

## Supplementary figures

Figure S1

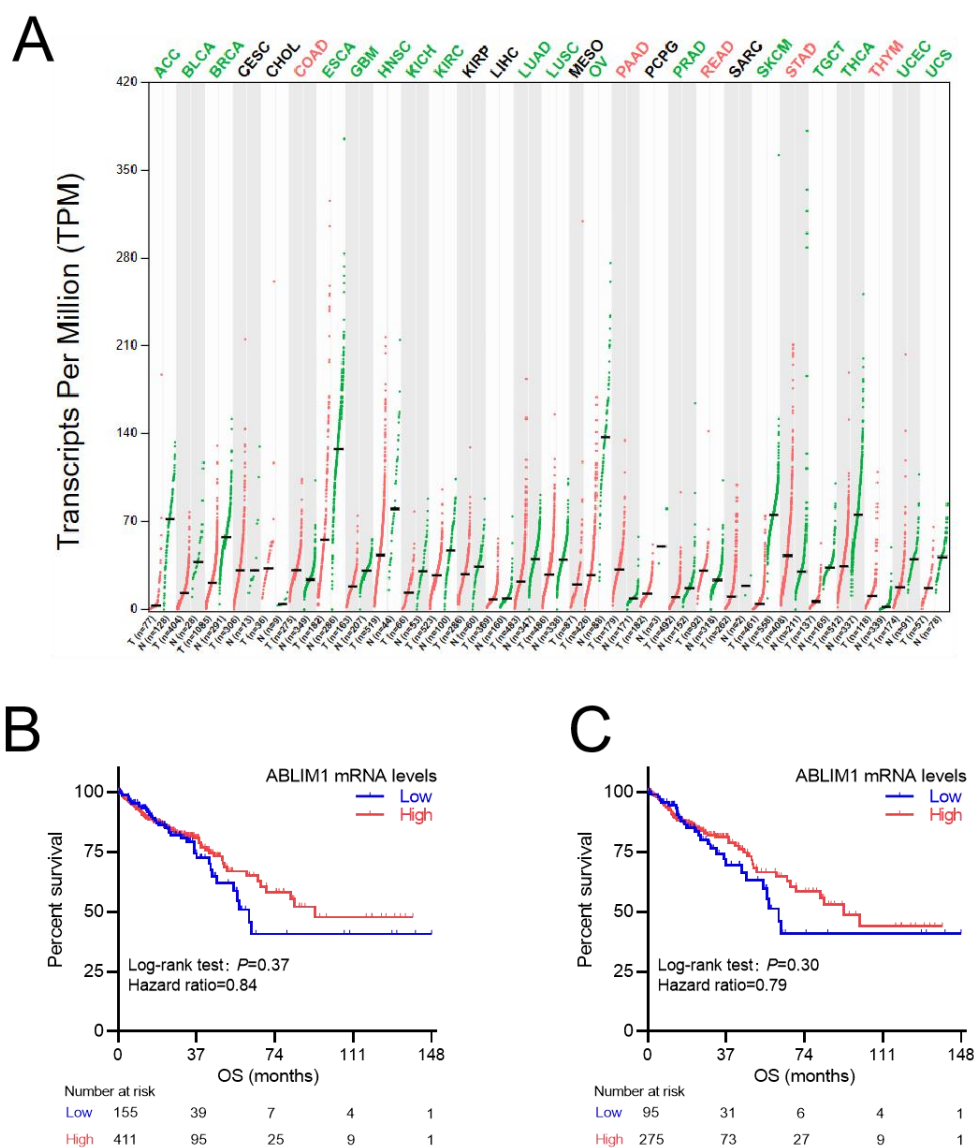


Figure S1. ABLIM1 expression profiles and survival curves. (A) ABLIM1 expression profiles in different tumors analyzed in GEPIA 2 database (<http://gepia2.cancer-pku.cn/>). Tumors marked in red or blue indicates the gene is significantly up-regulated or down-regulated in tumors. (B) CRC patient overall survival curves stratified by ABLIM1 expression levels using data downloaded from CBioPortal database (B, TCGA PanCancer Atlas; C, TCGA Firehose Legacy). B,  $P = 0.37$ , hazard ratio = 0.84 [0.56–1.26, 95% confidence interval (CI)]. C,  $P = 0.30$ , hazard ratio = 0.79 [0.49–1.27, 95% CI].

Figure S2

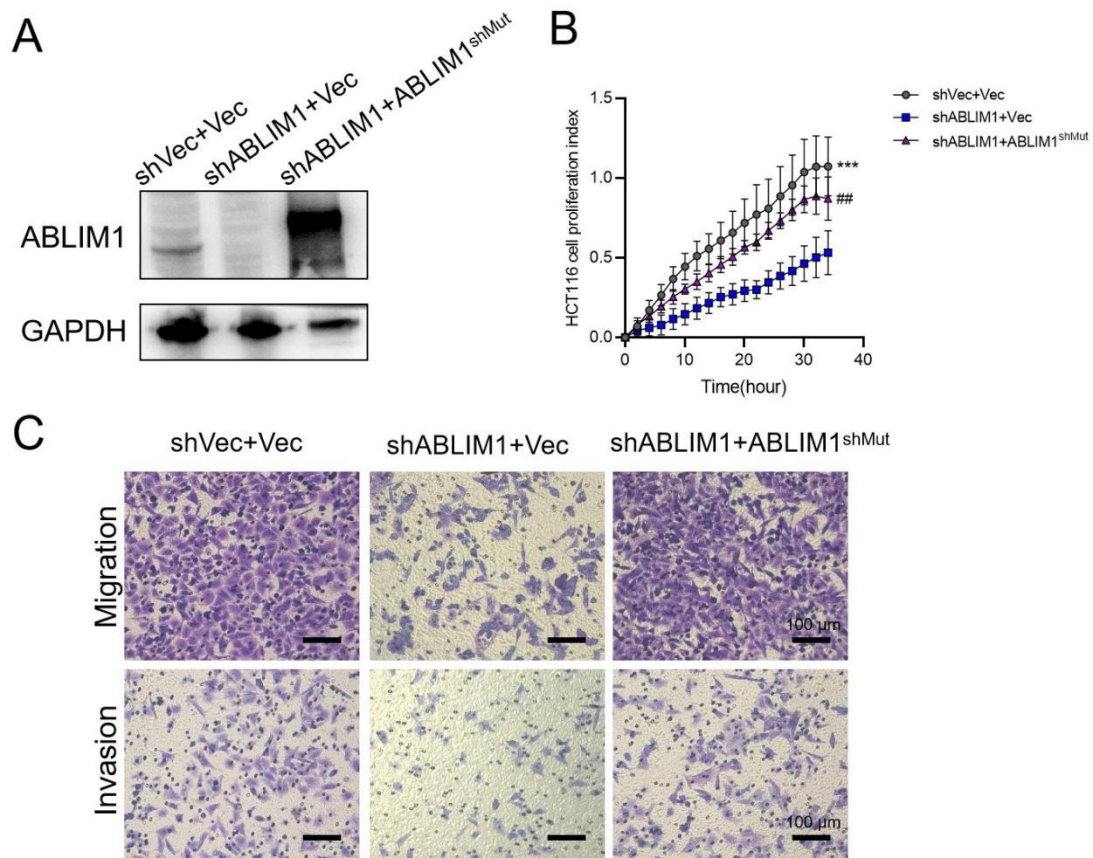


Figure S2. The rescue effect of a shRNA-resistant mutant of ABLIM1 on colorectal cancer cell proliferation, migration, and invasion. (A) Western blot analysis of ABLIM1 in HCT116 cells transduced with shABLIM1+ABLIM1<sup>shMut</sup>, shABLIM1+Vec, or shVec+Vec. (B) HCT116 cell proliferation indexes recorded by RTCA system after indicated treatments. N = 4 ~ 5 for each group. Unpaired t-test. \*\*\*,  $p < 0.001$  for shVec+Vec versus shABLIM1+Vec. ##,  $p < 0.01$  for shABLIM1+ABLIM1<sup>shMut</sup> versus shABLIM1+Vec. (C) HCT116 cell migration and invasion images stained by crystal violet after indicated treatments.

Figure S3

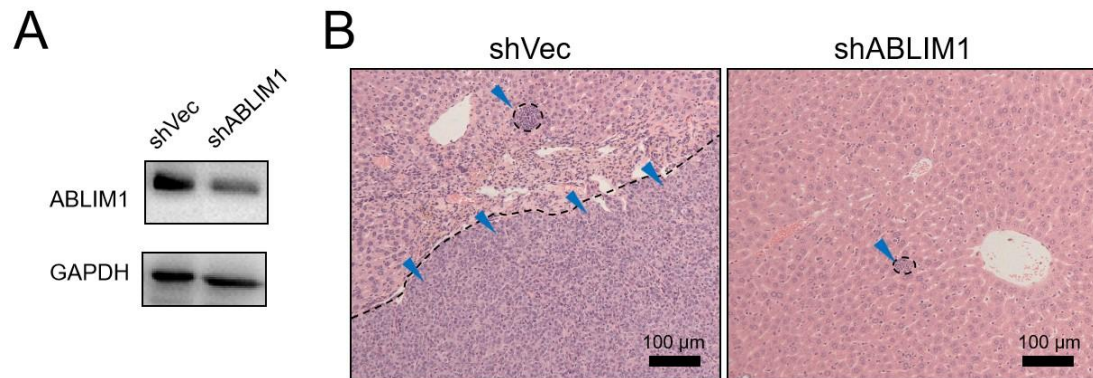


Figure S3. (A) Western blot analysis of ABLIM1 knock-down efficiency in SW620 cells transduced by shABLIM1 or shVec. (B) HE images of nude mouse livers in the CRC liver metastasis models. Stable shVec or shABLIM1 SW620 cells were injected into hepatic portal veins of nude mice (N = 5) to establish the CRC liver metastasis model. Blue triangles indicate the tumor nodes in livers under microscopy.

Figure S4

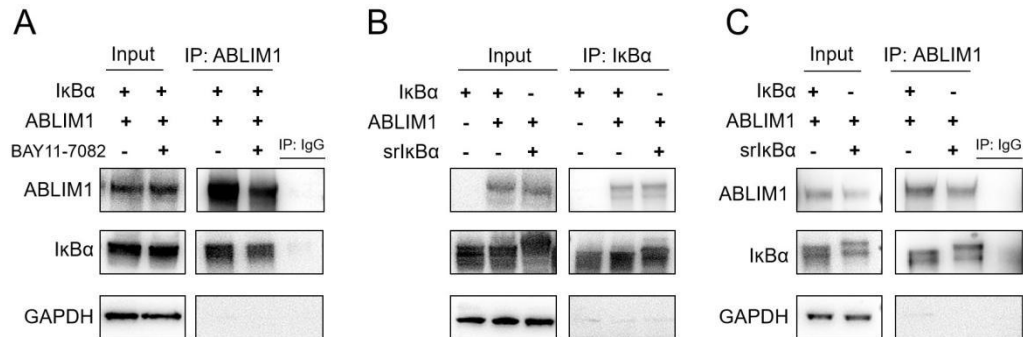


Figure S4. Phosphorylation does not modulate the interaction between ABLIM1 and IκBα. Co-immunoprecipitation assays were performed after BAY11-7082 treatment (10 μM, 16 h) (A) or srIκBα overexpression (B) in 293T cells. (C) In HCT116 cells, ABLIM1 antibody was used to co-immunoprecipitate IκBα after ABLIM1, and srIκBα or IκBα overexpression. ABLIM1, IκBα, and GAPDH were detected by immunoblotting.

Original Western blot images:

Figure 1F:

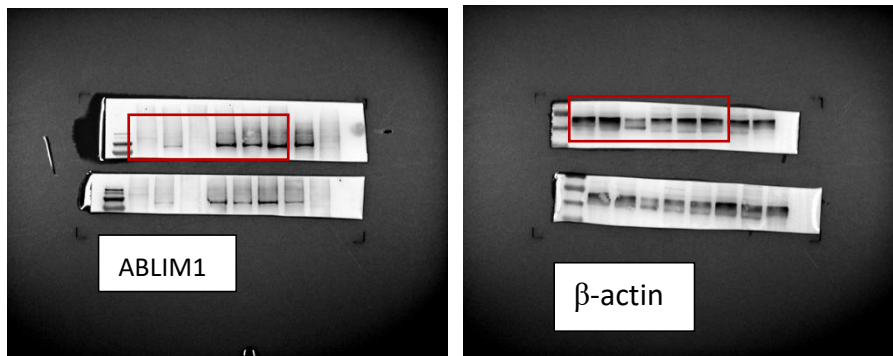


Figure 2A:

HCT116 (UP) and RKO (Down)

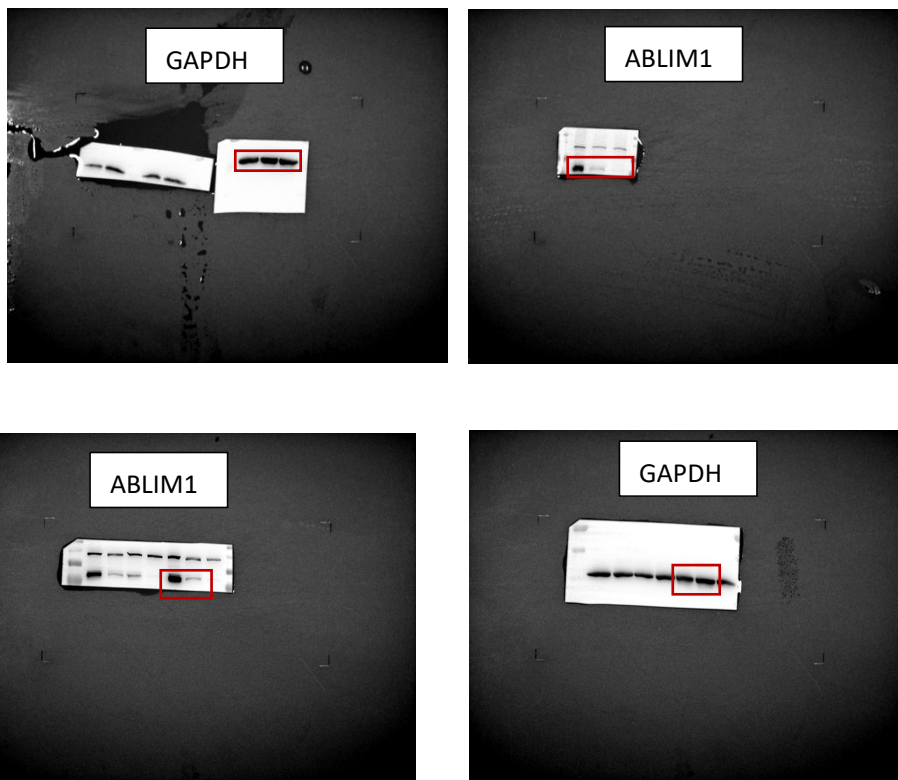


Figure 3A:

HCT116 (Up) and SW620 (Down)

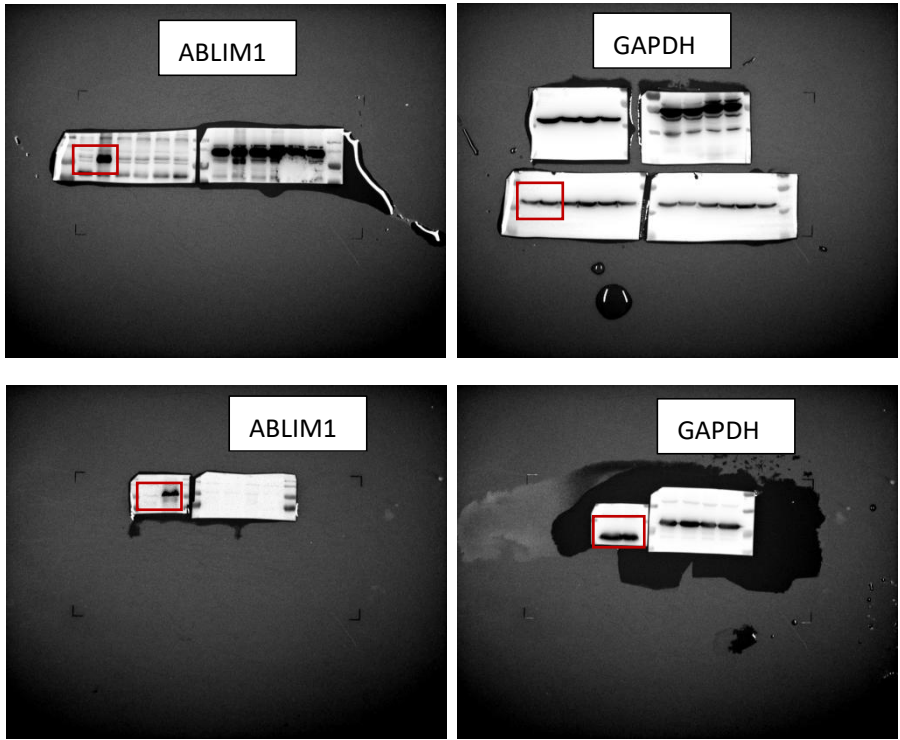
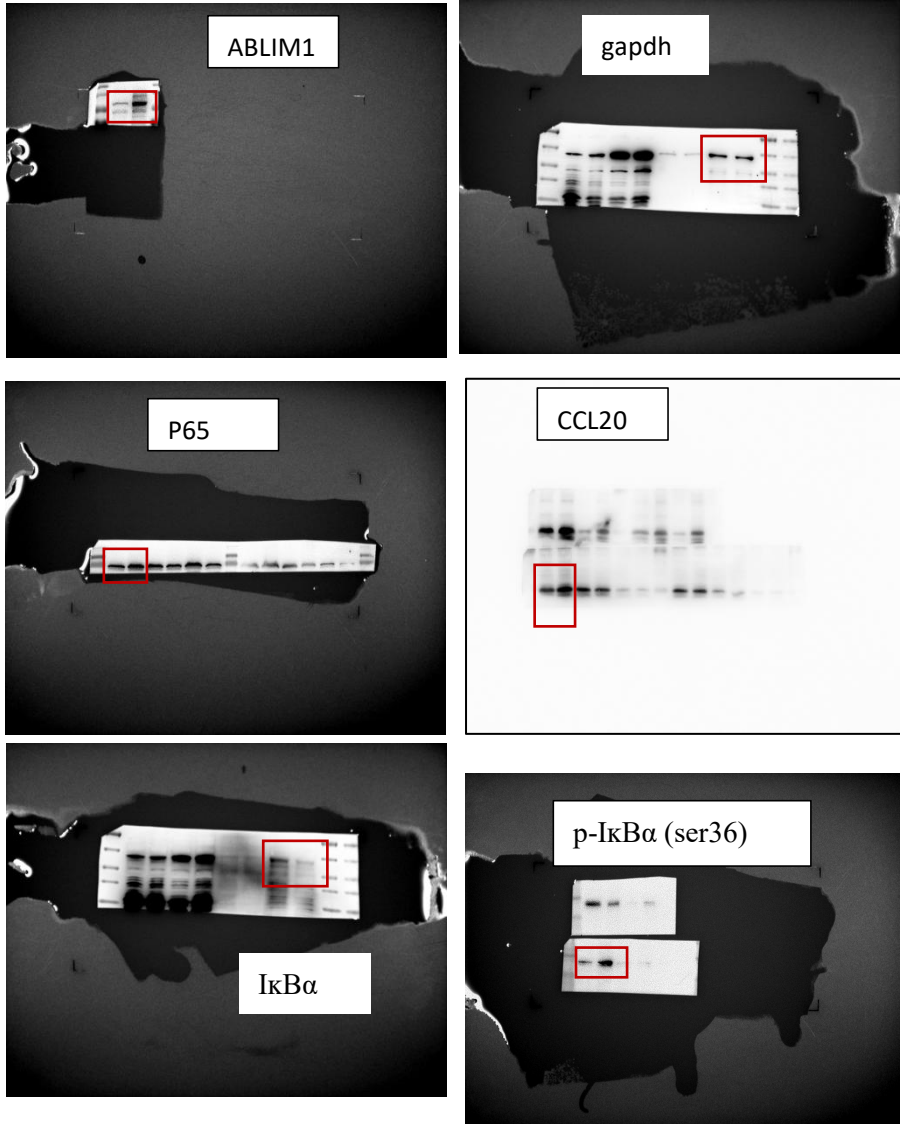


Figure 4D  
Vector AND ABLIM1<sup>OE</sup>



shVec AND shABLIM1

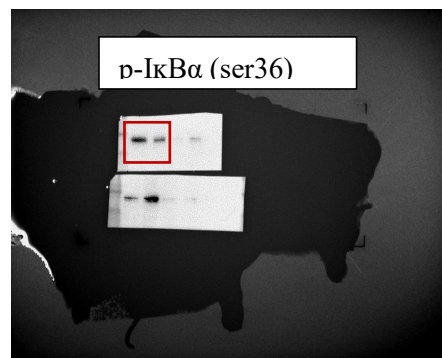
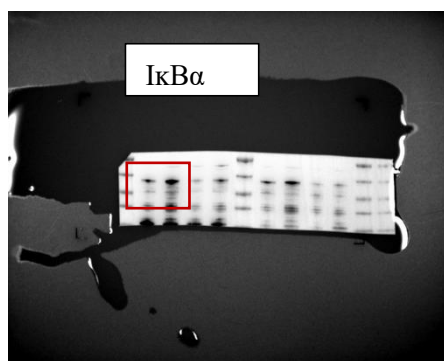
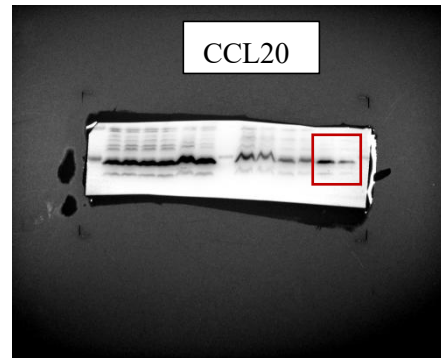
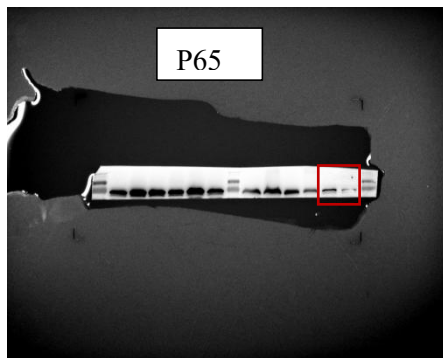
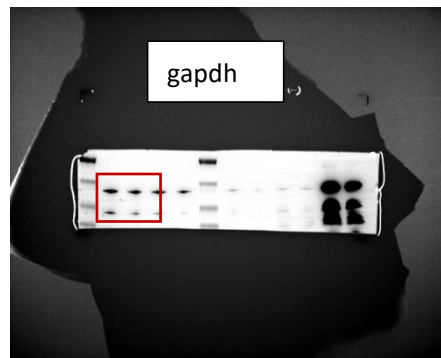
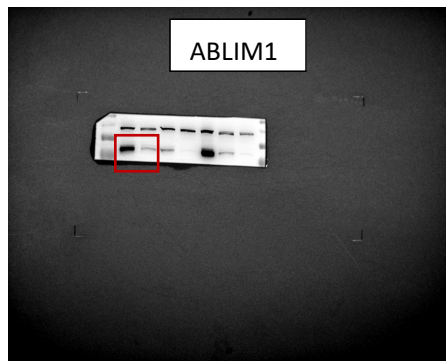
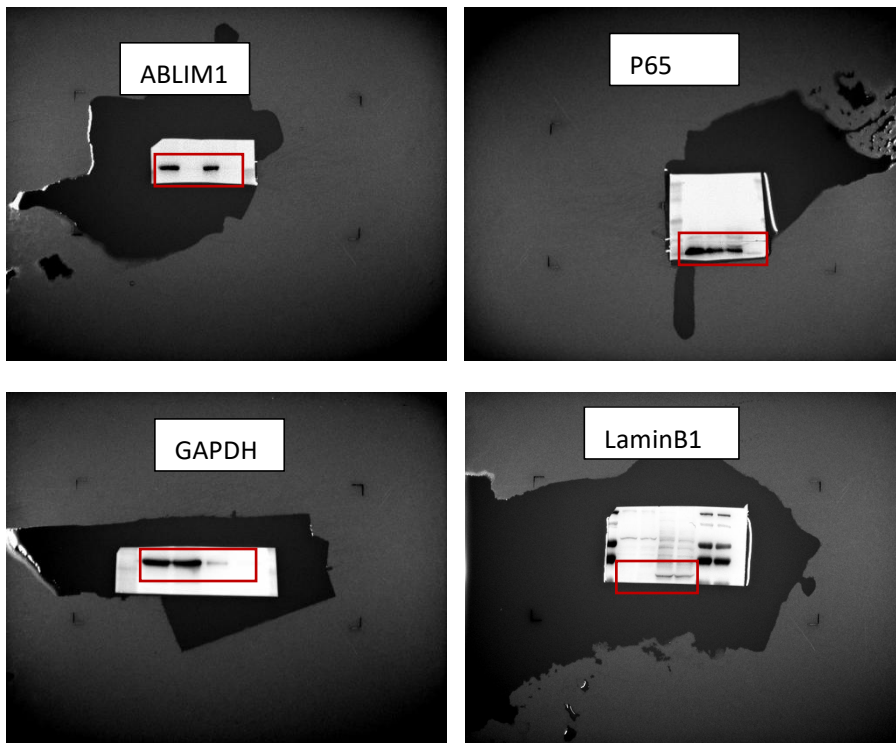


Figure 4E  
HCT116:



RKO:

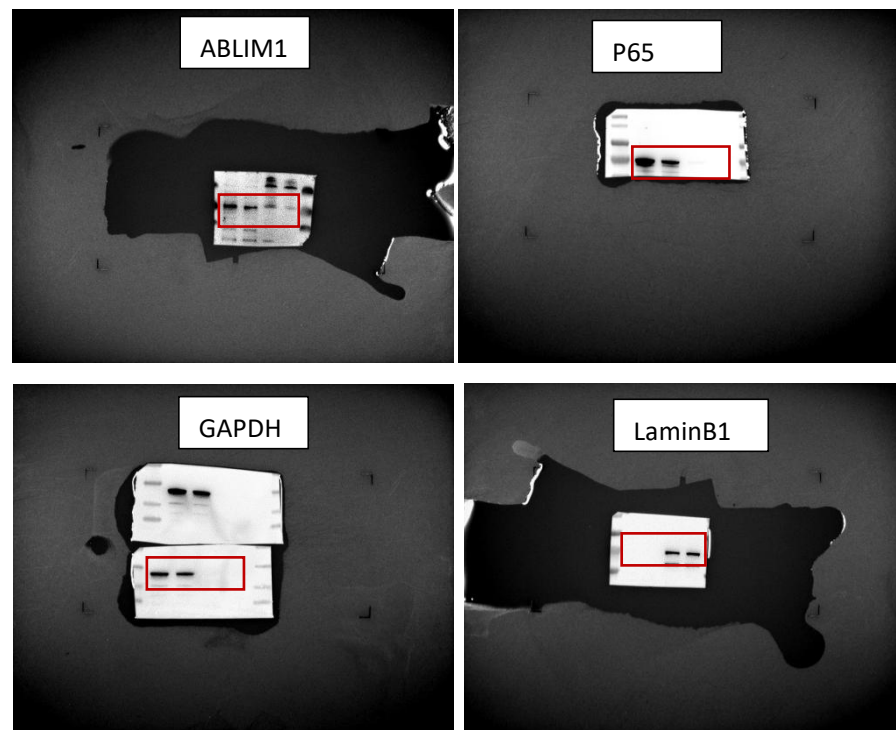




Figure 5A

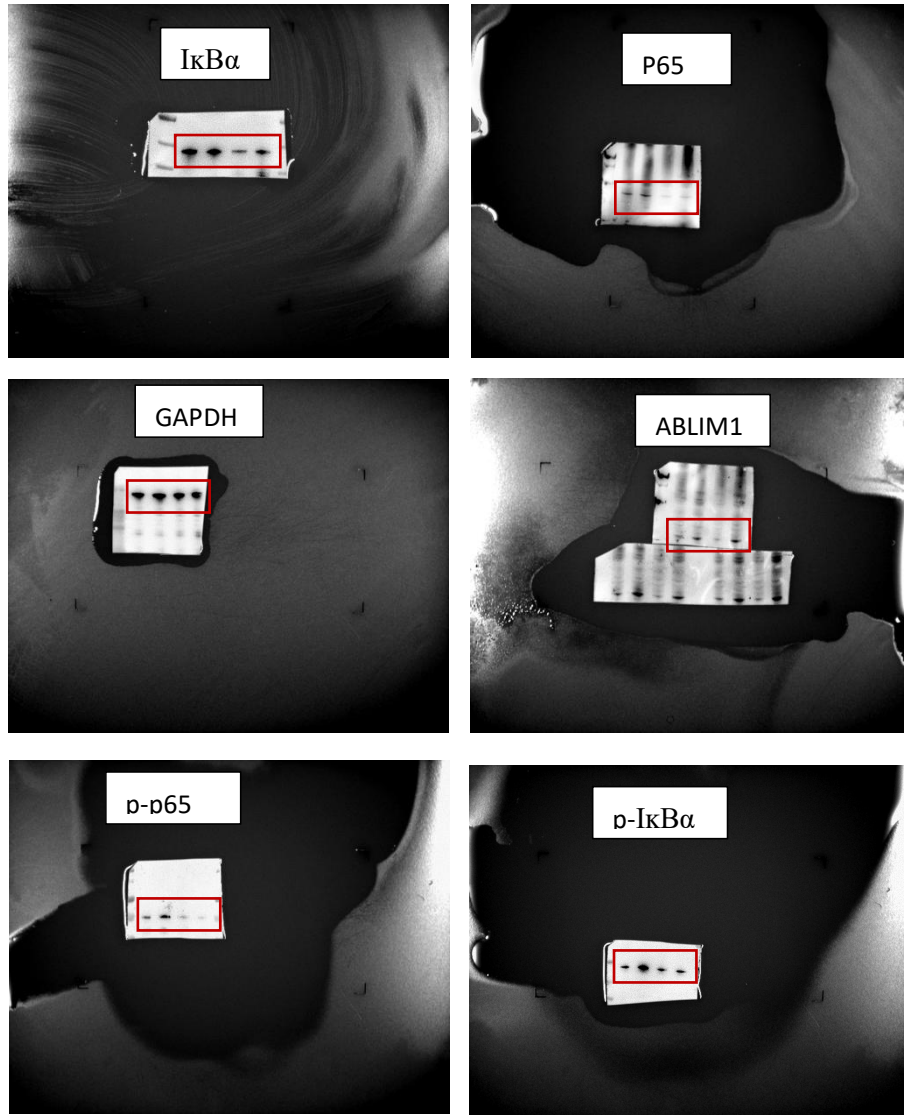


Figure 5E

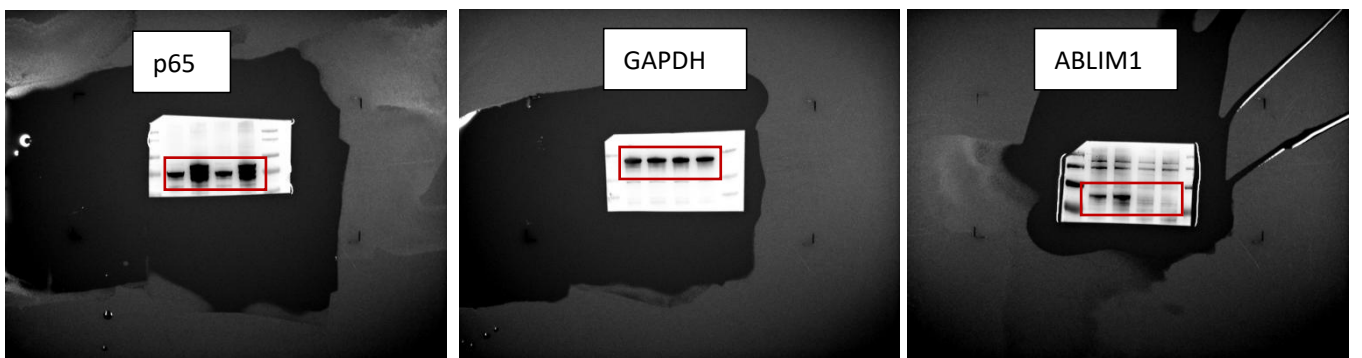


Figure 6B

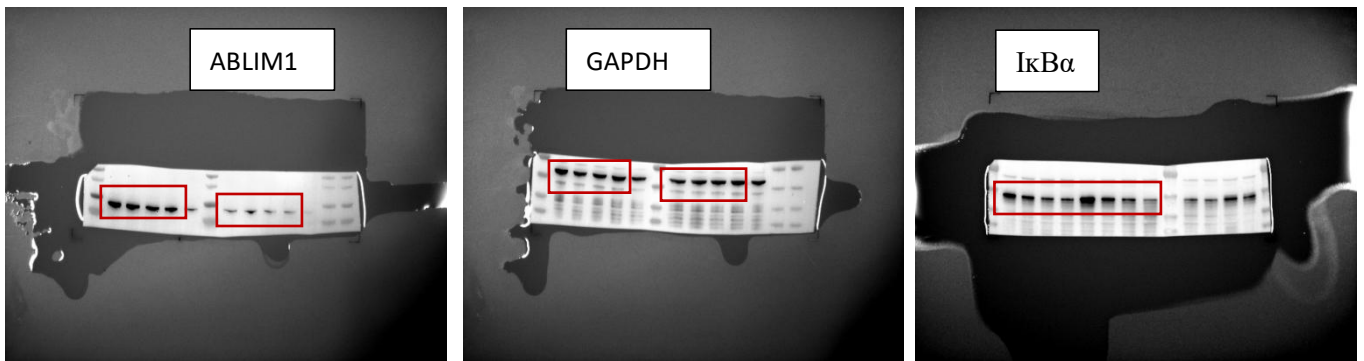


Figure 6C

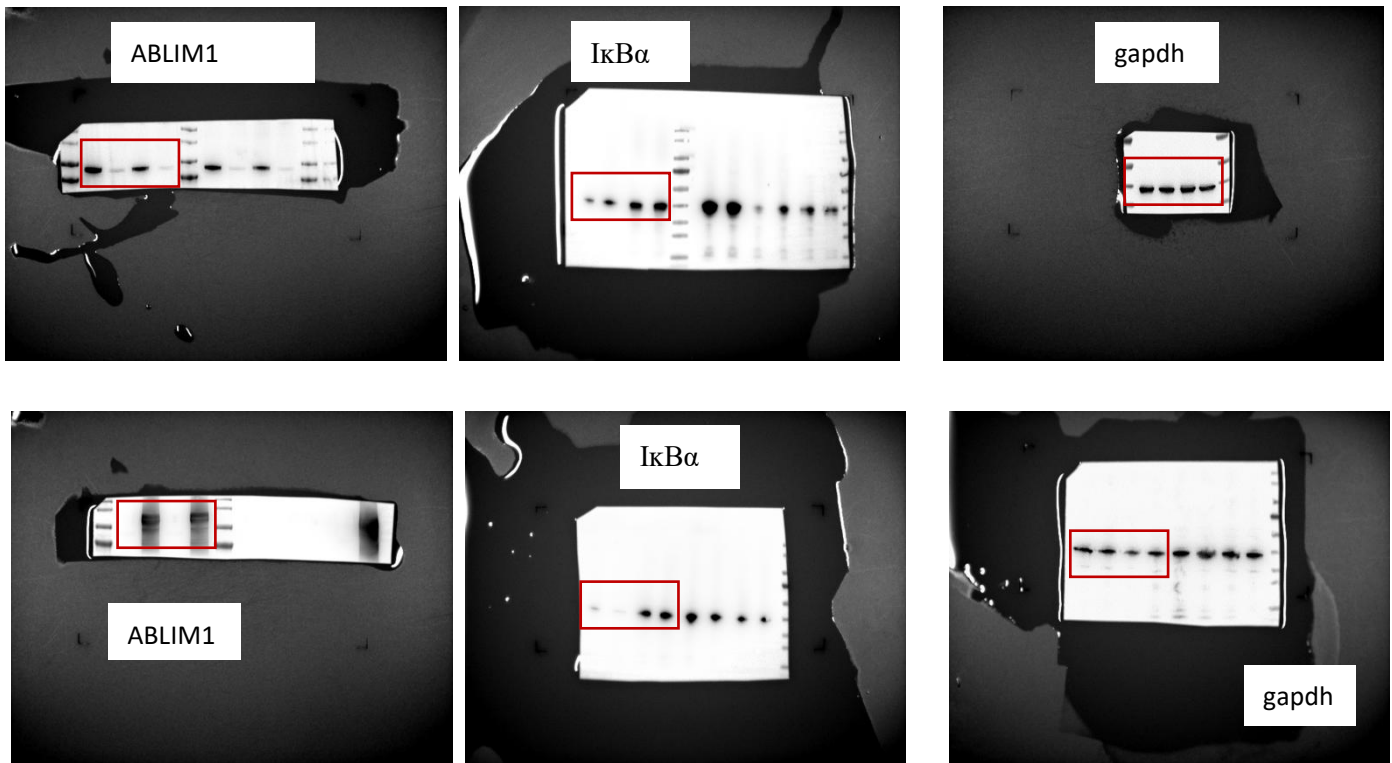


Figure 6D  
HCT116

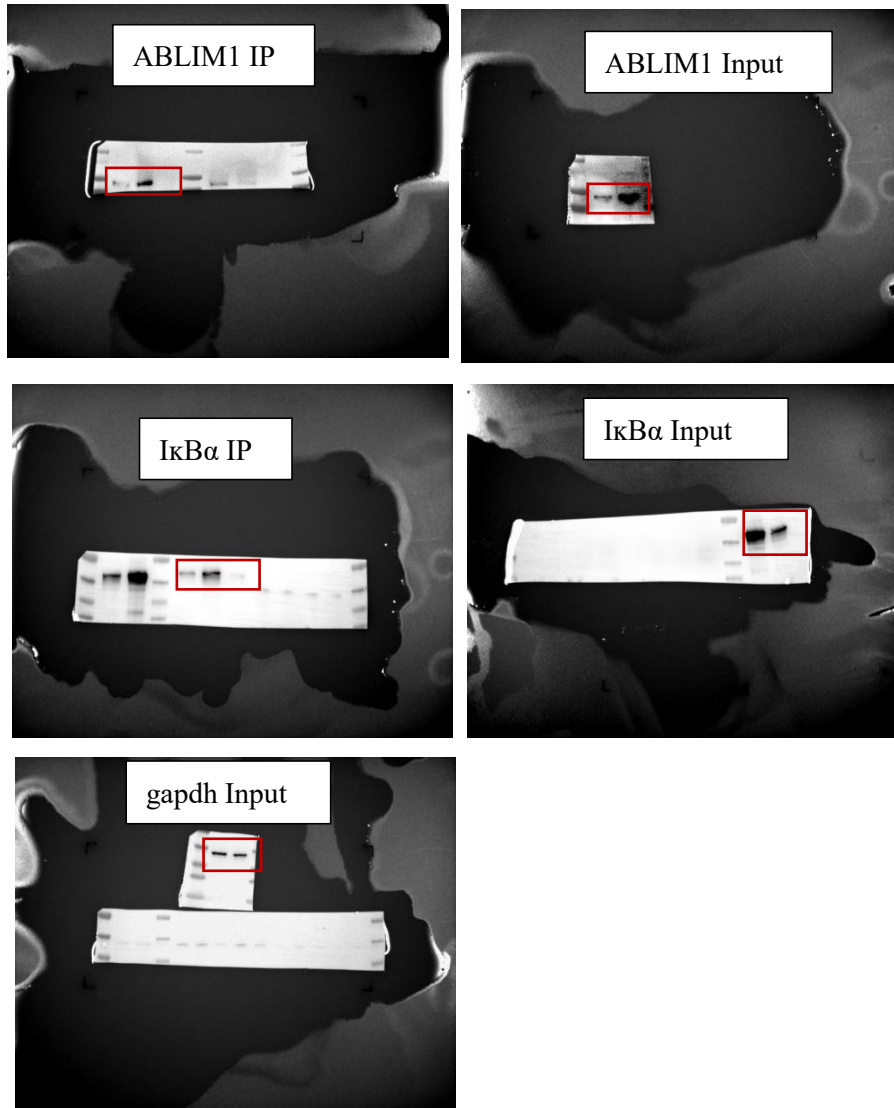


Figure 6D

RKO

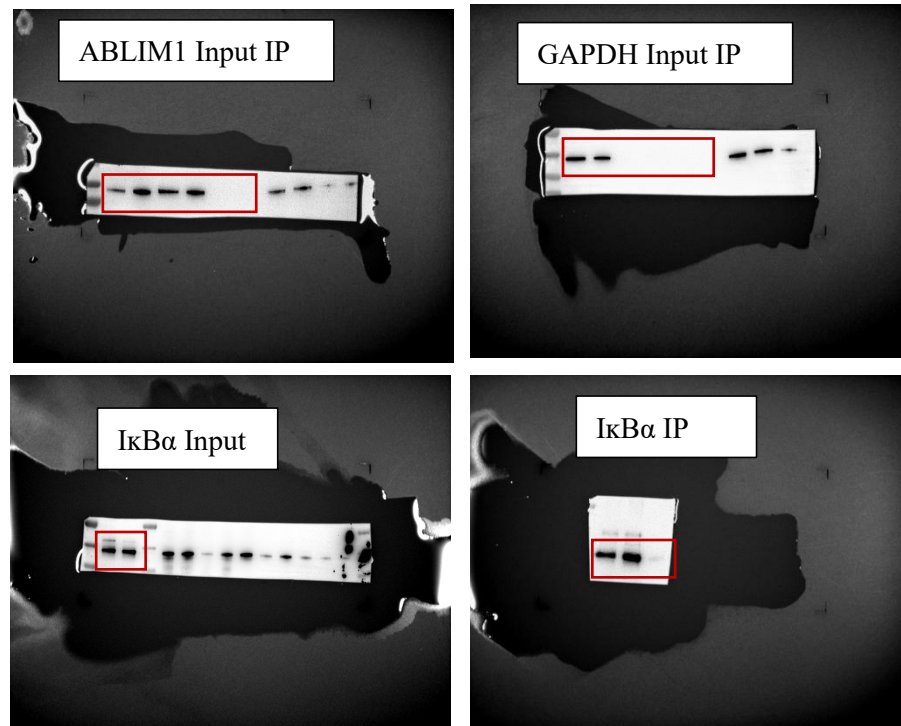
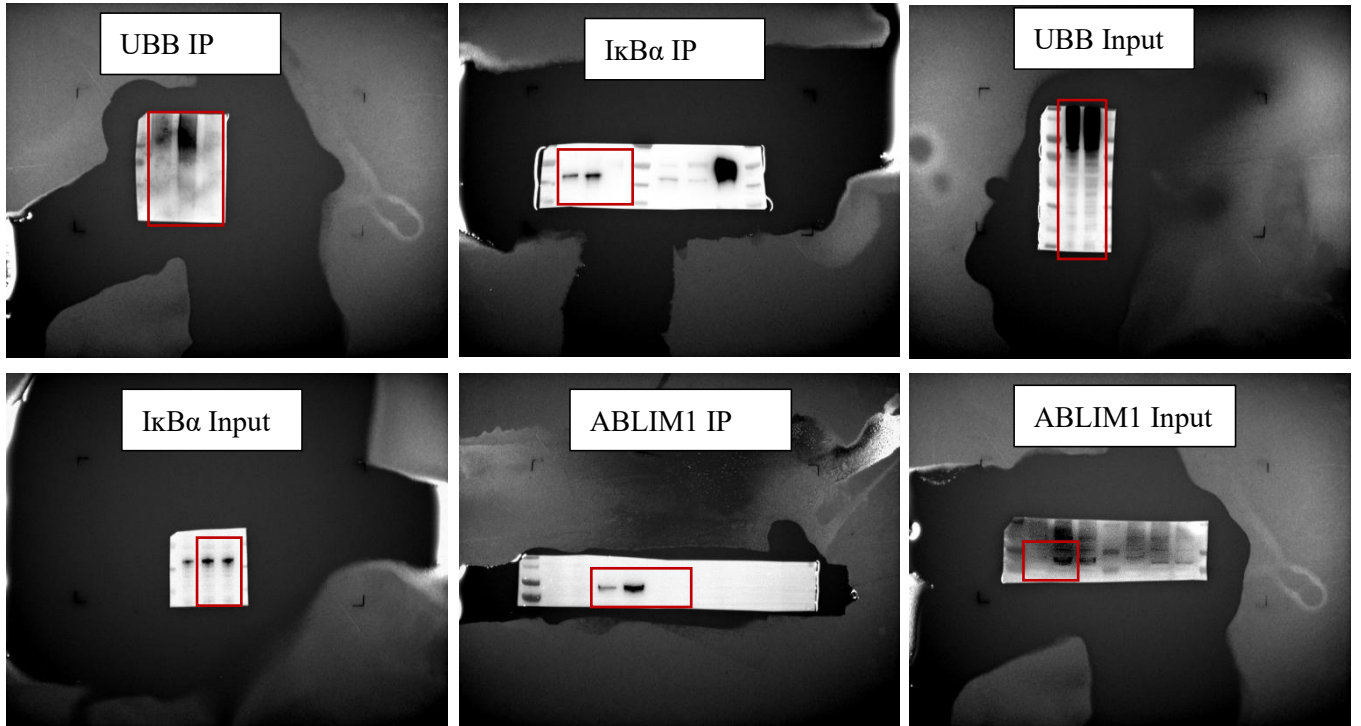


Figure 6E  
HCT116



293T:

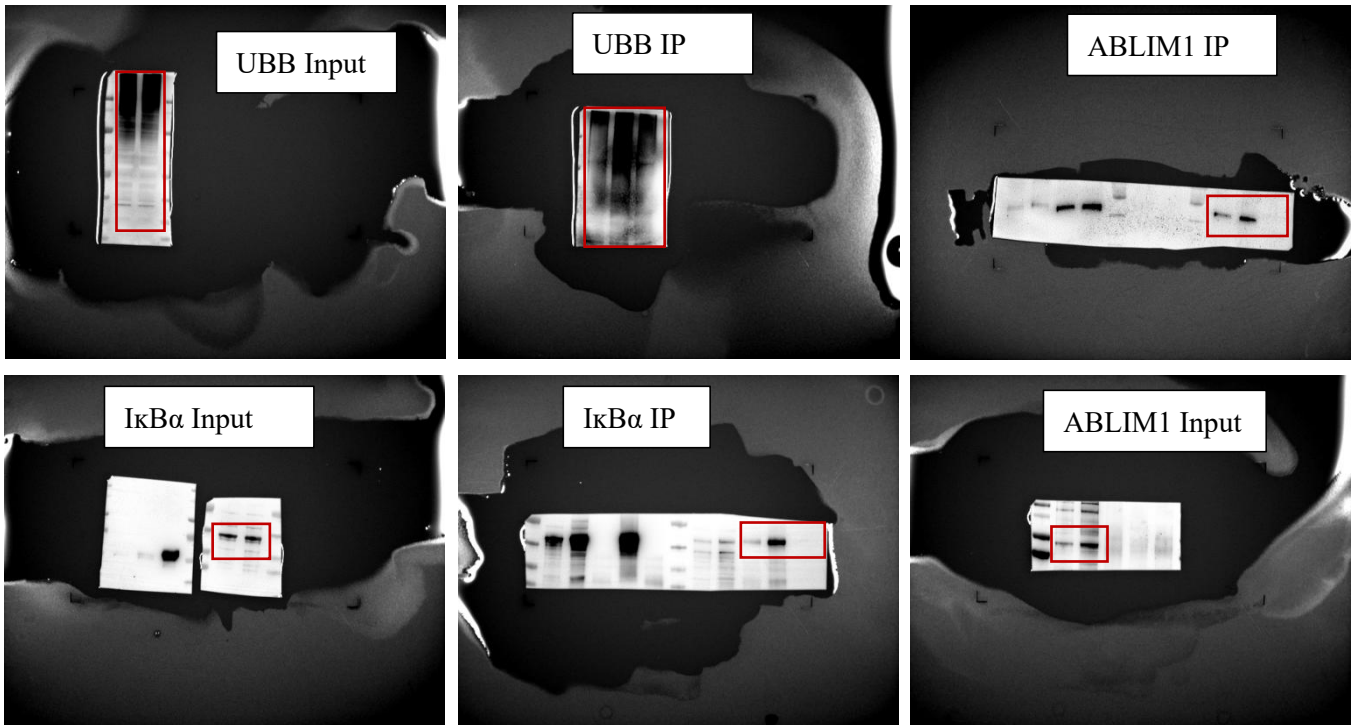


Figure 6F

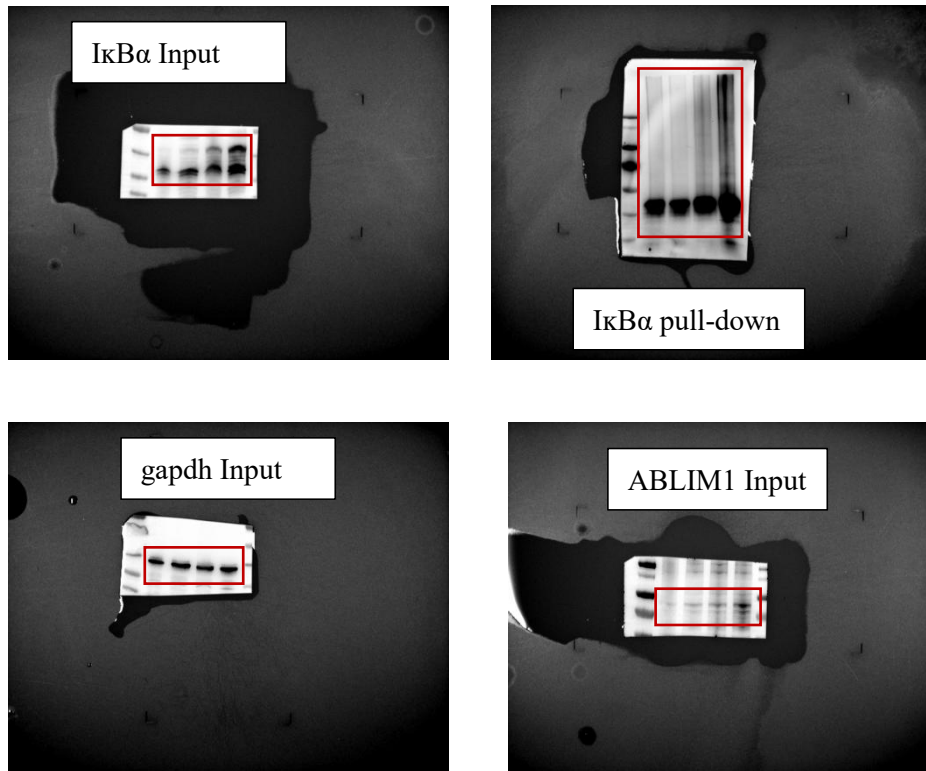


Figure 7A

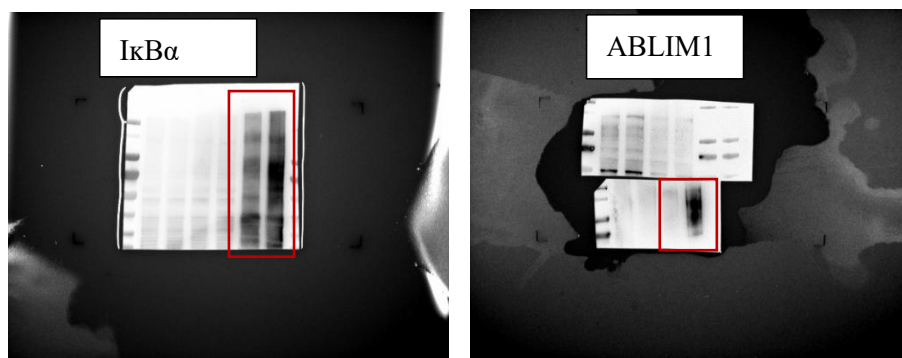


Figure 7B

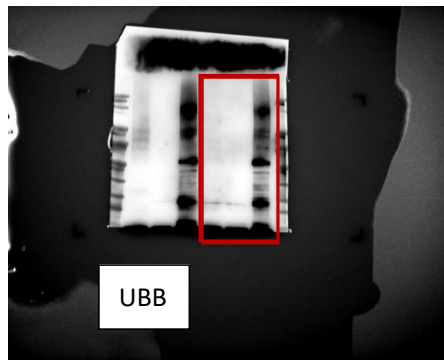


Figure 7C

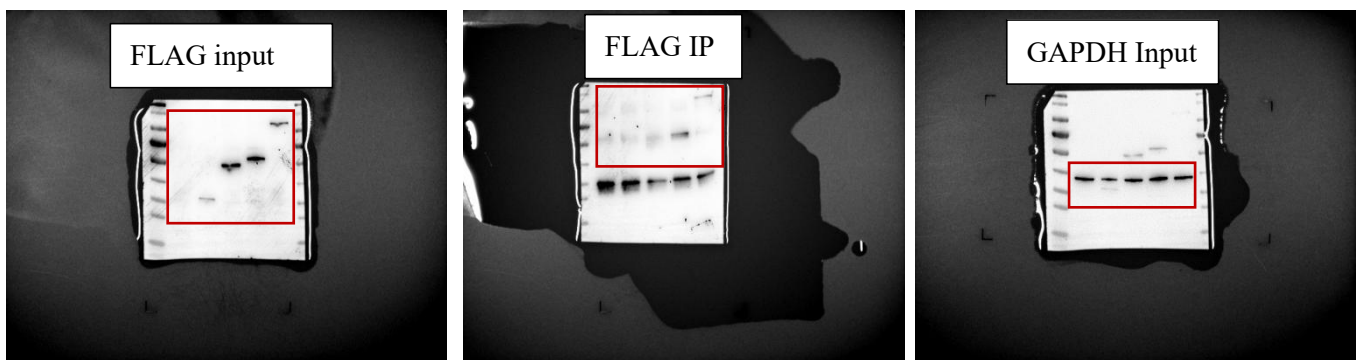


Figure 7D

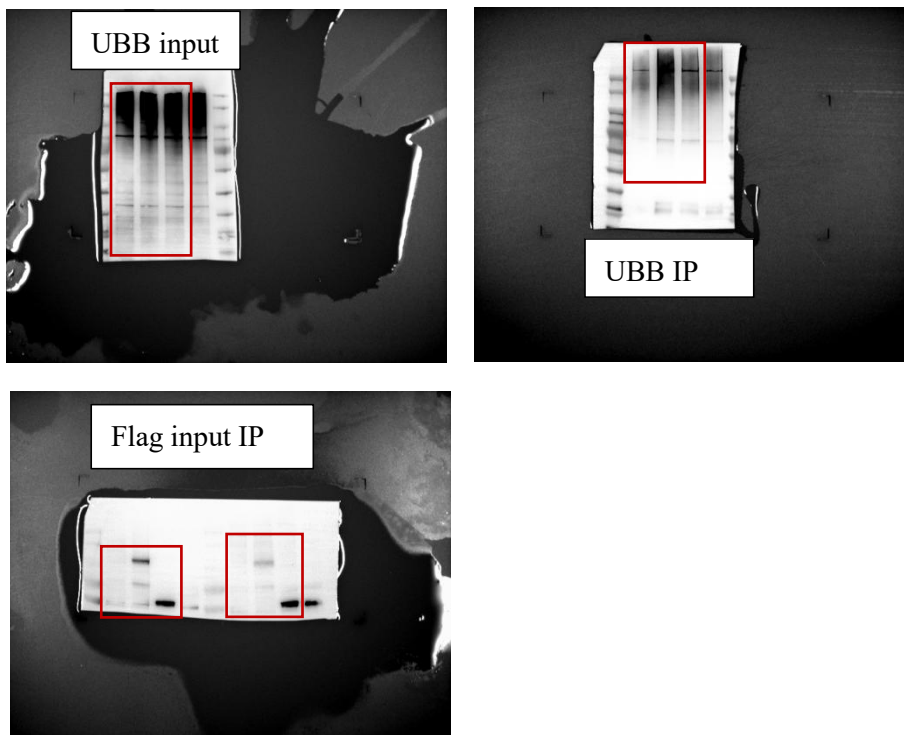


Figure 7F:

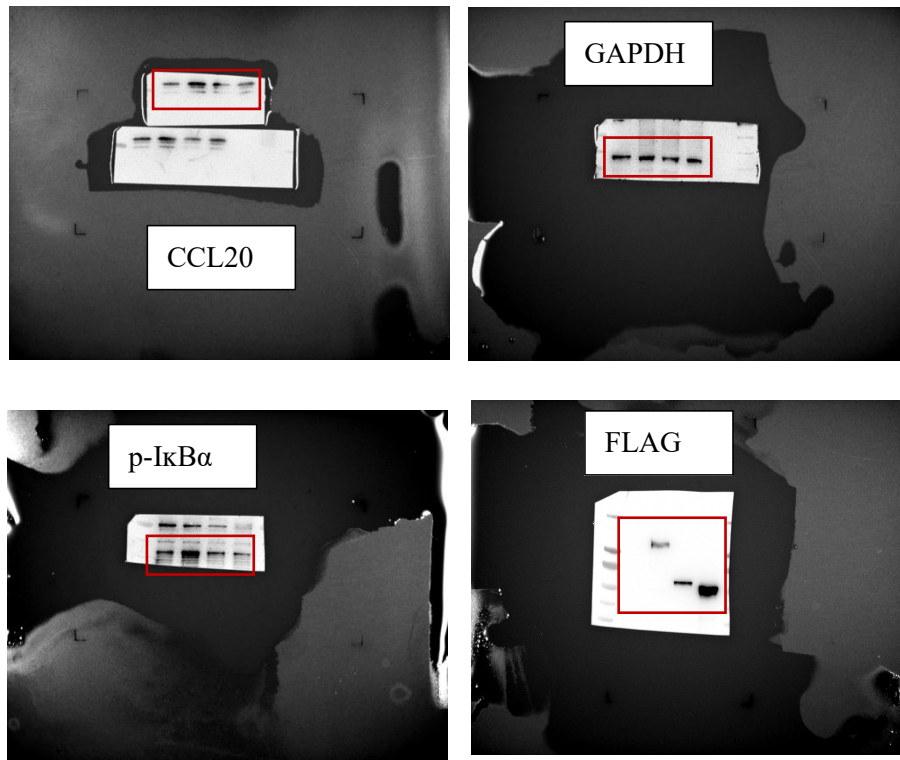




Figure 7G

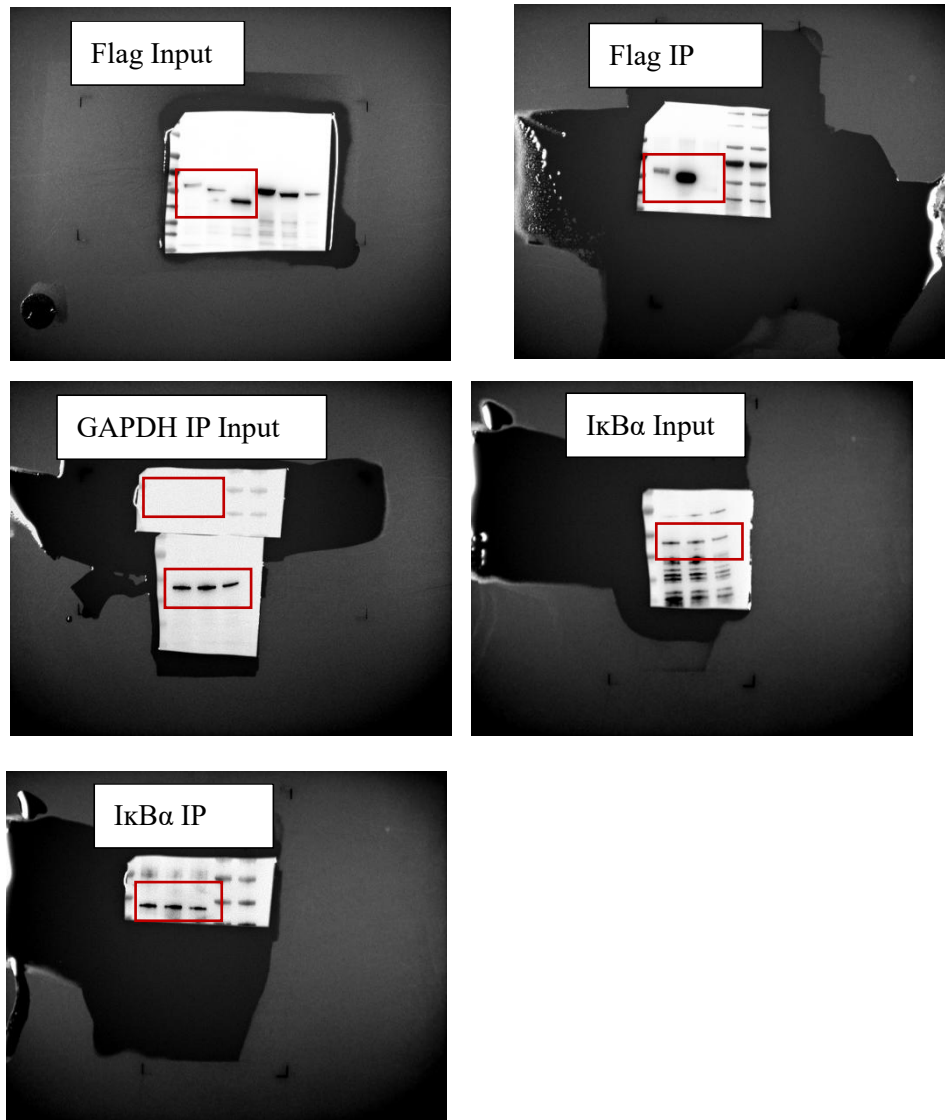


Figure 7H

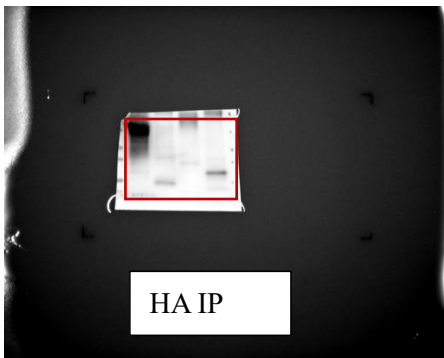
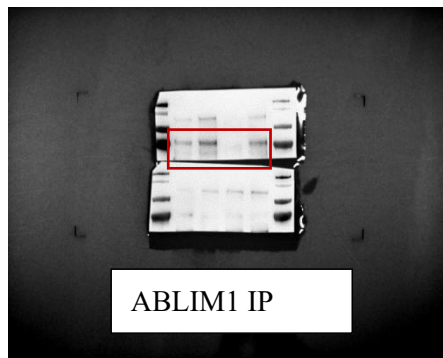
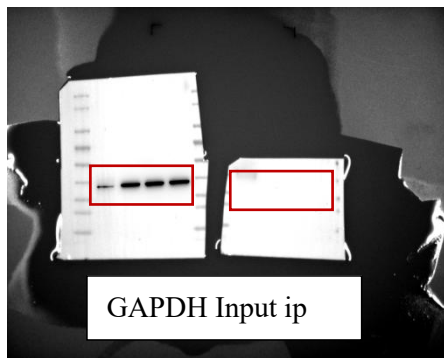
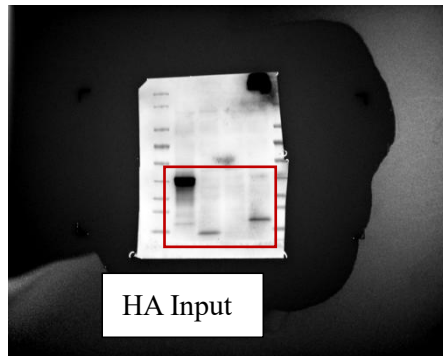
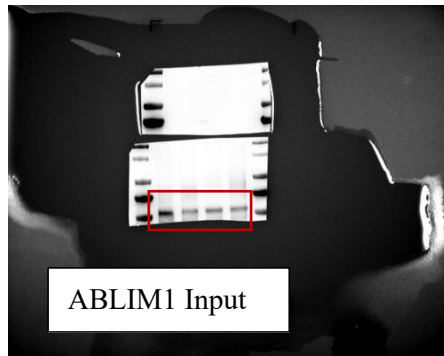
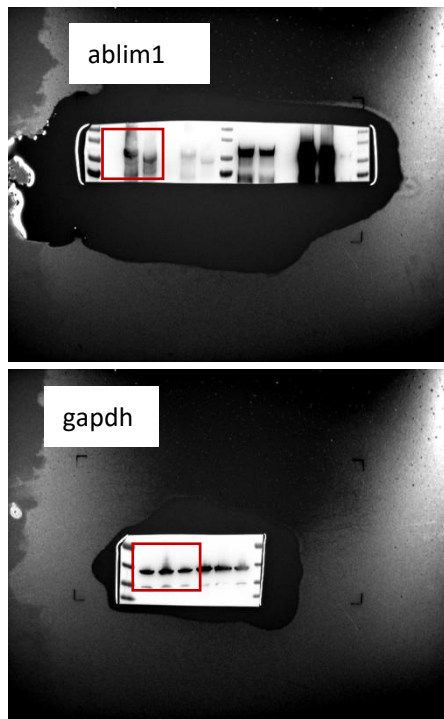


Figure 8A



Supplementary Figure S2A

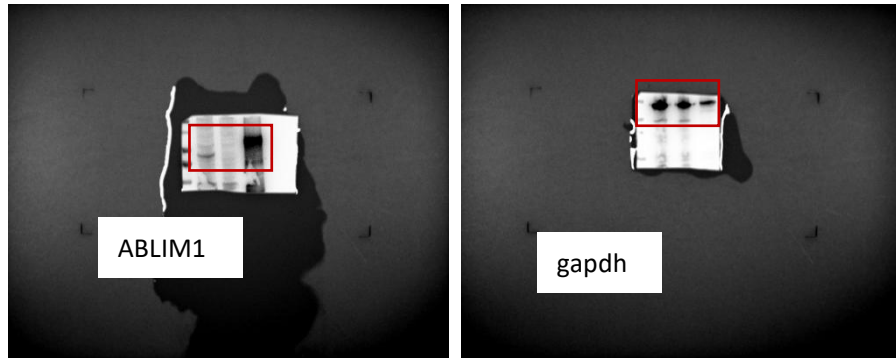


Figure S3A

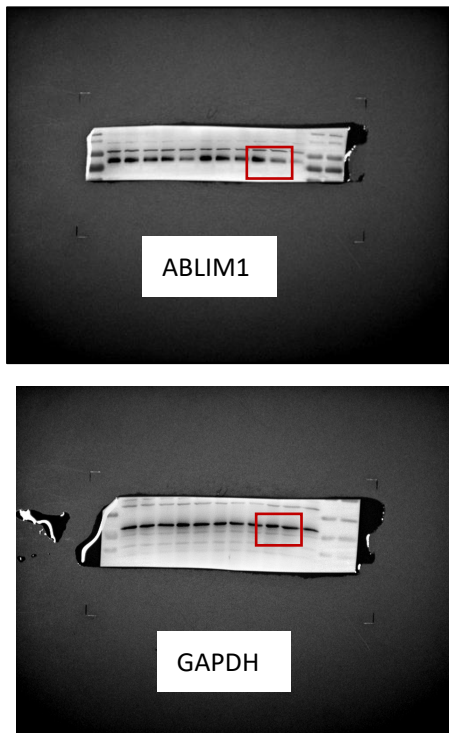


Figure S4A

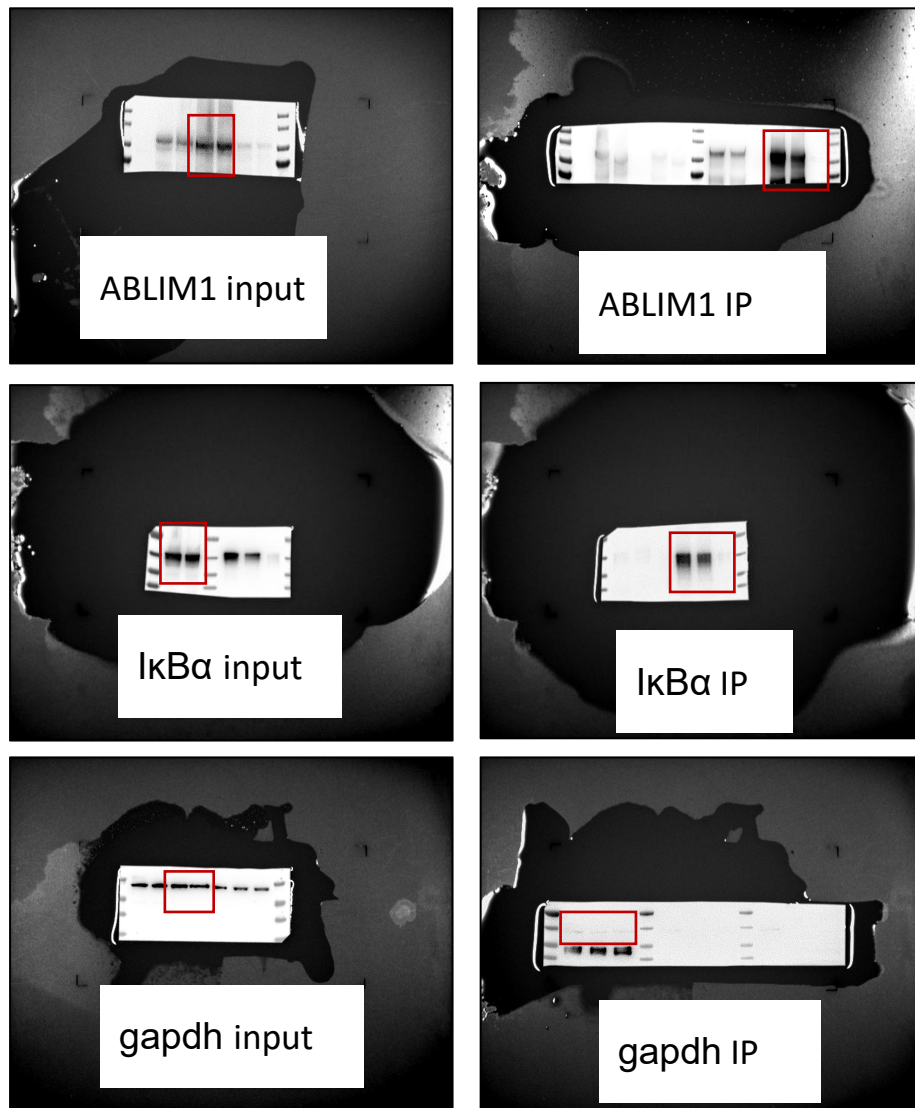


Figure S4B

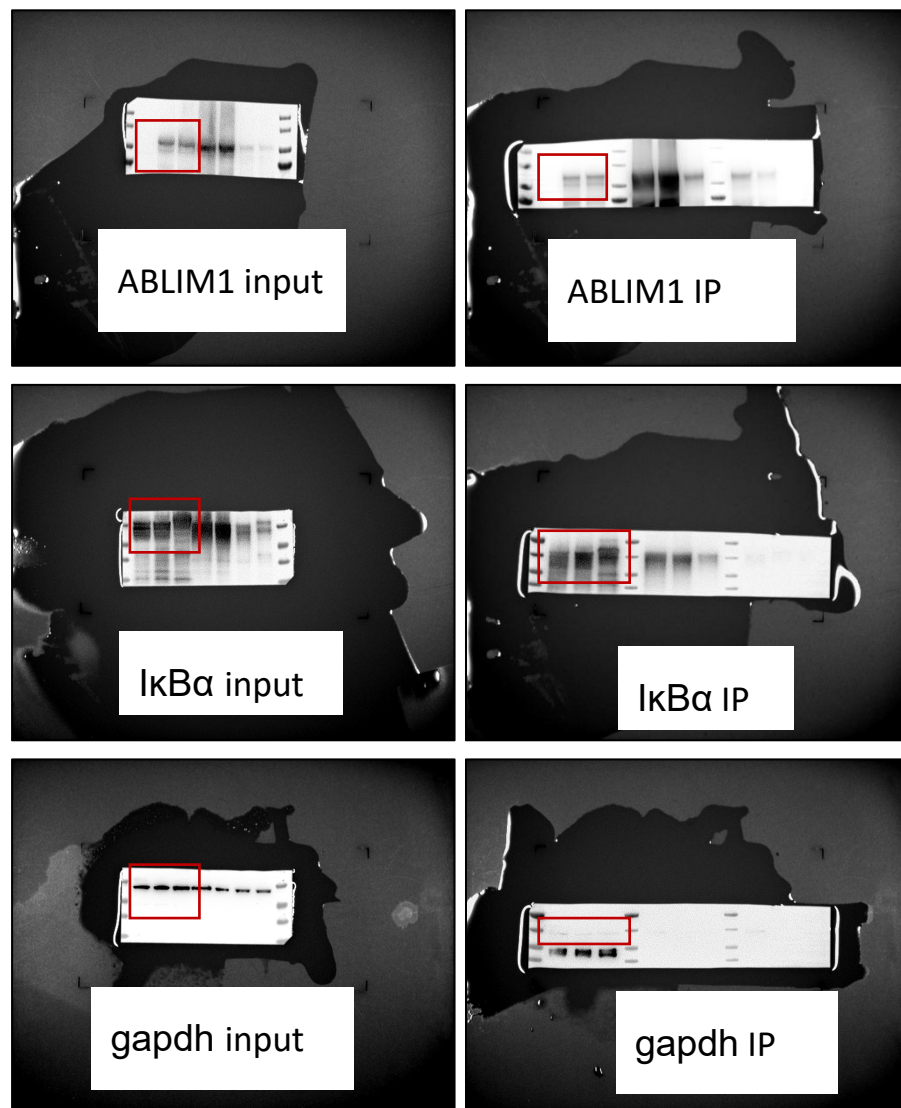


Figure S4C

