

## **Supplementary Materials**

### **Monosomy 3 is linked to resistance to MEK inhibitors in uveal melanoma**

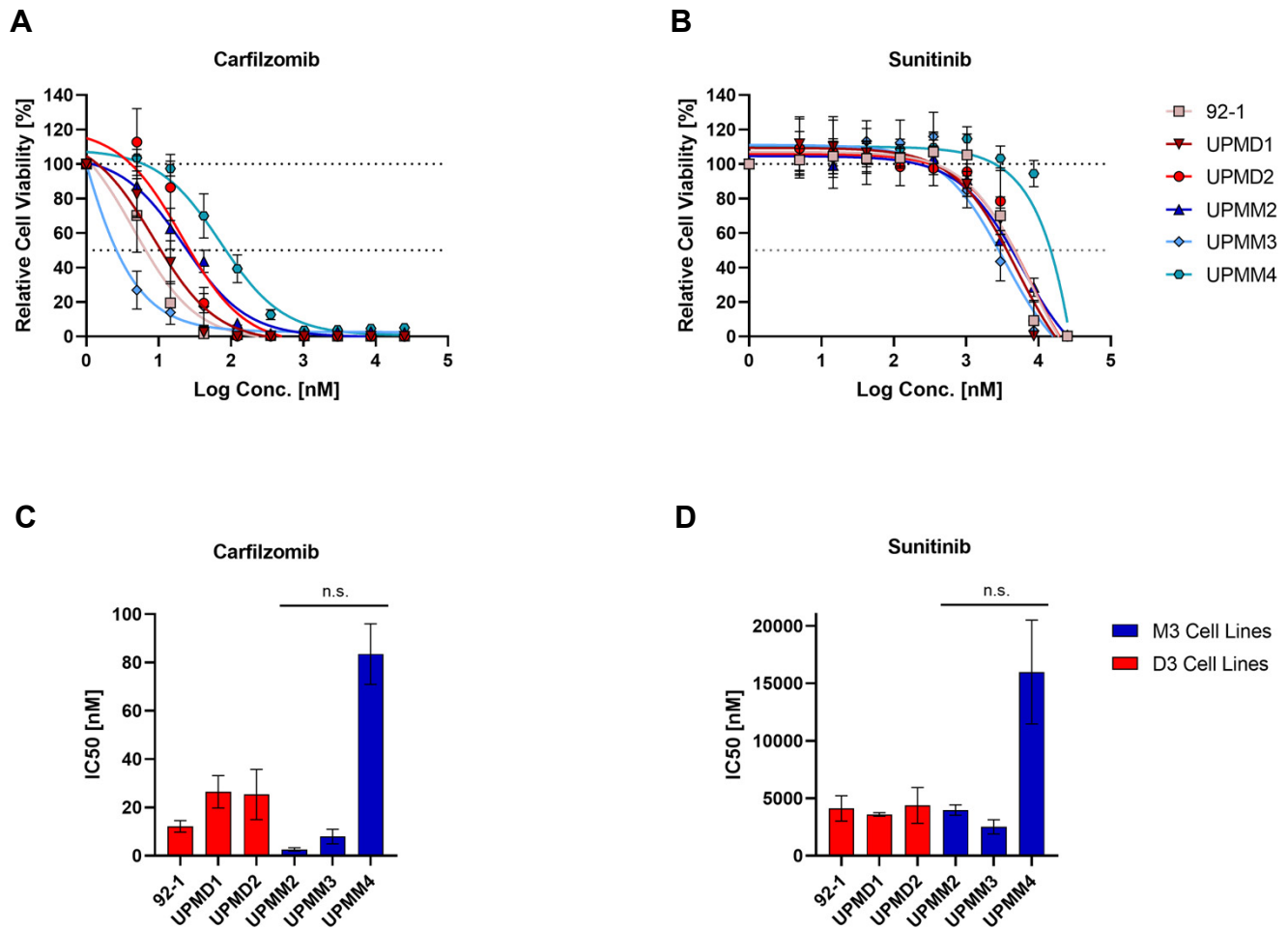
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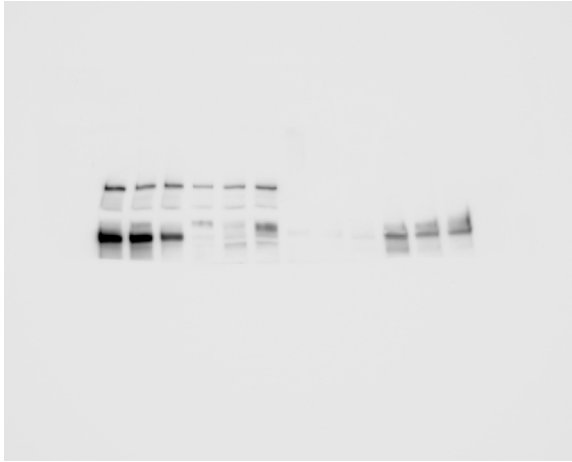
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**Figure S1. MEKi resistance pattern of M3 cell lines is not recapitulated in experiments with other compounds.** Dose-response curves of uveal melanoma cell lines with M3 (blue symbols) and D3 (red symbols) that were treated with carfilzomib (**A**) or sunitinib (**B**) at different concentrations (from 5 nM to 25  $\mu$ M) for 5 days and IC<sub>50</sub> values for each cell line (**C**, **D**). Cell viability is expressed as normalized values in percentage to DMSO controls. Summarized results of three independent experiments are shown. Data are average  $\pm$  SD.

BAP1

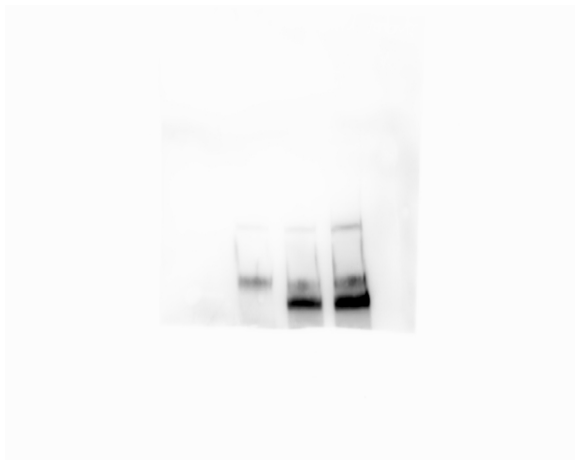


$\beta$ -Actin



**Figure S2. Uncropped western blots for Fig. 2.** Original pictures of the western blots shown in Fig. 2.

BAP1

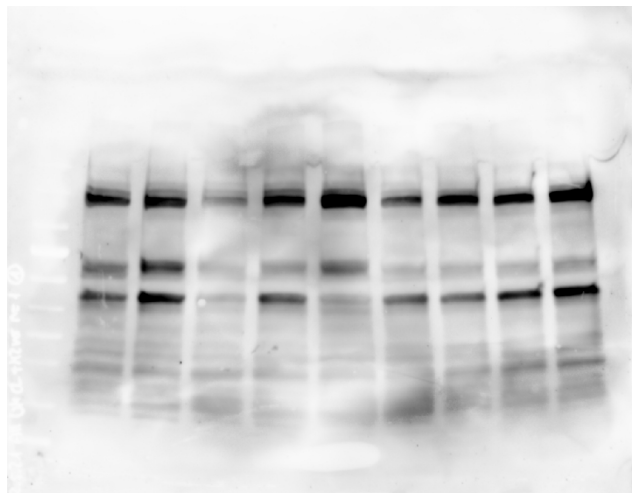


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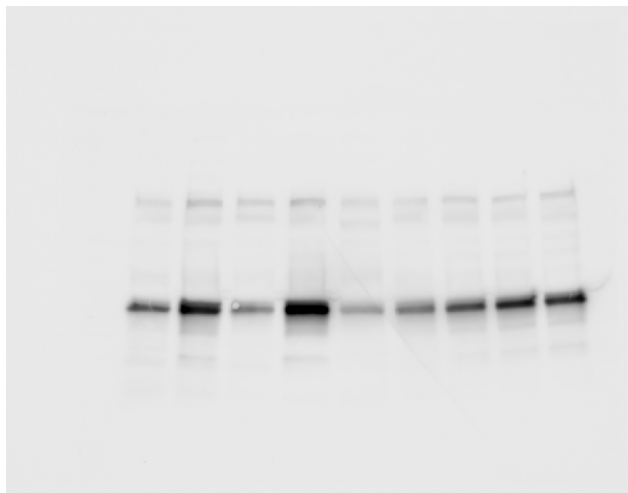


**Figure S3. Uncropped western blots for Fig. 3.** Original pictures of the western blots shown in Fig. 3.

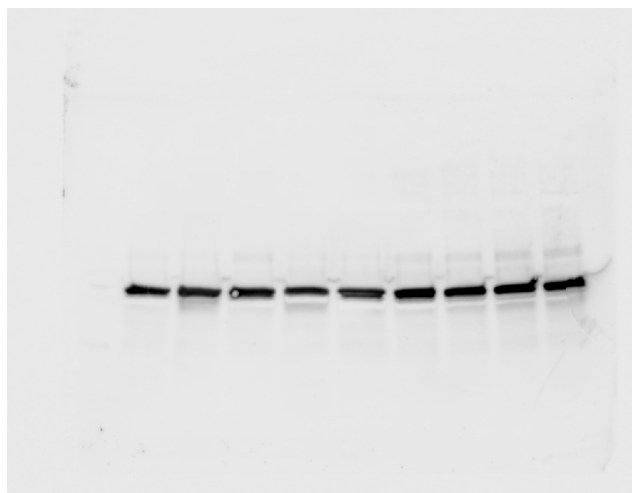
pMEK1/2



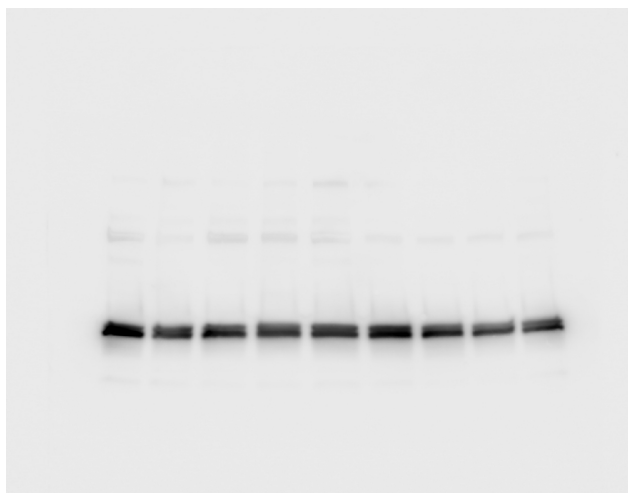
pERK1/2



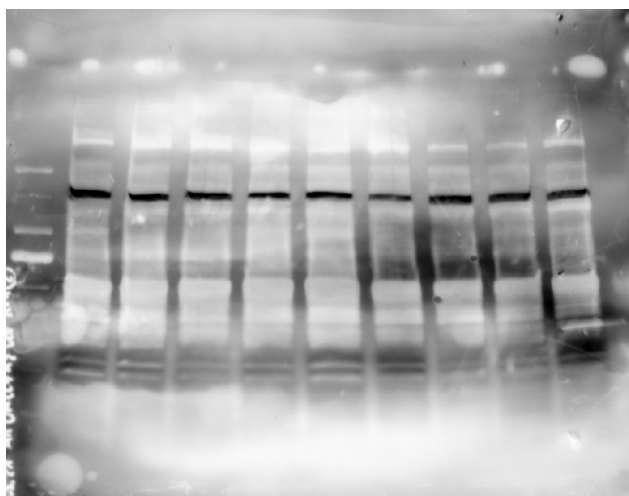
$\beta$ -Actin



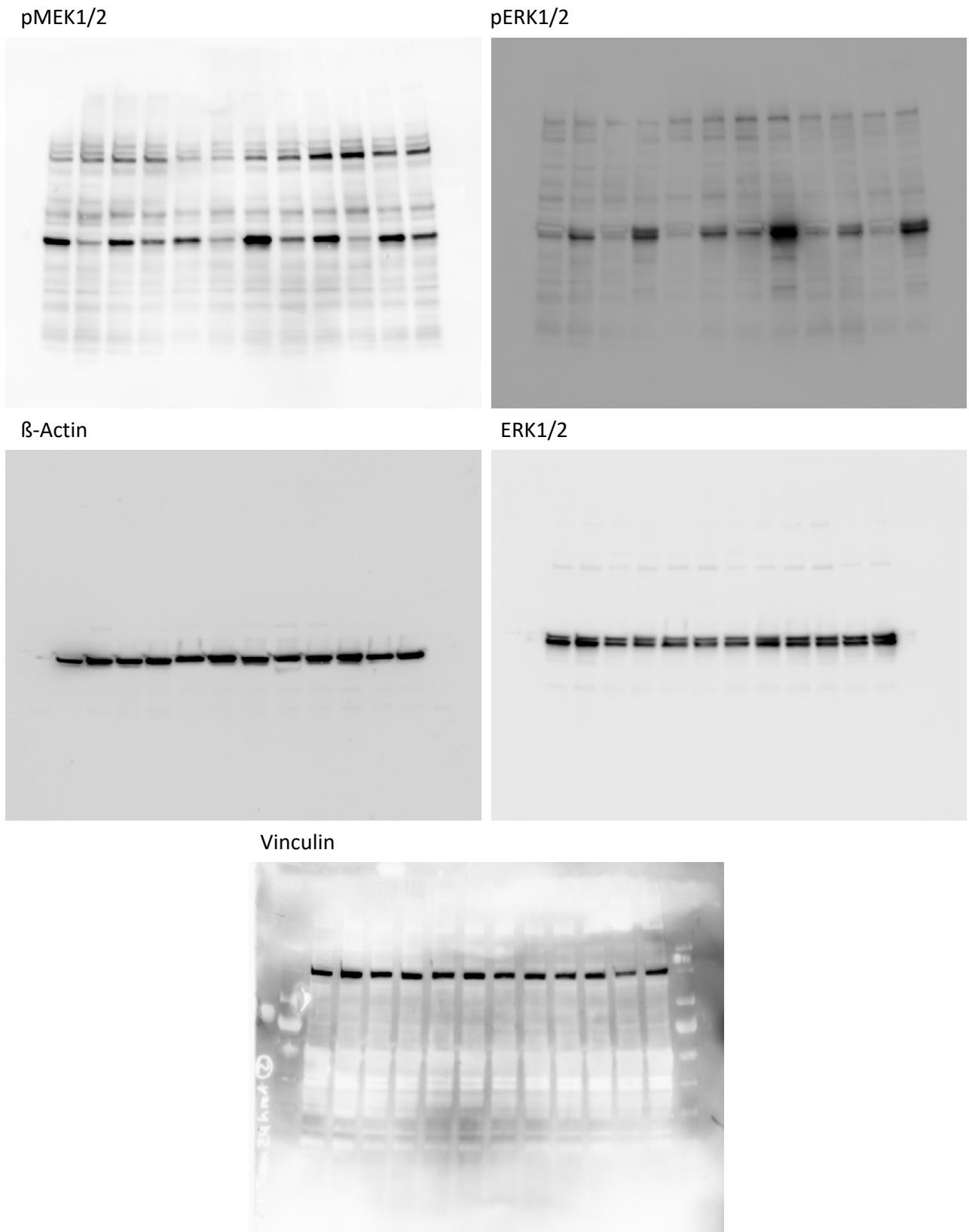
ERK1/2



Vinculin

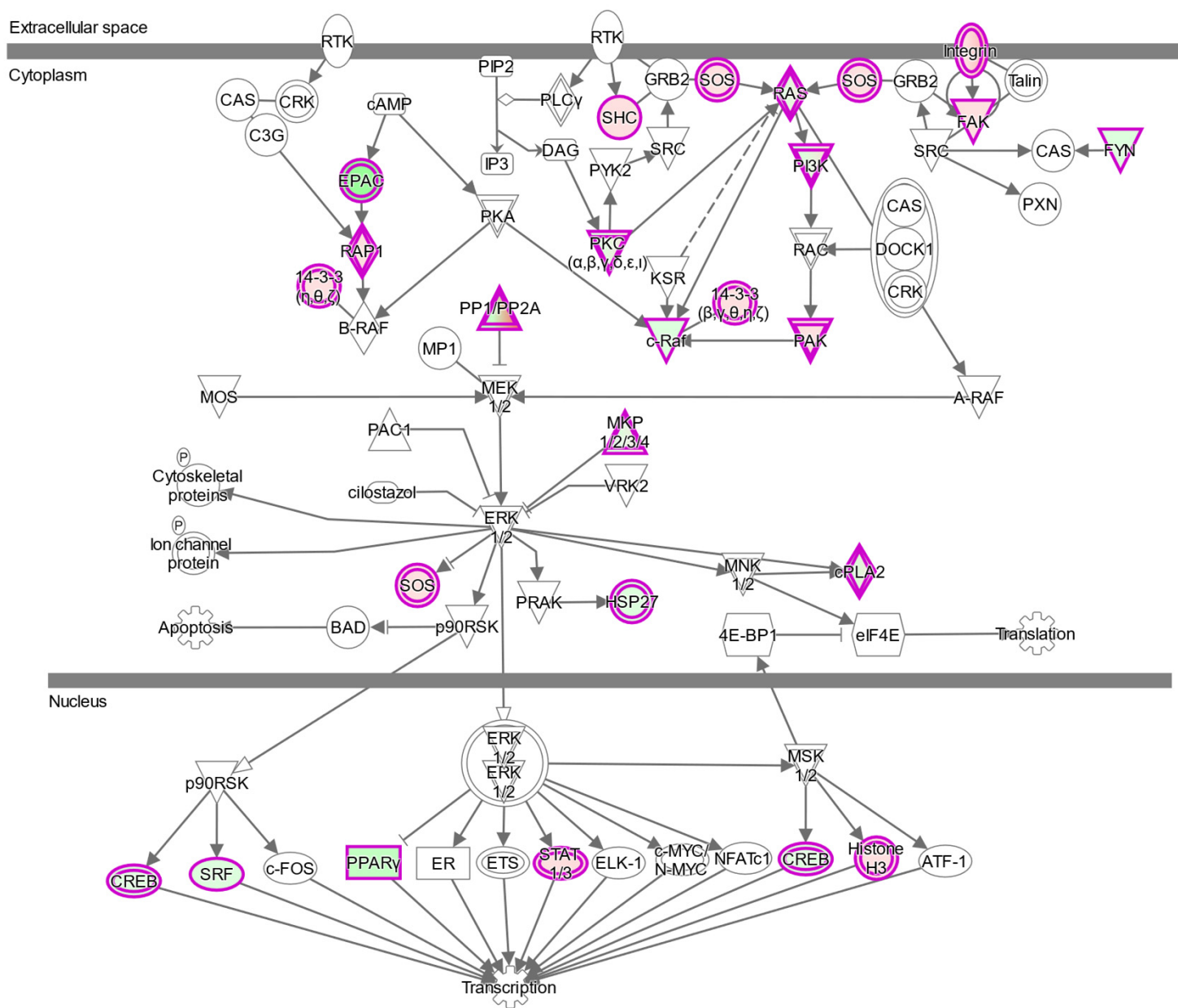


**Figure S4. Uncropped western blots for Fig. 5A.** Original pictures of the western blots shown in Fig. 5A.

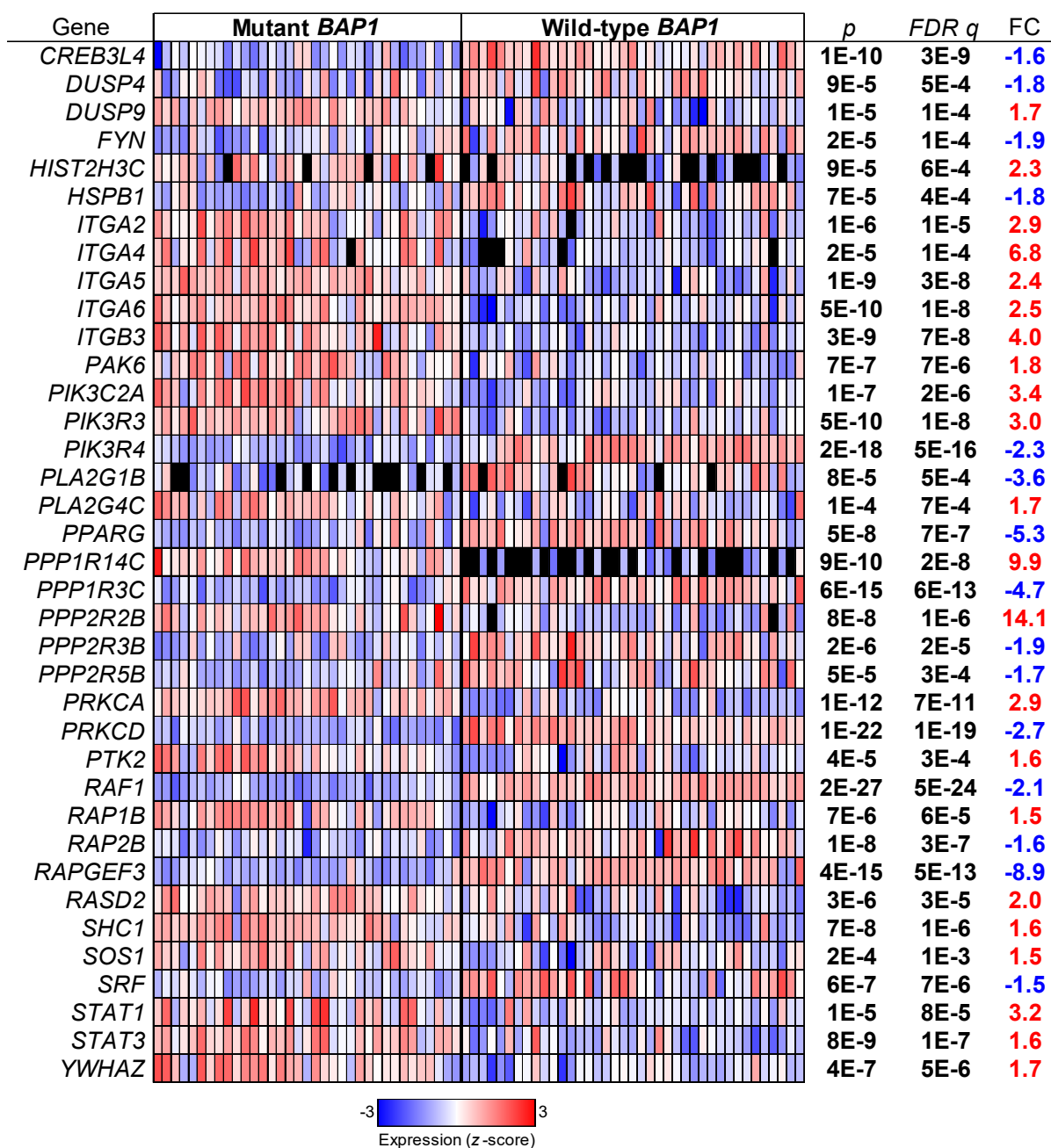


**Figure S5. Uncropped western blots for Fig. 5B.** Original pictures of the western blots shown in Fig. 5B.





**Figure S7. ERK/MAPK Signaling.** Ingenuity Pathway Analysis shows upregulated genes in shades of red and downregulated genes in shades of green.



**Figure S8. ERK/MAPK signaling pathway genes in *BAP1*-mutant and *BAP1*-wild type UM tumor samples.** Uveal melanoma TCGA data ( $n=74$ ) was analyzed and grouped in *BAP1*-mutant and *BAP1*-wild type tumor samples. The genes of the ERK/MAPK signaling pathway that were differentially expressed after a false discovery rate (FDR) corrected  $p$  value below 0.001 and a fold change (FC) higher than 1.5 are shown.



**Supplementary Table S1. List of primers.**

Primer name	Sequence 5'-3'
EIF2A_F	GACCCCAACCATACAAGGTGG
EIF2A_R	TTCTCCATAGTAGGAAGCTCCTG
EIF4A2_F	GAAGCCTTCCGCTATTCAGCA
EIF4A2_R	CTTGGGTCTCCTTGA ACTCAATC
PPIB_F	GAGGAAAGAGCATCTACGGTG
PPIB_R	GCTTCTCCACCTCGATCTTG
RAF1_F	TGTTCCCCTCACAACACACAA
RAF1_R	CTGGGACTCCACTATCACCAATA
RPS12_F	TGCTGGAGGTGTAATGGACG
RPS12_R	GGCGCTTGTCTAAGGCTTTG
WARS_F	AAAGGCATTTTCGGCTTCACT
WARS_R	ATGGCACATGGGATAAGGCAC