Supplementary Materials and Methods

MEK1/2 inhibitor treatment of cells

For CI-1040, cells were treated with 25µM (BRAF$_{WT}$ CHL-1), 5µM (BRAF$_{WT}$ HCT116), 4µM (BRAF$^{G464V}$ MDA-MB231) or 1µM (BRAF$^{V600D}$ WM266.4 and BRAF$^{V600E}$ SKMEL-28) for 24h. These concentrations were equivalent to 10xGI$_{50}$. CHL-1 cells were further treated with 1µM for comparison. Ba/F3 cells were treated with equipotent concentrations of CI-1040 equivalent to 8, 10 and 6µM for BRAF$_{WT}$ Ba/F3, BRAF$^{V600E}$ Ba/F3+IL-3 and BRAF$^{V600E}$ Ba/F3–IL-3 for 24h. These concentrations were equivalent to 1xGI$_{50}$. For PD325901, cells were treated with 5xGI$_{50}$ i.e. 10nM for WM266.4 cells, 15nM for SKMEL-28 cells and 40nM for HCT116 cells for 24h.

Antibodies used for Western blotting

The following primary antibodies were used for overnight incubation in 5% v/w bovine serum albumin (BSA, Sigma-Aldrich): hexokinase-I, hexokinase-II, phosphorylated Akt (P-AKT) (Ser473), Akt, ERK1/2 antibody (p44/42 MAP Kinase), phosphorylated MEK1/2 (P-MEK1/2), CMYC, cleaved Poly ADP ribose polymerase (cPARP) (Asp214), phosphorylated retinoblastoma (pRB) (Ser780), and B-ACTIN (New England Biolabs Ltd), and Cyclin D1/bcl-1 Ab-1 (Clone DCS-6, Thermo Fisher Scientific Inc.). Monoclonal Anti-ERK, Activated (Diphosphorylated ERK 1,2) antibody, clone MAPK-Y, ascites fluid (P-ERK1/2, Sigma-Aldrich) and Anti-Glyceraldehyde-3-Phosphate Dehydrogenase, clone 6C5 (GAPDH, Millipore) were left overnight at 1:20,000 dilutions in non-fat milk.
ECL™ Anti-rabbit IgG/HRP (GE Healthcare) and Polyclonal Rabbit Anti-Mouse Immunoglobulins/HRP (Dako) secondary antibodies were applied for 1h at 1:2000 dilutions in BSA (except for P-ERK1/2 and GAPDH, which were diluted at 1:20,000 in non-fat milk).