This test is designed to profile the molecular abnormalities in various solid tumors including cancers of the lung, pancreas, brain, colon, breast, Ovary, endometrium, thyroid, head and neck, and soft tissue (sarcoma and GIST). The test provides physicians with clinically actionable information. This profiling covers abnormalities in single nucleotide and indels in 434 genes. All exons of the of the 434 genes are covered and evaluated for abnormalities. In addition, the test is designed to detect microsatellite instability (MSI) and tumor mutational burden (TMB). Significant amplification in various genes can also be detected and reported. The provided information helps in determining prognosis, design therapeutic approach and predict response to therapy.

GTC-Solid Tumor Profile

Specimen Requirements:

-FFPE: 1 H&E slide and 6-8 unstained slides, 5-7 microns of tissue fixed with 10% NBF fixative. Please circle tumor for microdissection. Alternatively, the FFPE block can be sent for tumor circling and cutting at our laboratory.

Shipping:

Ship using cold pack. The cold pack should not directly contact specimen. Ship As soon as sample collected with overnight delivery.

Turn Around Time:

5-7 days

Tested Genes

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| **Genes Tested for Abnormalities in coding sequence** |
| ABCB7 | AURKB | C15ORF41 | CEBPA | DICER1 | FANCC | FLT3 | GRIN2A | IRF2 | LMO1 | MSH2 | NTRK1 | POLE | RANBP2 | SETD2 | STAT4 | TSC2 |
| ABL1 | AURKC | CALR | CHD2 | DOT1L | FANCD2 | FLT4 | GRM3 | IRF4 | LPIN2 | MSH6 | NTRK2 | POT1 | RARA | SF3B1 | STAT6 | TSHR |
| ABL2 | AXIN1 | CARD11 | CHD4 | EED | FANCE | FOXL2 | GSK3B | IRS2 | LRP1B | MTOR | NTRK3 | PPM1D | RB1 | SLIT2 | STK11 | U2AF1 |
| ACD | AXIN2 | CBFB | CHEK1 | EGFR | FANCF | FOXP1 | GSKIP | JAGN1 | LYN | MUTYH | NUP93 | PPP2R1A | RBBP6 | SLX4 | SUFU | U2AF2 |
| ACVR1B | AXL | CBL | CHEK2 | EGLN1 | FANCG | FRS2 | H3F3A | JAK1 | LYST | MVK | PAK3 | PRDM1 | RBM10 | SMAD2 | SUZ12 | VEGFA |
| ADA | B2M | CBLB | CIC | ELANE | FANCI | FUBP1 | HAX1 | JAK2 | LZTR1 | MYC | PALB2 | PREX2 | RBM8A | SMAD3 | SYK | VHL |
| AK2 | BAP1 | CBLC | CREBBP | EP300 | FANCL | G6PC3 | HGF | JAK3 | MAGI2 | MYCL | PARK2 | PRKAR1A | RET | SMAD4 | TAF1 | WAS |
| AKT1 | BARD1 | CCND1 | CRKL | EPAS1 | FANCM | GABRA6 | HIST1H3B | JUN | MAP2K1 | MYCN | PAX5 | PRKCI | RHEB | SMAD9 | TAL1 | WHSC1 |
| AKT2 | BCL2 | CCND2 | CRLF2 | EPCAM | FAS | GALNT12 | HNF1A | KAT6A | MAP2K2 | MYD88 | PBRM1 | PRKDC | RHOA | SMAD9L | TBX3 | WISP3 |
| AKT3 | BCL2L1 | CCND3 | CSF1R | EPHA3 | FAT1 | GATA1 | HOXA11 | KDM5A | MAP2K4 | NBN | PDCD1LG2 | PRSS1 | RICTOR | SMARCA4 | TCF3 | WT1 |
| ALK | BCL2L2 | CCNE1 | CSF3R | EPHA5 | FBXW7 | GATA2 | HOXB13 | KDM5C | MAP3K1 | NF1 | PDGFRA | PRSS8 | RIT1 | SMARCB1 | TCIRG1 | XPO1 |
| AMER1 | BCL6 | CD274 | CTC1 | EPHA7 | FGF10 | GATA3 | HRAS | KDM6A | MAP3K14 | NF2 | PDGFRB | PSTPIP1 | RNF168 | SMC1A | TERC | XRCC2 |
| ANKRD26 | BCOR | CD79A | CTCF | EPHB1 | FGF14 | GATA4 | HSD3B1 | KDR | MAPK1 | NFE2L2 | PDK1 | PTCH1 | RNF43 | SMC3 | TERF1 | XRCC3 |
| APC | BCORL1 | CD79B | CTNNA1 | ERBB2 | FGF19 | GATA6 | HSP90AA1 | KEAP1 | MCL1 | NFKBIA | PHF6 | PTEN | ROS1 | SMO | TERF2 | ZBTB2 |
| AR | BCR | CDAN1 | CTNNB1 | ERBB3 | FGF23 | GEN1 | ID3 | KEL | MDM2 | NHP2 | PIK3C2B | PTPN11 | RPTOR | SNCAIP | TERF2IP | ZNF217 |
| ARAF | BIRC3 | CDC73 | CUL3 | ERBB4 | FGF3 | GFI1 | IDH1 | KIF23 | MDM4 | NKX2-1 | PIK3CA | QKI | RTEL1 | SOCS1 | TERT | ZNF703 |
| ARFRP1 | BLM | CDH1 | CUX1 | ERCC4 | FGF4 | GFI1B | IDH2 | KIT | MED12 | NLRP3 | PIK3CB | RAB27A | RUNX1 | SOX10 | TET2 | ZRSR2 |
| ARID1A | BMPR1A | CDK12 | CXCR4 | ERG | FGF6 | GID4 | IGF1R | KLF1 | MEF2B | NME1 | PIK3CG | RAC1 | RUNX1T1 | SOX2 | TGFBR2 |   |
| ARID1B | BRAF | CDK4 | CYLD | ERRFI1 | FGFR1 | GLI1 | IGF2 | KLHL6 | MEFV | NOP10 | PIK3R1 | RAD21 | SBDS | SOX9 | TNFAIP3 |   |
| ARID2 | BRCA1 | CDK6 | DAXX | ESR1 | FGFR2 | GLI2 | IKBKE | KLLN | MEN1 | NOTCH1 | PIK3R2 | RAD50 | SBF2 | SPEN | TNFRSF14 |   |
| ASXL1 | BRCA2 | CDK8 | DDR2 | ETV6 | FGFR3 | GNA11 | IKZF1  | KMT2A | Merged | NOTCH2 | PIM1 | RAD51 | SDHA | SPOP | TNFRSF1A |   |
| ATG2B | BRD4 | CDKN1A | DDX11 | EXO1 | FGFR4 | GNA13 | IKZF3 | KMT2B | MET | NOTCH3 | PLCG1 | RAD51B | SDHB | SPTA1 | TOP1 |   |
| ATM | BRIP1 | CDKN1B | DDX41 | EZH2 | FH | GNAQ | IL2RG | KMT2C | MITF | NPM1 | PLCG2 | RAD51C | SDHC | SRC | TOP2A |   |
| ATR | BTG1 | CDKN2A | DKC1 | FAM175A | FLCN | GNAS | IL7R | KMT2D | MLH1 | NRAS | PMS1 | RAD51D | SDHD | SRSF2 | TP53 |   |
| ATRX | BTK | CDKN2B | DNM2 | FAM46C | FLI1 | GPR124 | INHBA | KRAS | MPL | NROB1 | PMS2 | RAD54L | SEC23B | STAG2 | TRAF3 |   |