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|---------|---------|---------|-----------|--------------|----------|---------|---------|----------|
| ABL1 | CCND1 | EGFL7 | FUBP1 | INPP4B | MSH2 | PIK3C3 | RECQL4 | SRSF2 |
| ACVR1 | CCND2 | EGFR | FYN | INPL1 | MSH3 | PIK3CA | REL | STAG2 |
| AGO2 | CCND3 | EIF1AX | GATA1 | INSR | MSH6 | PIK3CB | RET | STAT3 |
| AKT1 | CCNE1 | EIF4A2 | GATA2 | IRF4 | MSI1 | PIK3CD | RFWD2 | STAT5A |
| AKT2 | CD274 | EIF4E | GATA3 | IRS1 | MSI2 | PIK3CG | RHEB | STAT5B |
| AKT3 | CD276 | ELF3 | GLI1 | IRS2 | MST1 | PIK3R1 | RHOA | STK11 |
| ALK | CD79A | EP300 | GNA11 | JAK1 | MST1R | PIK3R2 | RICTOR | STK19 |
| ALOX12B | CD79B | EPAS1 | GNAQ | JAK2 | MTOR | PIK3R3 | RIT1 | STK40 |
| ANKRD11 | CDC42 | EPCAM | GNAS | JAK3 | MUTYH | PIM1 | RNF43 | SUFU |
| APC | CDC73 | EPHA3 | GPS2 | JUN | MYC | PLCG2 | ROS1 | SUZ12 |
| AR | CDH1 | EPHA5 | GREM1 | KDM5A | MYCL1 | PLK2 | RPS6KA4 | SYK |
| ARAF | CDK12 | EPHA7 | GRIN2A | KDM5C | MYCN | PMAIP1 | RPS6KB2 | TAP1 |
| ARID1A | CDK4 | EPHB1 | GSK3B | KDM6A | MYD88 | PMS1 | RPTOR | TAP2 |
| ARID1B | CDK6 | ERBB2 | H3F3A | KDR | MYOD1 | PMS2 | RRAGC | TBK3 |
| ARID2 | CDK8 | ERBB3 | H3F3B | KEAP1 | NBN | PNRC1 | RRAS | TCEB1 |
| ARID5B | CDKN1A | ERBB4 | H3F3C | KIT | NCOA3 | POLD1 | RRAS2 | TCF3 |
| ASXL1 | CDKN1B | ERCC2 | HGF | KLF4 | NCOR1 | POLE | RTEL1 | TCF7L2 |
| ASXL2 | CDKN2A | ERCC3 | HIST1H1C | KMT2A (MLL) | NEGR1 | PPARG | RUNX1 | TEK |
| ATM | CDKN2B | ERCC4 | HIST1H2BD | KMT2B (MLL4) | NF1 | PPM1D | RXRA | TERT |
| ATR | CDKN2C | ERCC5 | HIST1H3A | KMT2C (MLL3) | NF2 | PPP2R1A | RYBP | TET1 |
| ATRX | CEBPA | ERF | HIST1H3B | KMT2D (MLL2) | NFE2L2 | PPP4R2 | SDHA | TET2 |
| AURKA | CENPA | ERG | HIST1H3C | KMT5A | NFKBIA | PPP6C | SDHAF2 | TGFBR1 |
| AURKB | CHEK1 | ERRF1 | HIST1H3D | KNSTRN | NKX2-1 | PRDM1 | SDHB | TGFBR2 |
| AXIN1 | CHEK2 | ESR1 | HIST1H3E | KRAS | NKX3-1 | PRDM14 | SDHC | TMEM127 |
| AXIN2 | CIC | ETV1 | HIST1H3F | LATS1 | NOTCH1 | PREX2 | SDHD | TMPRSS2 |
| AXL | CREBBP | ETV6 | HIST1H3G | LATS2 | NOTCH2 | PRKAR1A | SESN1 | TNFAIP3 |
| B2M | CRKL | EZH1 | HIST1H3H | LMO1 | NOTCH3 | PRKCI | SESN2 | TNFRSF14 |
| BABAM1 | CRLF2 | EZH2 | HIST1H3I | LYN | NOTCH4 | PRKD1 | SESN3 | TOP1 |
| BAP1 | CSDE1 | FAM123B | HIST1H3J | MALT1 | NPM1 | PTCH1 | SETD2 | TP53 |
| BARD1 | CSF1R | FAM175A | HIST2H3C | MAP2K1 | NRAS | PTEN | SF3B1 | TP53BP1 |
| BBC3 | CSF3R | FAM46C | HIST2H3D | MAP2K2 | NSD1 | PTP4A1 | SH2B3 | TP63 |
| BCL10 | CTCF | FAM58A | HIST3H3 | MAP2K4 | NTHL1 | PTPN11 | SH2D1A | TRAF2 |
| BCL2 | CTLA4 | FANCA | HLA-A | MAP3K1 | NTRK1 | PTPRD | SHOC2 | TRAF7 |
| BCL2L1 | CTNNB1 | FANCC | HLA-B | MAP3K13 | NTRK2 | PTPRS | SHQ1 | TSC1 |
| BCL2L11 | CUL3 | FAT1 | HNF1A | MAP3K14 | NTRK3 | PTPRT | SLX4 | TSC2 |
| BCL6 | CXCR4 | FBXW7 | HOXB13 | MAPK1 | NUF2 | RAB35 | SMAD2 | TSHR |
| BCOR | CYLD | FGF19 | HRAS | MAPK3 | NUP93 | RAC1 | SMAD3 | U2AF1 |
| BIRC3 | CYSLTR2 | FGF3 | ICOSLG | MAPKAP1 | PAK1 | RAC2 | SMAD4 | UPF1 |
| BLM | DAXX | FGF4 | ID3 | MAX | PAK7 | RAD21 | SMARCA4 | VEGFA |
| BMPR1A | DCUN1D1 | FGFR1 | IDH1 | MCL1 | PALB2 | RAD50 | SMARCB1 | VHL |
| BRAF | DDR2 | FGFR2 | IDH2 | MDC1 | PARK2 | RAD51 | SMARCD1 | VTCN1 |
| BRCA1 | DICER1 | FGFR3 | IFNGR1 | MDM2 | PARP1 | RAD51C | SMO | WHSC1 |
| BRCA2 | DIS3 | FGFR4 | IGF1 | MDM4 | PAX5 | RAD51L1 | SMYD3 | WHSC1L1 |
| BRD4 | DNAJB1 | FH | IGF1R | MED12 | PBRM1 | RAD51L3 | SOC3 | WT1 |
| BRIP1 | DNMT1 | FLCN | IGF2 | MEF2B | PDCD1 | RAD52 | SOS1 | WWTR1 |
| BTK | DNMT3A | FLT1 | IKBKE | MEN1 | PDCD1LG2 | RAD54L | SOX17 | XIAP |
| CALR | DNMT3B | FLT3 | IKZF1 | MET | PDGFRA | RAF1 | SOX2 | XPO1 |
| CARD11 | DOT1L | FLT4 | IL10 | MGA | PDGFRB | RARA | SOX9 | XRCC2 |
| CARM1 | DROSHA | FOXA1 | IL7R | MITF | PDPK1 | RASA1 | SPEN | YAP1 |
| CASP8 | DUSP4 | FOXL2 | INHHA | MLH1 | PGR | RB1 | SPOP | YES1 |
| CBFB | E2F3 | FOXO1 | INHBA | MPL | PHOX2B | RBM10 | SPRED1 | ZFHX3 |
| CBL | EED | FOXP1 | INPP4A | MRE11A | PIK3C2G | RECQL | SRC | ZRSR2 |



70 Intronic Regions

| Gene ID | Target | Interval | Target ID | Length | First Design |
|---------|-------------|--------------------------|------------------|--------|--------------|
| ALK | intron_17 | chr2:29449941-29450438 | ALK_intron_17 | 498 | IMPACT-468 |
| ALK | intron_18 | chr2:29448432-29449786 | ALK_intron_18 | 1355 | IMPACT-468 |
| ALK | intron_19 | chr2:29446395-29448326 | ALK_intron_19 | 1932 | IMPACT-341 |
| BRAF | intron_10 | chr7:140481494-140482820 | BRAF_intron_10 | 1327 | IMPACT-341 |
| BRAF | intron_7 | chr7:140494268-140500161 | BRAF_intron_7 | 5894 | IMPACT-341 |
| BRAF | intron_8 | chr7:140487385-140494107 | BRAF_intron_8 | 6723 | IMPACT-341 |
| BRAF | intron_9 | chr7:140482958-140487347 | BRAF_intron_9 | 4390 | IMPACT-341 |
| CD74 | intron 4to6 | chr5:149784243-149785821 | CD74 intron 4to5 | 1579 | IMPACT-468 |

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|--------------|--------------|---------------------------|--------------------|-------|------------|
| CD74 | intron_6 | chr5:149782876-149784242 | CD74_intron_6 | 1367 | IMPACT-410 |
| DNAJB1 | intron_1 | chr19:14627859-14628950 | DNAJB1_intron_1 | 1092 | IMPACT-410 |
| DNAJB1 | intron_2 | chr19:14626983-14627277 | DNAJB1_intron_2 | 295 | IMPACT-410 |
| EGFR | intron_17 | chr7:55240818-55241613 | EGFR_intron_17 | 796 | IMPACT-468 |
| EGFR | intron_24 | chr7:55268107-55268880 | EGFR_intron_24 | 774 | IMPACT-468 |
| EGFR | intron_25 | chr7:55269049-55269427 | EGFR_intron_25 | 379 | IMPACT-468 |
| EGFR | intron_26 | chr7:55269476-55270209 | EGFR_intron_26 | 734 | IMPACT-468 |
| EGFR | intron_7 | chr7:55221846-55223521 | EGFR_intron_7 | 1676 | IMPACT-341 |
| ETV6 | intron_4 | chr12:12006496-12022357 | ETV6_intron_4 | 15862 | IMPACT-410 |
| ETV6 | intron_5 | chr12:12022904-12037378 | ETV6_intron_5 | 14475 | IMPACT-341 |
| EWSR1 | intron_7to13 | chr22:29683124-29694788 | EWSR1_intron_7to13 | 11665 | IMPACT-341 |
| FGFR2 | intron_16 | chr10:123243318-123244907 | FGFR2_intron_16 | 1590 | IMPACT-468 |
| FGFR2 | intron_17 | chr10:123239536-123243211 | FGFR2_intron_17 | 3676 | IMPACT-341 |
| FGFR3 | intron_15 | chr4:1807901-1807982 | FGFR3_intron_15 | 82 | IMPACT-468 |
| FGFR3 | intron_16 | chr4:1808055-1808271 | FGFR3_intron_16 | 217 | IMPACT-468 |
| FGFR3 | intron_17 | chr4:1808411-1808554 | FGFR3_intron_17 | 144 | IMPACT-468 |
| FGFR3 | intron_18 | chr4:1808662-1808842 | FGFR3_intron_18 | 181 | IMPACT-341 |
| MET | intron_13 | chr7:116411709-116411902 | MET_intron_13 | 194 | IMPACT-468 |
| MET | intron_14 | chr7:116412044-116414934 | MET_intron_14 | 2891 | IMPACT-468 |
| NAB2 | intron_2to6 | chr12:57485782-57489250 | NAB2_intron_2to6 | 3469 | IMPACT-410 |
| NTRK1 | intron_10 | chr1:156844419-156844697 | NTRK1_intron_10 | 279 | IMPACT-341 |
| NTRK1 | intron_11 | chr1:156844801-156845311 | NTRK1_intron_11 | 511 | IMPACT-410 |
| NTRK1 | intron_12 | chr1:156845459-156845871 | NTRK1_intron_12 | 413 | IMPACT-410 |
| NTRK1 | intron_3 | chr1:156834592-156836700 | NTRK1_intron_3 | 2109 | IMPACT-468 |
| NTRK1 | intron_7 | chr1:156841548-156843423 | NTRK1_intron_7 | 1876 | IMPACT-468 |
| NTRK1 | intron_8 | chr1:156843752-156844174 | NTRK1_intron_8 | 423 | IMPACT-341 |
| NTRK1 | intron_9 | chr1:156844193-156844362 | NTRK1_intron_9 | 170 | IMPACT-341 |
| NTRK2 | intron_15 | chr9:87476003-87482157 | NTRK2_intron_15 | 6155 | IMPACT-468 |
| NUT/C15orf55 | intron_1 | chr15:34638237-34640169 | NUT_intron_1 | 1933 | IMPACT-341 |
| PAX8 | intron_10 | chr2:113977756-113984731 | PAX8_intron_10 | 6976 | IMPACT-341 |
| PAX8 | intron_8 | chr2:113993081-113994177 | PAX8_intron_8 | 1097 | IMPACT-341 |
| PAX8 | intron_9 | chr2:113984834-113992970 | PAX8_intron_9 | 8137 | IMPACT-341 |
| RELA | intron_1to2 | chr11:65429560-65430296 | RELA_intron_1to2 | 737 | IMPACT-468 |
| RET | intron_10 | chr10:43609124-43609927 | RET_intron_10 | 804 | IMPACT-341 |
| RET | intron_11 | chr10:43610185-43612031 | RET_intron_11 | 1847 | IMPACT-341 |
| RET | intron_7 | chr10:43606914-43607545 | RET_intron_7 | 632 | IMPACT-468 |
| RET | intron_8 | chr10:43607673-43608299 | RET_intron_8 | 627 | IMPACT-468 |
| RET | intron_9 | chr10:43608412-43609003 | RET_intron_9 | 592 | IMPACT-341 |
| ROS1 | intron_31 | chr6:117650610-117658333 | ROS_intron_31 | 7724 | IMPACT-341 |
| ROS1 | intron_32 | chr6:117647578-117650491 | ROS_intron_32 | 2914 | IMPACT-341 |
| ROS1 | intron_33 | chr6:117645579-117647385 | ROS_intron_33 | 1807 | IMPACT-341 |
| ROS1 | intron_34 | chr6:117642558-117645494 | ROS_intron_34 | 2937 | IMPACT-341 |
| ROS1 | intron_35 | chr6:117641194-117642421 | ROS_intron_35 | 1228 | IMPACT-341 |
| ROS1 | intron_30 | chr6:117658504-117662297 | ROS1_intron_30 | 3794 | IMPACT-468 |
| TFE3 | intron_3 | chrX:48895968-48896630 | TFE3_intron_3 | 663 | IMPACT-468 |
| TFE3 | intron_4to5 | chrX:48891767-48895966 | TFE3_intron_4to5 | 4200 | IMPACT-410 |
| TMPRSS2 | intron_1 | chr21:42870117-42879876 | TMPRSS2_intron_1 | 9760 | IMPACT-341 |
| TMPRSS2 | intron_2 | chr21:42866506-42870045 | TMPRSS2_intron_2 | 3540 | IMPACT-341 |

