



Figure S1. Detection of HA-tagged ARF6^{Q67L} in *Braf*^{CA};*Cdkn2a*^{ff} melanoma. a) Anti-HA immunostain of FFPE sections of primary tumors with variable levels of detection of ARF6^{Q67L}-HA. The strongest staining was observed in tumors with the highest level of mRNA detected by qRT-PCR (b). Absent staining of FFPE tumors was observed in tumors with low (6456) and undetectable (6457) levels of mRNA by qRT-PCR of frozen tumors. Scale bars = 20 μ m, 400x magnification. Control = *Braf*^{CA};*Cdkn2a*^{ff} (Cre-only injection). b) qRT-PCR of *Arf6*^{Q67L}-HA from fresh, frozen primary tumor fragments. Bars represent the absolute difference in crossing threshold (Ct) between *Arf6*^{Q67L}-HA and *Gapdh*. The Ct threshold that defines detection was established above the background signal for controls in both the *Braf*^{CA};*Cdkn2a*^{ff} and the *Braf*^{CA};*Cdkn2a*^{ff};*Pten*^{ff} cohorts (see Figures 1g and S3). With rare exception, positive tumors demonstrated *Arf6*^{Q67L}-HA expression levels lower than *Gapdh*.