

Titles and legends to supplementary figures

Supplementary figure 1: MK-2206 sensitive cells show an increase in apoptosis and a decrease in proliferation.

Respective cell lines were treated with 1000 nM MK-2206 for 24 hours and analysed for (A) viable cells, (B) caspase 3/7 activity and (C) cell cycle progression. All graphs indicate mean +/- S.E. expressed as percentage of control and represent at least two independent experiments. Statistical comparison was performed using the student t-test (* indicates $p < 0.05$).

Supplementary figure 2: Regulation of DUSP1 expression after AKT inhibition is independent of CREB.

Cells transfected with control or CREB directed siRNA oligonucleotides were treated with indicated concentrations of MK-2206 for one hour and protein expression was analysed by immunoblotting. '+' indicates present and '-' indicates absent.

Supplementary figure 3: Expression of mutant *PIK3CA* sensitizes resistant cells to MK-2206 and promotes apoptosis.

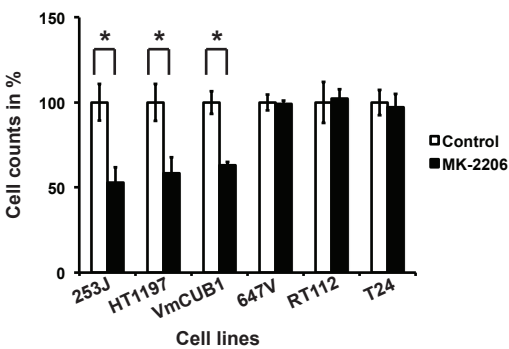
Cells transfected with either control vector (ctrl) or mutant *PIK3CA* E545K were treated for 24 hours with 1000 nM MK-2206 and analysed for (A) number of viable cells or (B) caspase 3/7 activity. All graphs indicate mean +/- S.E. expressed as percentage of control and are representative of at least two independent experiments. Statistical comparison was performed using the student t-test (* indicates $p < 0.05$).

Supplementary figure 4: *PIK3CA* mutant cells are sensitive to MK-2206 *in vivo*.

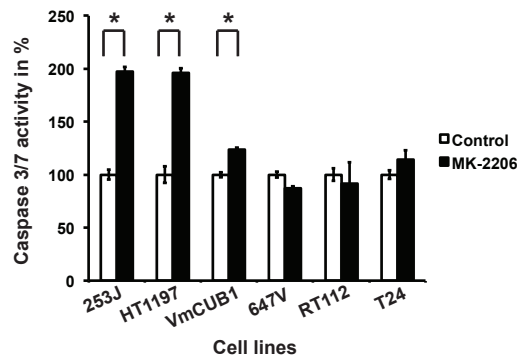
(A) Representative images of HT1197 and RT112 cells show tumour formation on the CAM inside a silicone ring, 6 days after seeding of cells. Scale bar equals 2 millimeters.

(B) and (C) IHC staining with indicated antibodies from representative sections was quantified from at least three different fields. Values represent mean \pm S.E. Statistical comparison was performed using the student t-test (* indicates $p < 0.05$). All results are representative of at least two independent experiments.

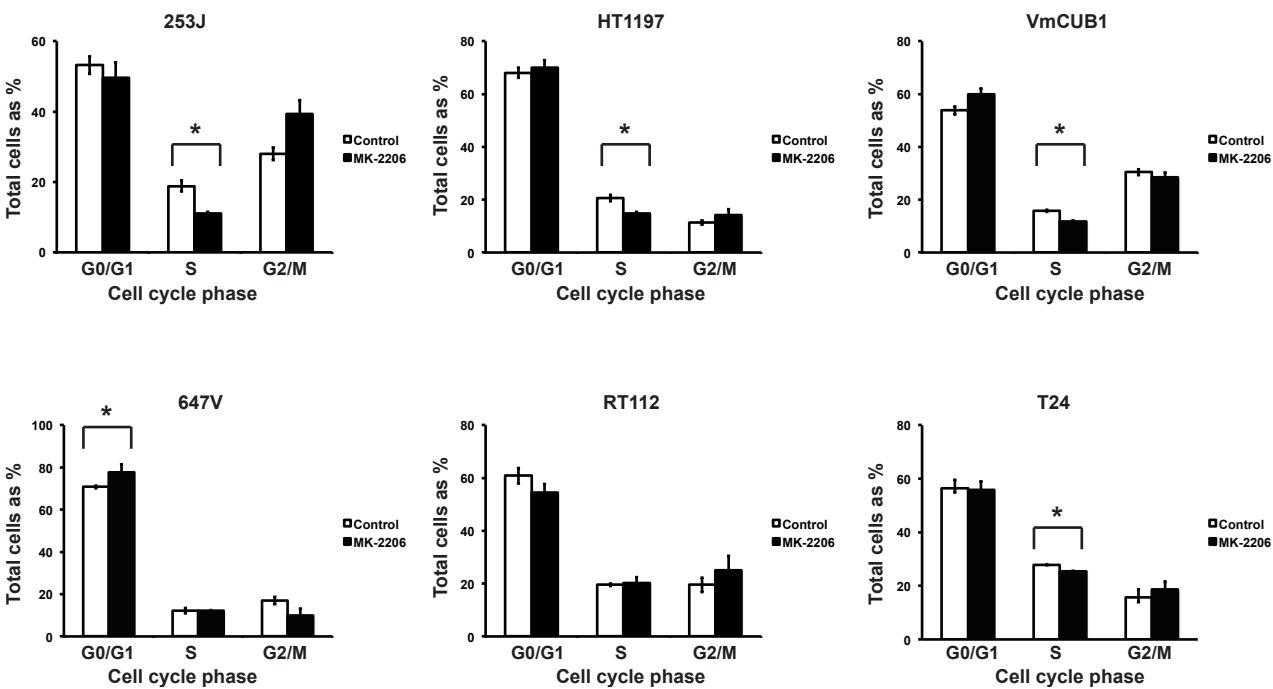
A



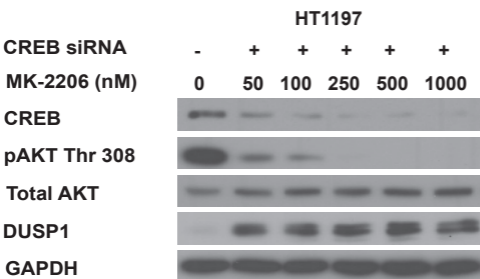
B



C

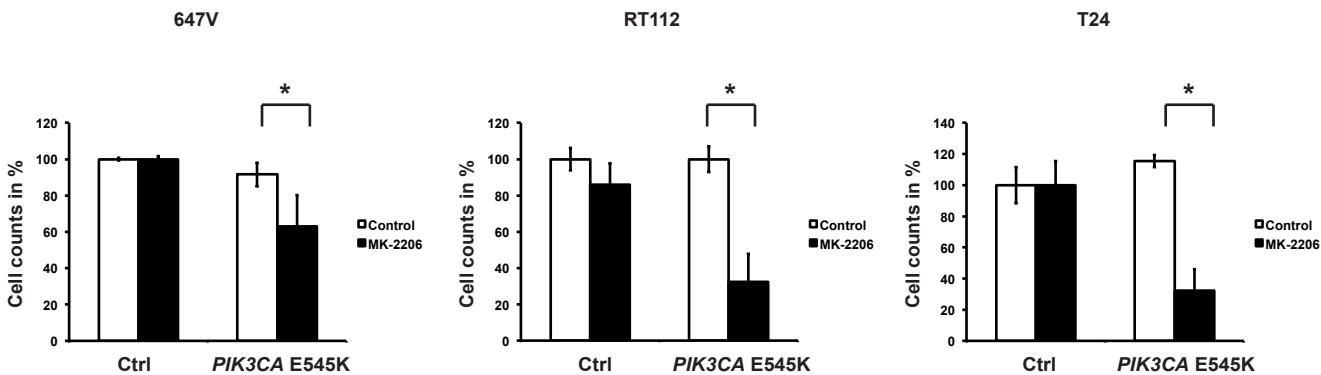


Supplementary figure 2

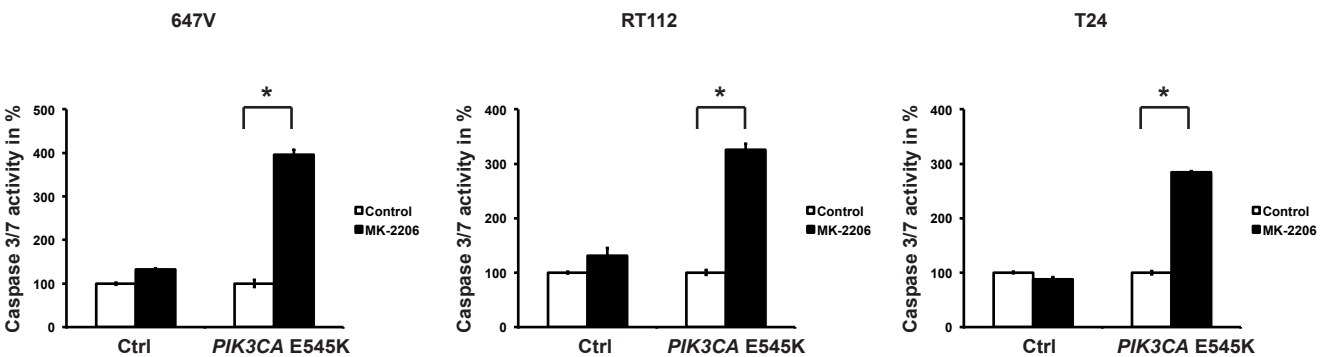


Supplementary figure 3

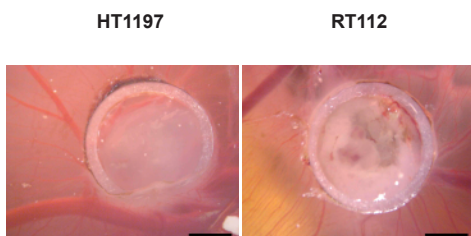
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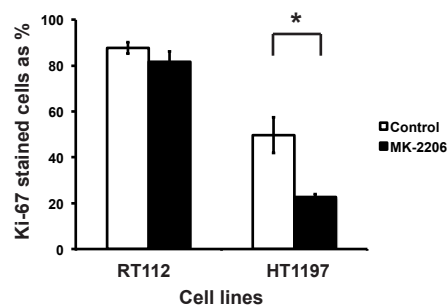
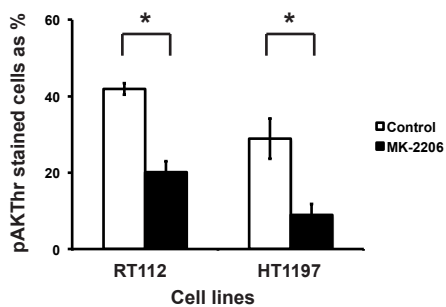
B



A



B



C

