSLG | LMO1 | NBN | PIK3C2G | RAD52 | SMC1A | TP53 |
| ARID1A | CCND2 | DHX15 | FANCD2 | GATA6 | ID3 | LRP1B | NCOA3 | PIK3CA | RAD54L | SMC3 | TP63 |
| ARID1B | CCND3 | DICER1 | FANCE | GEN1 | IDH1 | LYN | NCOR1 | PIK3CB | RAF1 | SMO | TRAF2 |
| ARID2 | CCNE1 | DIS3 | FANCF | GID4 | IDH2 | LZTR1 | NEGR1 | PIK3CB | RANBP2 | SNCAIP | TRAF7 |
| ARID5B | CD274 | DNAJB1 | FANCG | GLI1 | IFNGR1 | MAGI2 | NF1 | PIK3CD | RARA | SOCS1 | TSC1 |
| ASXL1 | CD276 | DNMT1 | FANCI | GNA11 | IGF1 | MALT1 | NF2 | PIK3CG | RASA1 | SOX10 | TSC2 |
| ASXL2 | CD74 | DNMT3A | FANCL | GNA13 | IGF1R | MAP2K1 | NFE2L2 | PIK3R1 | RB1 | SOX17 | TSHR |
| ATM | CD79A | DNMT3B | FAS | GNAQ | IGF2 | MAP2K2 | NFKBIA | PIK3R2 | RBM10 | SOX2 | U2AF1 |
| ATR | CD79B | DOT1L | FAT1 | GNAS | IKBKE | MAP2K4 | NKX2-1 | PIK3R3 | RECQL4 | SOX9 | VEGFA |
| ATRX | CDK73 | E2F3 | FBXW7 | GPR124 | IKZF1 | MAP3K1 | NKX3-1 | PIM1 | REL | SPEN | VHL |
| AURKA | CDH1 | EED | FGF1 | GPS2 | IL10 | MAP3K13 | NOTCH1 | PLCG2 | RET | SPOP | VTCN1 |
| AURKB | CDK12 | EGFL7 | FGF10 | GREM1 | IL7R | MAP3K14 | NOTCH2 | PLK2 | RFWD2 | SPTA1 | WISP3 |
| AXIN1 | CDK4 | EGFR | FGF14 | GRIN2A | INHBA | MAP3K4 | NOTCH3 | PMAIP1 | RHEB | SRC | WT1 |
| AXIN2 | CDK6 | EIF1AX | FGF19 | GRM3 | INHBA | MAPK1 | NOTCH4 | PMS1 | RHOA | SRSF2 | XIAP |
| AXL | CDK8 | EIF4A2 | FGF2 | GSK3B | INPP4A | MAPK3 | NPM1 | PMS2 | RICTOR | STAG1 | XPO1 |
| B2M | CDKN1A | EIF4E | FGF23 | H3F3A | INPP4B | MAX | NRAS | PNRC1 | RIT1 | STAG2 | XRCC2 |
| BAP1 | CDKN1B | EML4 | FGF3 | H3F3B | INSR | MCL1 | NRG1 | POLD1 | RNF43 | STAT3 | YAP1 |
| BARD1 | CDKN2A | EP300 | FGF4 | H3F3C | IRF2 | MDC1 | NSD1 | POLE | ROS1 | STAT4 | YES1 |
| BBC3 | CDKN2B | EPCAM | FGF5 | HGF | IRF4 | MDM2 | NTRK1 | PPARG | RPS6KA4 | STAT5A | ZBTB2 |
| BCL10 | CDKN2C | EPHA3 | FGF6 | HIST1H1C | IRS1 | MDM4 | NTRK2 | PPM1D | RPS6KB1 | STAT5B | ZBTB7A |
| BCL2 | CEBPA | EPHA5 | FGF7 | HIST1H2BD | IRS2 | MED12 | NTRK3 | PPP2R1A | RPS6KB2 | STK11 | ZFHX3 |
| BCL2L1 | CENPA | EPHA7 | FGF8 | HIST1H3A | JAK1 | MEF2B | NUP93 | PPP2R2A | RPTOR | STK40 | ZNF217 |
| BCL2L11 | CHD2 | EPHB1 | FGF9 | HIST1H3B | JAK2 | MEN1 | NUTM1 | PPP6C | RUNX1 | SUFU | ZNF703 |
| BCL2L2 | CHD4 | ERBB2 | FGFR1 | HIST1H3C | JAK3 | MET | PAK1 | PRDM1 | RUNX1T1 | SUZ12 | ZRSR2 |
| BCL6 | CHEK1 | ERBB3 | FGFR2 | HIST1H3D | JUN | MGA | PAK3 | PREX2 | RYBP | SYK | |
| BCOR | CHEK2 | ERBB4 | FGFR3 | HIST1H3E | KAT6A | MITF | PAK7 | PRKAR1A | SDHA | TAF1 | |
| BCORL1 | CIC | ERCC1 | FGFR4 | HIST1H3F | KDM5A | MLH1 | PALB2 | PRKCI | SDHAF2 | TBX3 | |
| BCR | CREBBP | ERCC2 | FH | HIST1H3G | KDM5C | MLL2 | PARK2 | PRKDC | SDHB | TCEB1 | |
| BIRC3 | CRKL | ERCC3 | FLCN | HIST1H3H | KDM6A | MPL | PARP1 | PRSS8 | SDHC | TCF3 | |
| DNA-Sequencing of 59 genes for the detection of copy gain and copy loss in ATM, BRCA1, BRCA2, and PTEN | | | | | | | | | | | |
| AKT2 | BRCA1 | CDK4 | ERBB2 | FGF1 | FGF23 | FGF7 | FGFR3 | LAMP1 | MYCL1 | PDGFRB | RET |
| ALK | BRCA2 | CDK6 | ERBB3 | FGF10 | FGF3 | FGF8 | FGFR4 | MDM2 | MYCN | PIK3CA | RICTOR |
| AR | CCND1 | CHEK1 | ERCC1 | FGF14 | FGF4 | FGF9 | JAK2 | MDM4 | NRAS | PIK3CB | RPS6KB1 |
| ATM | CCND3 | CHEK2 | ERCC2 | FGF19 | FGF5 | FGFR1 | KIT | MET | NRG1 | PTEN | TFRC |
| BRAF | CCNE1 | EGFR | ESR1 | FGF2 | FGF6 | FGFR2 | KRAS | MYC | PDGFRA | RAF1 | |
| RNA-Sequencing of 55 genes for the detection of fusions and skipping mutations (splice variants) in MET and EGFR | | | | | | | | | | | |
| ABL1 | BCL2 | CSF1R | ESR1 | EWSR1 | FLI1 | KIF5B | MSH2 | NRG1 | PAX7 | RAF1 | |
| AKT3 | BRAF | EGFR | ETS1 | FGFR1 | FLT1 | KIT | MYC | NTRK1 | PDGFRA | RET | |
| ALK | BRCA1 | EML4 | ETV1 | FGFR2 | FLT3 | KMT2A | NOTCH1 | NTRK2 | PDGFRB | ROS1 | |
| AR | BRCA2 | ERBB2 | ETV4 | FGFR3 | JAK2 | MET | NOTCH2 | NTRK3 | PIK3CA | RPS6KB1 | |
| AXL | CDK4 | ERG | ETV5 | FGFR4 | KDR | MLL2 | NOTCH3 | PAX3 | PPARG | TMPRSS2 | |
| RNA-sequencing of 64 immune genes | | | | | | | | | | | |
| ADORA2A | CD2 | CD39 | CD80 | CXCR6 | ICOS | KLRD1 | MX1 | PD-L1 | TBX21 | TLR9 | |
| BTLA | CD20 | CD4 | CD86 | DDX58 | ICOSLG | LAG3 | NECTIN2 | PD-L2 | TGFB1 | TNF | |
| CCL2 | CD27 | CD40 | CSF1R | FOXP3 | IDO1 | LAGE1A | NY-ESO-1 | PVR | TIGIT | TNFRSF14 | |
| CCR2 | CD28 | CD40LG | CTLA4 | GATA3 | IFNG | MAGEA1 | OX40 | SLAMF4 | TIM3 | VISTA | |
| CD137 | CD3 | CD68 | CXCL10 | GITR | IL10 | MAGEA3 | OX-40L | SSX2 | TLR7 | | |
| CD163 | CD38 | CD8 | CXCR2 | GZMB | IL1B | MAGEA4 | PD-1 | STAT1 | TLR8 | | |
| Immunohistochemistry for expression of PD-L1 | | | | | | | | | | | |
| PD-L1 IHC (22C3), PD-L1 IHC (SP142) | | | | | | | | | | | |

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