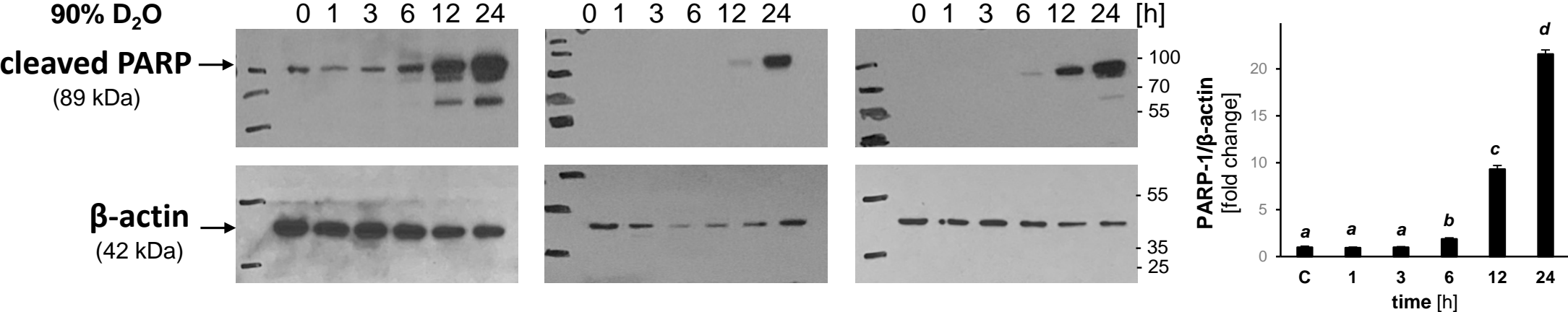
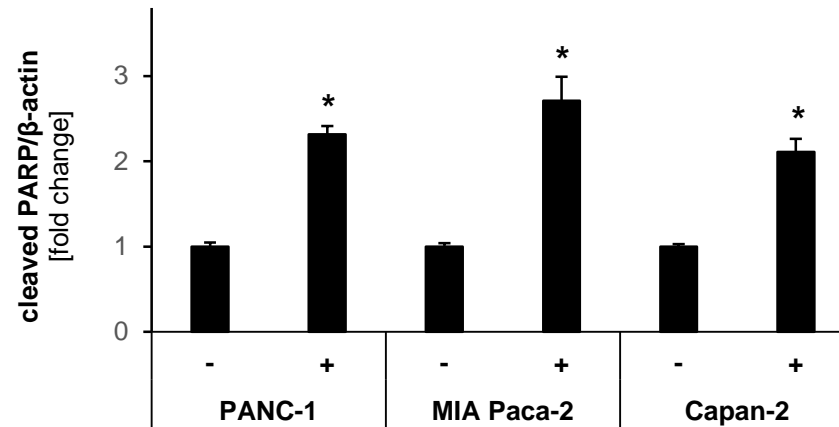
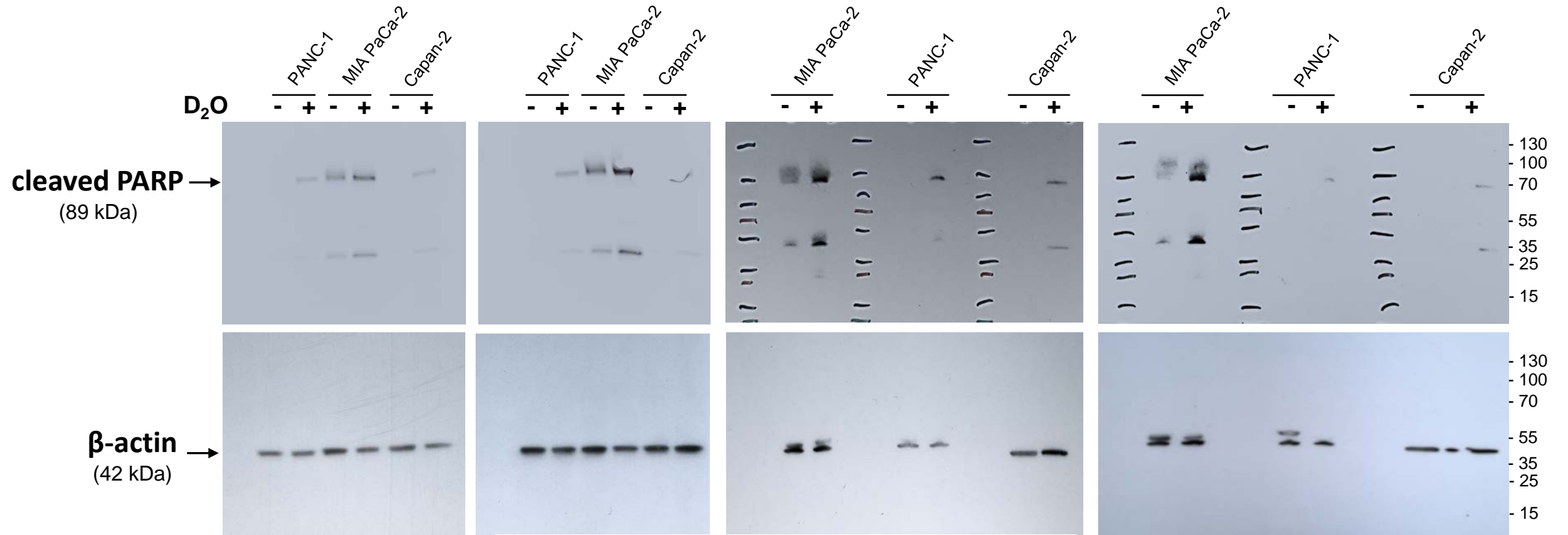


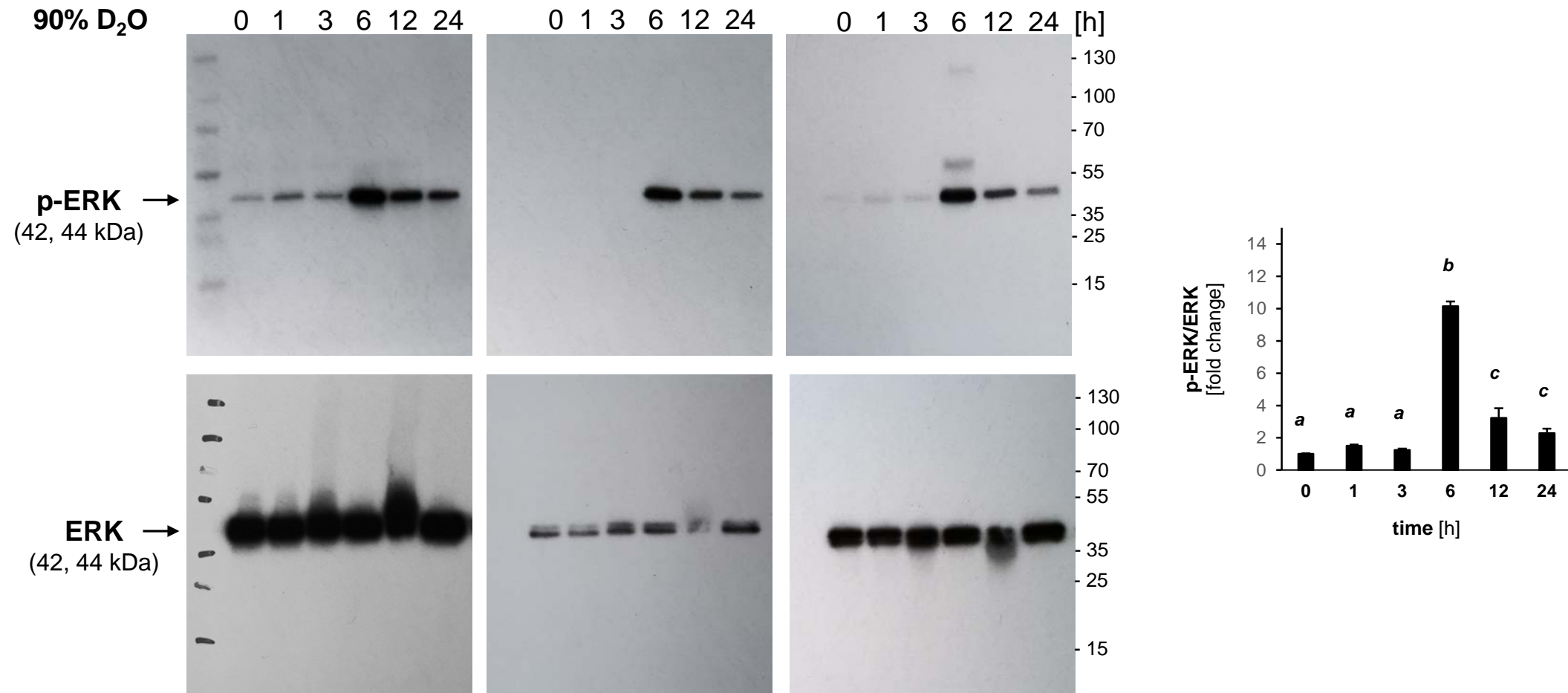
**Figure S1.** The uncropped immunoblots and molecular weight markers of Figure 1G.



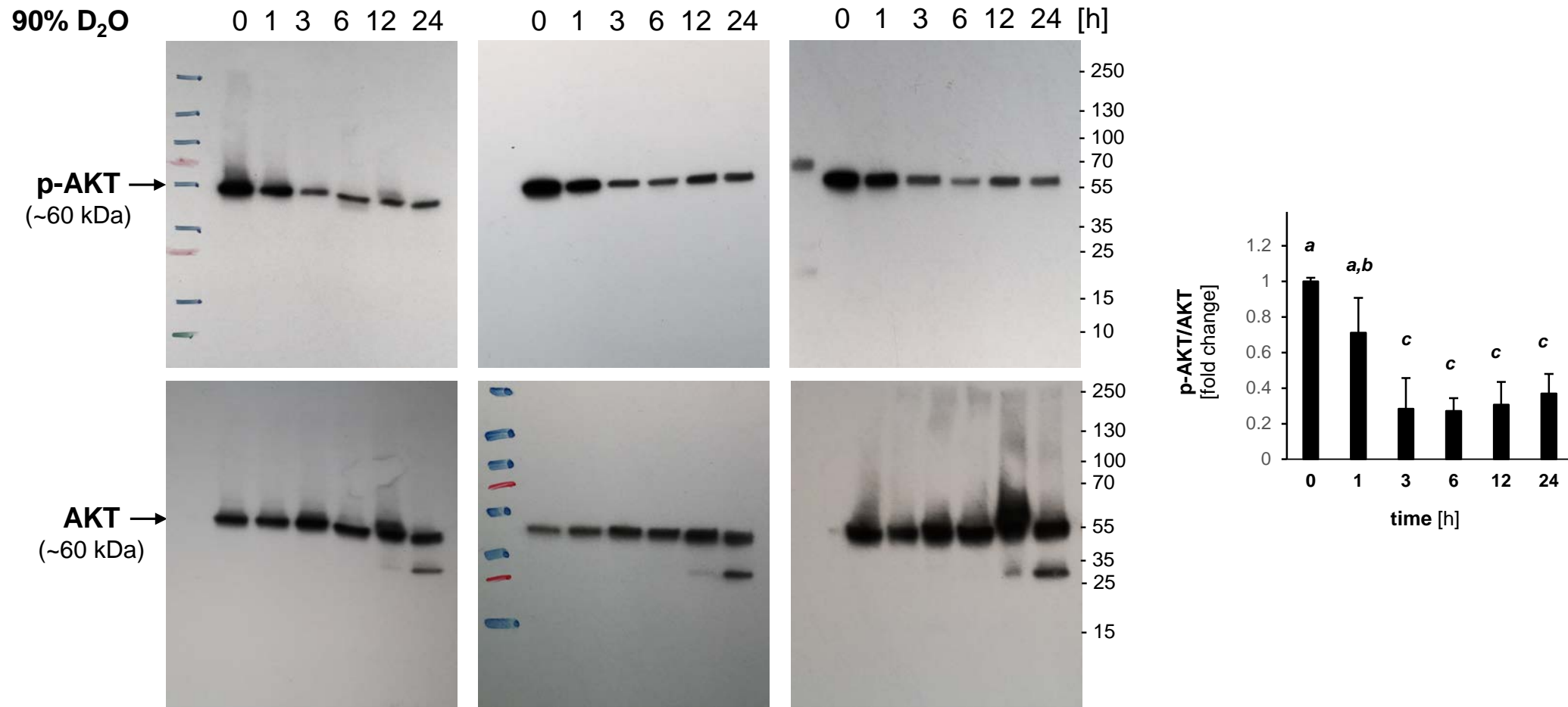
**Figure S2.** The uncropped immunoblots and molecular weight markers of Figure 2D



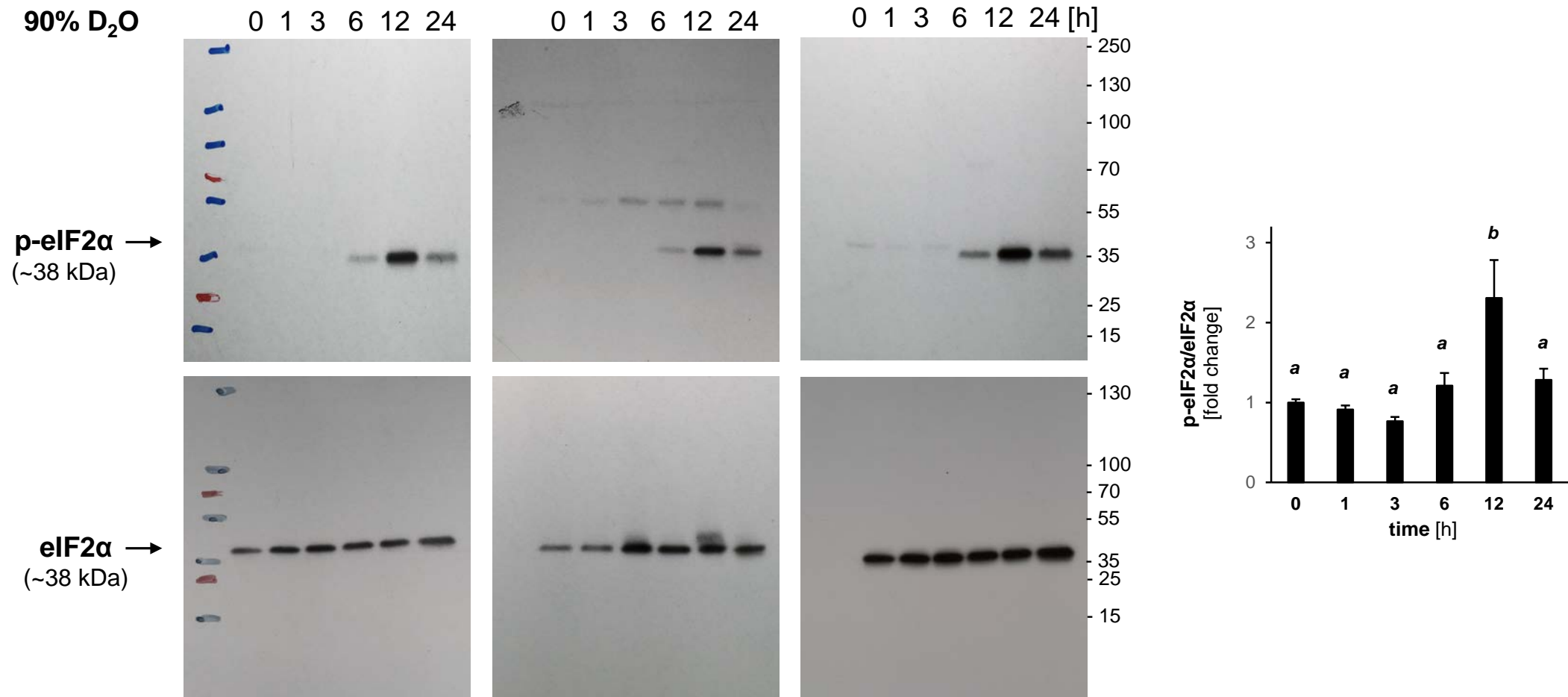
**Figure S3A.** The uncropped immunoblots and molecular weight markers of Figure 4B (antigen: ERK)



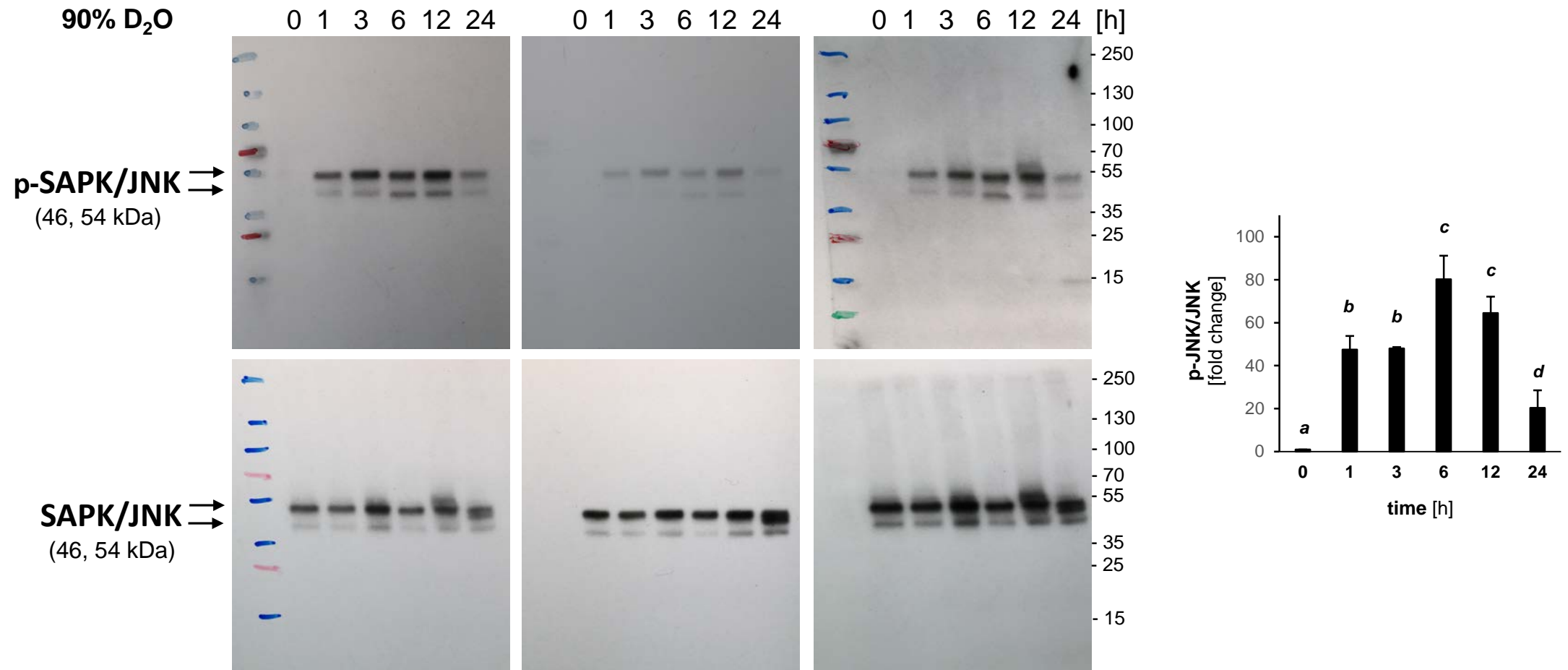
**Figure S3B.** The uncropped immunoblots and molecular weight markers of Figure 4B (antigen: AKT)



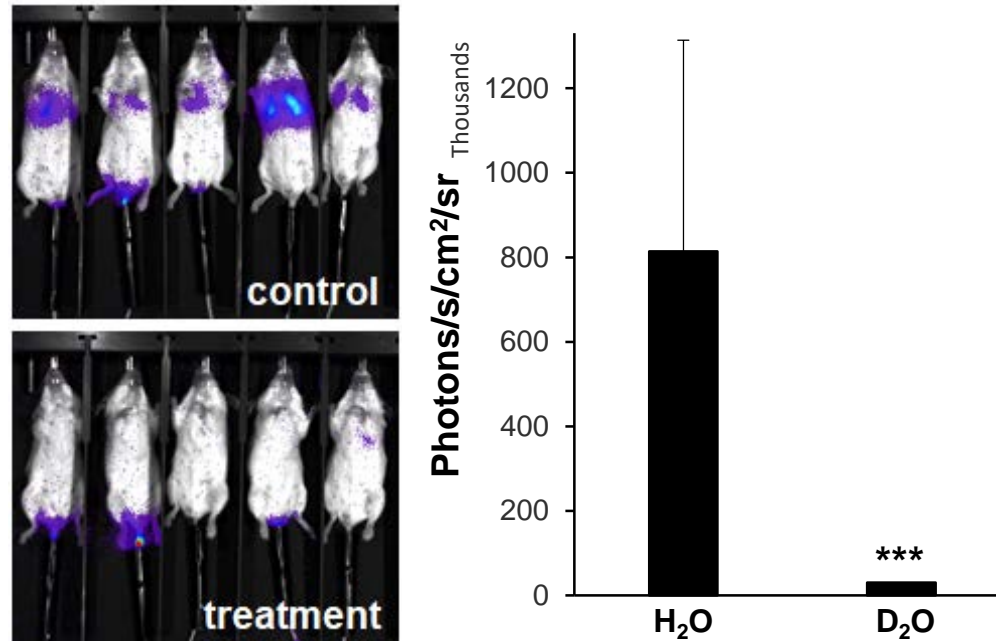
**Figure S3C.** The uncropped immunoblots and molecular weight markers of Figure 4B (antigen: eIF2 $\alpha$ )



**Figure S3D.** The uncropped immunoblots and molecular weight markers of Figure 4B (antigen: JNK)



**Figure S4. Systemic administration of D<sub>2</sub>O impairs A375 melanoma cell metastasis in a SCID mouse model.** Bioluminescent imaging data acquired at the end of the two weeks D<sub>2</sub>O regimen. Luminescent cells were injected at day 0, mice were then supplemented with drinking water (D<sub>2</sub>O vs. H<sub>2</sub>O) until day 14, and imaging occurred on day 14; (see Fig. 5 for experimental details and day 28 data).



**Figure S5.** Representative 'low power' IHC images of tumor tissue stained for the following antigens: Ki67, DDIT3 and HO-1 (see legend of Fig. 5G for details on tumor specimens).

