

**Supplementary Table 1.** Mutation screening/validation results for A375 and three BRAF inhibitor resistant sub-lines, consensus denotes according to database sequence

Genes	A375parental	A375PR1	A375VR3	A375VR4
<b>NRAS</b>	consensus	consensus	consensus	consensus
<b>KRAS</b>	consensus	consensus	consensus	consensus
<b>RRAS</b>				
g.49635672G>A; g. 49636788G>A; g.49636811G>A;				
NM_006270:c.C333T: p.111N>N g.49636835C>T	all four variants (heterozygous)	all four variants (heterozygous)	all four variants (heterozygous)	all four variants (heterozygous)
<b>BRAF</b> g.171429T>A:p.V600E	p.V600E	p.V600E	p.V600E	p.V600E
<b>RAC1</b> g.6387309C>T, g.6392059C>T	g.6387309CC>TT g.6392059CC>TT	g.6387309CC>TT g.6392059CC>TT	g.6387309CC>TT g.6392059CC>TT	g.6387309CC>TT g.6392059CC>TT
<b>MET</b> (exons 1-3, 16-20)	consensus	consensus	consensus	consensus
<b>PTEN</b> (exon 1, exons 3-6, exons 10-13)	consensus	consensus	consensus	Consensus