

List of gene targets in Oncomine Comprehensive Assay v3 (Thermo Fisher Scientific,
Waltham, MA, USA) – 161 gene panel

Hotspot genes	Full-length genes	Copy number genes	Gene fusions (inter- and intragenic)
AKT1 ALK AR ARAF BRAF BTK CBL CDK4 CHEK2 CSF1R CTNNB1 DDR2 EGFR ERBB2 ERBB3 ERBB4 ESR1 EZH2 FGFR1 FGFR2 FGFR3 FLT3 FOXL2 GATA2 GNAI1 GNAQ GNAS HNF1A HRAS IDH1 IDH2 JAK1 JAK2 JAK3 KDR KIT KNSTRN KRAS MAGOH MAP2K1 MAP2K2 MAPK1 MAX MED12 MET MTOR MYD88 NFE2L2 NRAS PDGFRA PIK3CA PPP2R1A PTPN11 RAC1 RAF1 RET RHEB RHOA SF3B1 SMO SPOP SRC STAT3 U2AF1 XPO1 AKT2 AKT3 AXL CCND1 CDK6 ERCC2 FGFR4 H3F3A HIST1H3B MAP2K4 MDM4 MYC MYCN NTRK1 NTRK2 PDGFRB PIK3CB ROS1 SMAD4 TERT TOP1	ATM BAP1 BRCA1 BRCA2 CDKN2A FBXW7 MSH2 NF1 NF2 NOTCH1 PIK3R1 PTCH1 PTEN RB1 SMARCB1 STK11 TP53 TSC1 TSC2 ARID1A ATR ATRX CDK12 CDKN1B CDKN2B CHEK1 CREBBP FANCA FANCD2 FANCI MLH1 MRE11A MSH6 NBN NOTCH2 NOTCH3 PALB2 PMS2 POLE RAD50 RAD51 RAD51B RAD51C RAD51D RNF43 SETD2 SLX4 SMARCA4	AKT1 AR CCND1 CCNE1 CDK4 CDK6 EGFR ERBB2 FGFR1 FGFR2 FGFR3 FGFR4 FLT3 IGF1R KIT KRAS MDM2 MDM4 MET MYC MYCL MYCN PDGFRA PIK3CA PPARG TERT AKT2 AKT3 ALK AXL BRAF CCND2 CCND3 CDK2 CDKN2A CDKN2B ESR1 FGF19 FGF3 NTRK1 NTRK2 NTRK3 PDGFRB PIK3CB RICTOR TSC1 TSC2	ALK AXL BRAF EGFR ERBB2 ERG ETV1 ETV4 ETV5 FGFR1 FGFR2 FGFR3 NTRK1 NTRK3 PDGFRA PPARG RAF1 RET ROS1 AKT2 AR BRCA1 BRCA2 CDKN2A ERBB4 ESR1 FGR FLT3 JAK2 KRAS MDM4 MET MYB MYBL1 NF1 NOTCH1 NOTCH4 NRG1 NTRK2 NUTM1 PDGFRB PIK3CA PRKACA PRKACB PTEN RAD51B RB1 RELA RSP02 RSP03 TERT

List of gene targets in the Ion AmpliSeq Cancer Hotspot Panel v2 (Thermo Fisher Scientific,
Waltham, MA, USA) – 50 gene panel

Hotspot genes
ABL1
AKT1
ALK
APC
ATM
BRAF
CDH1
CDKN2A
CSF1R
CTNNB1
EGFR
ERBB2
ERBB4
EZH2
FBXW7
FGFR1
FGFR2
FGFR3
FLT3
GNA11
GNAS
GNAQ
HNF1A
HRAS
IDH1
JAK2
JAK3
IDH2
KDR
KIT
KRAS
MET
MLH1
MPL
NOTCH1
NPM1
NRAS
PDGFRA
PIK3CA
PTEN
PTPN11
RB1
RET
SMAD4
SMARCB1
SMO
SRC
STK11
TP53
VHL