

## HEREDITARY CANCER PANEL (526 GENES)

ABL1, ABL2, ACD, ACVR1, ACVR1B, AFDN, AIP, AKT1, AKT2, AKT3, ALK, AMER1, ANKRD26, ANKS1A, AP2S1, APC, APEX1, APEX2, AR, ARAF, ARFRP1, ARHGEF12, ARID1A, ARI1B, ARID2, ASXL1, ATM, ATR, ATRX, AURKA, AURKB, AXIN1, AXIN2, AXL, BAP1, BARD1, BCAR1, BCL2, BCL2L1, BCL6, BCORL1, BCR, BLM, BMPR1A, BRAF, BRCA1, BRCA2, BRD4, BRI1, BTK, BUB1, BUB1B, BUB3, CAPN9, CARD11, CASP10, CASP8, CASR, CBFEB, CBL, CBLB, CCND1, CCND2, CCND3, CD14, CD274, CD70, CD79A, CDC42, CDC73, CDH1, CDK12, CDK4, CDK6, CDK8, CDKN1A, CDKN1B, CDKN1C, CDKN2A, CDKN2B, CDKN2C, CEBPA, CEP57, CFTR, CHD2, CHD4, CHEK1, CHEK2, CLEC12B, CREBBP, CRLF2, CSF1R, CTCF, CTNNA1, CTNNA2, CTNNB1, CTSC, CUL3, CYLD, DAXX, DCLRE1C, DDB1, DDB2, DDR2, DDX10, DDX41, DICER1, DIS3L2, DKC1, DLST, DMC1, DNAH7, DNAJC21, DNMT3A, DOT1L, DROSHA, DSC2, DSG2, EDNRB, EFL1, EGFR, EGLN1, EIF3A, ELAC2, ELANE, ELP1, EME1, EME2, EMSY, ENG, EP300, EPCAM, EPHA3, EPHB1, ERBB2, ERBB3, ERBB4, ERCC1, ERCC2, ERCC3, ERCC4, ERCC5, ERCC6, ERCC6L2, ERCC8, ERG, ERFF1, ESR1, ESR2, ETV1, ETV4, ETV6, EXO1, EXT1, EXT2, EZH2, FAAP24, FABP2, FAM111B, FAN1, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, FAS, FAT1, FBN1, FBXO24, FBXW7, FGF10, FGF14, FGF23, FGF3, FGF4, FGFR1, FGFR2, FGFR3, FGFR4, FH, FLCN, FLT1, FLT3, FLT4, G6PC3, GABRG1, GALNT14, GATA1, GATA2, GATA3, GATA4, GATA6, GFI1, GLI1, GLI2, GLI3, GNA11, GNA13, GNAQ, GNAS, GPC3, GPR161, GPRIN1, GREM1, GRIN2A, GRM3, GSK3B, GTF2H1, GTF2H2, GTF2H3, GTF2H4, GTF2H5, HAVCR2, HAX1, HERPUD1, HGF, HMMR, HNF1A, HOXB13, HRAS, HSP90AA1, IDH1, IDH2, IGF1R, IGF2, IKBKE, IKZF1, IL1RN, IL7R, INHBA, INSR, IRF1, IRF2, IRF4, IRS2, JAK1, JAK2, JAK3, JUN, KAT6B, KDM6A, KDR, KEAP1, KEL, KIF1B, KIT, KITLG, KLF6, KLHL6, KLLN, KMT2A, KMT2C, KMT2D, KRAS, KRAS2, KRT76, LAMB4, LCP1, LIG4, LMO1, LRP5, LYN, LZTR1, MAGI2, MAP2K1, MAP2K2, MAP2K4, MAP3K1, MAP3K6, MAP3K9, MAX, MBD4, MC1R, MCL1, MCPH1, MDH2, MDM2, MDM4, MECOM, MED12, MEN1, MET, MGMT, MIR125A, MIR191, MITF, MLH1, MLH3, MLLT6, MMS19, MNAT1, MPG, MRE11, MSH2, MSH3, MSH4, MSH5, MSH6, MST1R, MTOR, MUS81, MUTYH, MX2, MYB, MYC, MYCL, MYCN, MYD88, NANP, NBAS, NBN, NEIL1, NEIL2, NEIL3, NEK10, NEK11, NEK2, NEK4, NF1, NF2, NFE2L2, NFKBIA, NHEJ1, NKX2-1, NLRP1, NME1, NOTCH1, NOTCH2, NOTCH3, NPM1, NQO2, NRAS, NSD1, NSUN2, NTHL1, NTRK1, NTRK2, NTRK3, NUMA1, NUP93, OCA2, OGG1, PAK3, PALB2, PALLD, PARP1, PARP2, PARP3, PAX5, PBRM1, PDE11A, PDGFRA, PDGFRB, PGR, PHB, PHOX2B, PIK3C2B, PIK3CA, PIK3CB, PIK3CG, PIK3R1, PIK3R2, PINK1, PKD1, PLA2G6, PLCE1, PLCG2, PLK2, PMS1, PMS2, PNKP, POLD1, POLE, POLH, POLK, POT1, PPM1D, PPP2R1A, PRDM1, PREX2, PRF1, PRKAR1A, PRKDC, PRKN, PROSER2, PRSS1, PRSS8, PTCH1, PTEN, PTPN11, PTPRD, PZP, RABL3, RAC1, RAD17, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RAD52, RAD54B, RAD54L, RAF1, RANBP2, RARA, RASA2, RASEF, RB1, RB1CC1, RBBP8, RECQL, RECQL4, REST, RET, RFC1, RHBDF2, RICTOR, RINT1, RIPK1, RIT1, RNASEL, RNF43, ROS1, RPA1, RPTOR, RRAS, RTEL1, RUNDC1, RUNX1, RUNX1T1, SAMD9, SAMD9L, SBDS, SDHA, SDHAF2, SDHB, SDHC, SDHD, SETD2, SF3B1, SHH, SHOC2, SLC22A18, SLC22A1L, SLC25A11, SLC34A2, SLC45A1, SLC45A2, SLIT2, SLX4, SMAD2, SMAD3, SMAD4, SMARCA4, SMARCB1, SMARCE1, SMO, SMUG1, SNCAIP, SOCS1, SON, SOS1, SOS2, SOX10, SOX2, SOX9, SPAG9, SPEN, SPINK1, SPOP, SPRED1, SPTA1, SRC, SRP72, STAG2, STAT3, STAT4, STK11, SUFU, SYK, TAF1, TBX3, TERC, TERF1, TERF2, TERF2IP, TERT, TET2, TGFB2, TGM6, TINF2, TMC6, TMEM127, Tmprss2, TNFAIP3, TNFRSF14, TOP1, TOP2A, TP53, TSC1, TSC2, TSHR, U2AF1, UNG, UPF1, VEGFA, VHL, WRN, WRNIP1, WT1, XAB2, XPA, XPC, XPO1, XRCC1, XRCC2, XRCC3, XRCC4, XRCC5, XRCC6.