Supplementary Materials

Urolithin A protects hepatocytes from palmitic acid-induced ER stress by regulating calcium homeostasis in the MAM

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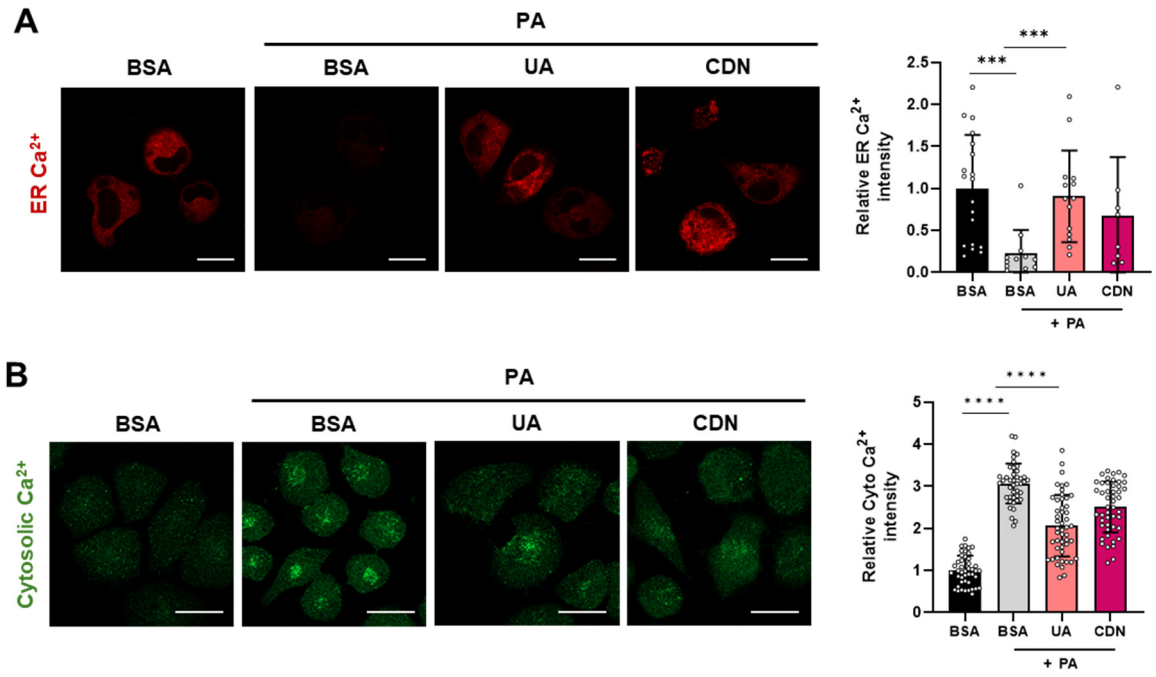
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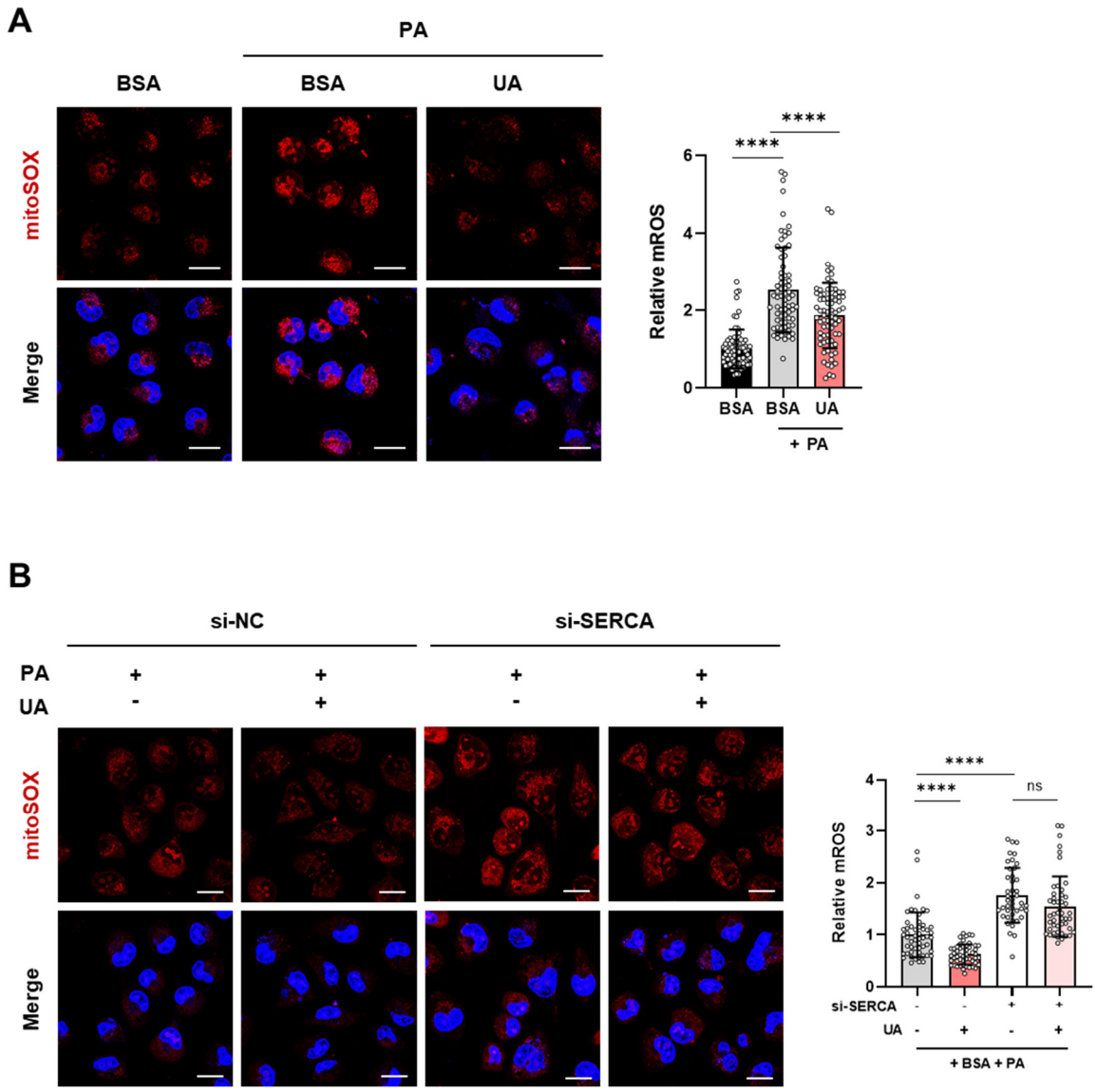
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Supplementary Figure S1.



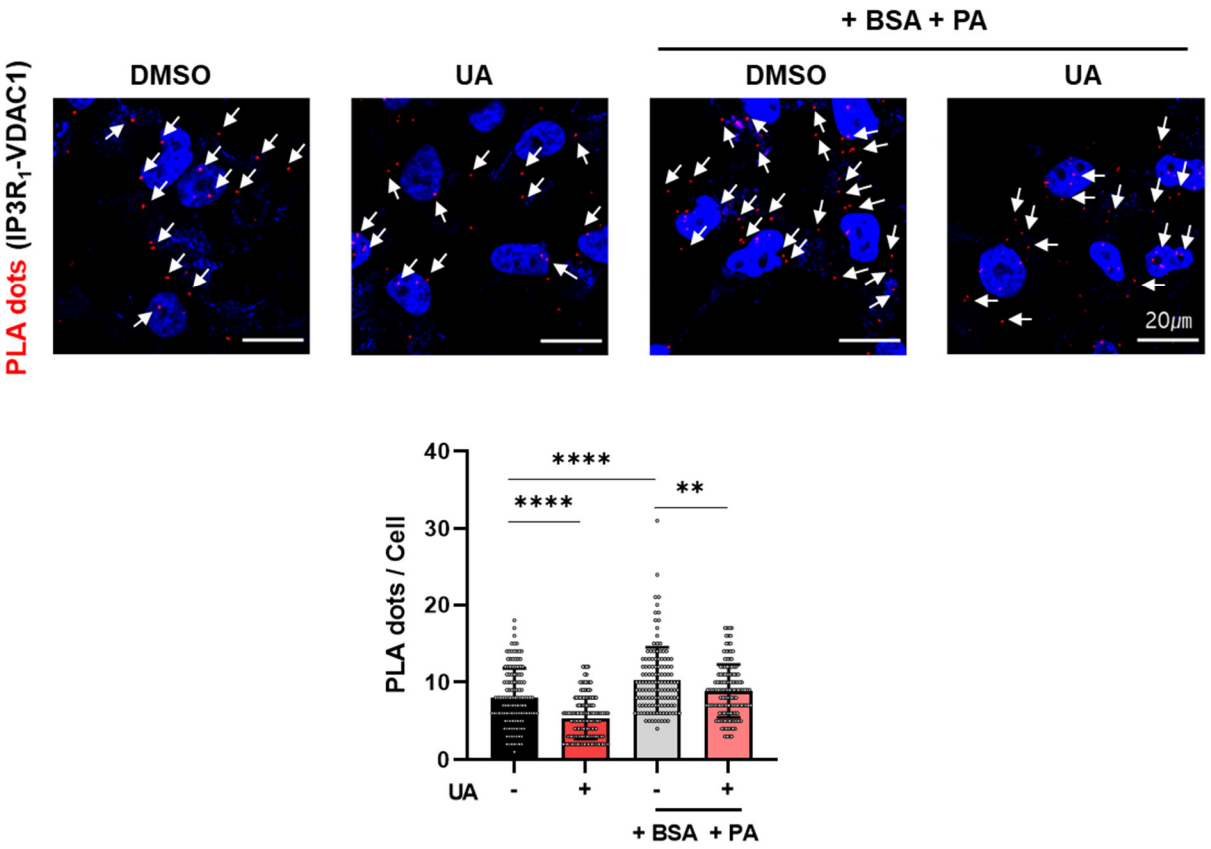
(**A**) ER calcium levels were measured in HepG2 cells treated with PA (500 μM) for 24 h, either alone or co-treated with UA (40 μM) and CDN1163 (10 μM) (scale bar: 10 μm). (**B**) Cytosolic calcium levels were assessed using the Fluo-4-AM after 24 h of treatment with PA, either alone or co-treated with UA (40 μM), and CDN1163 (10 μM) (scale bar: 20 μm). (***$p < 0.001$, ****$p < 0.0001$)

Supplementary Figure S2.



(**A**) HepG2 cells were treated with PA for 24 h with or without UA, followed by mitoSOX staining (scale bar: 20 μm). (**B**) Mitochondrial ROS levels were assessed to evaluate the effect of UA following SERCA knockdown in HepG2 cells (scale bar: 20 μm). (****$p < 0.0001$, ns: not significant)

Supplementary Figure S3.

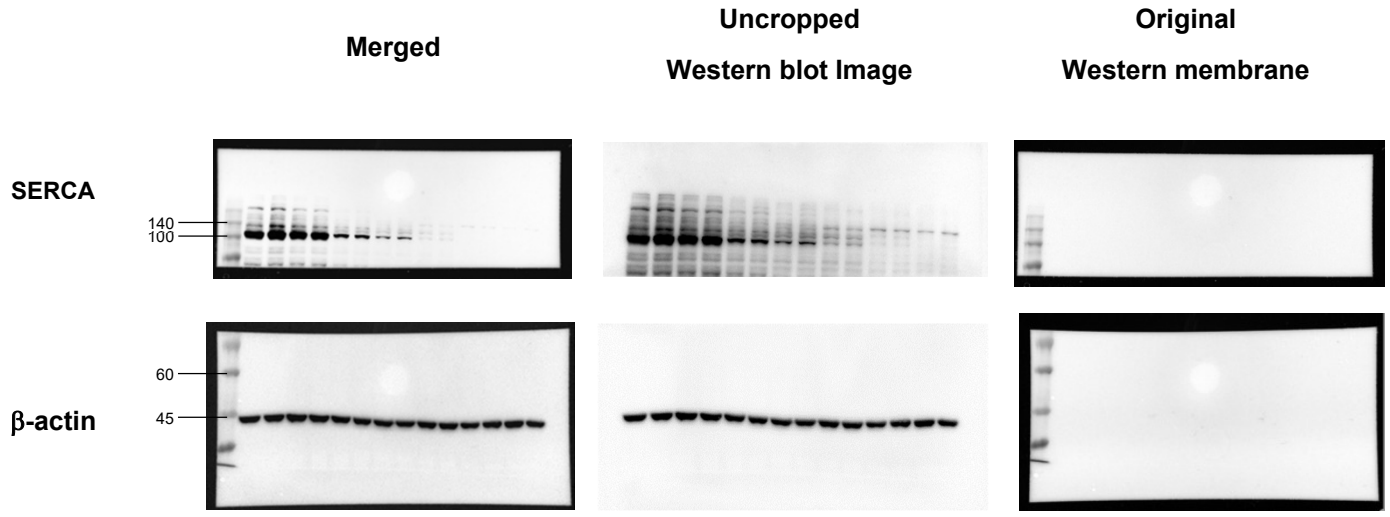


Proximity ligation assay (PLA) of IP3R and VDAC1 in HepG2 cells treated with PA (0.5 mM) and UA (40 μM) for 24 h was performed. The red fluorescent dots indicate sites of close proximity between the ER and mitochondria. Quantification was conducted by counting the number of red fluorescent dots (scale bar: 20 μm). (**p < 0.01, ****p < 0.0001)

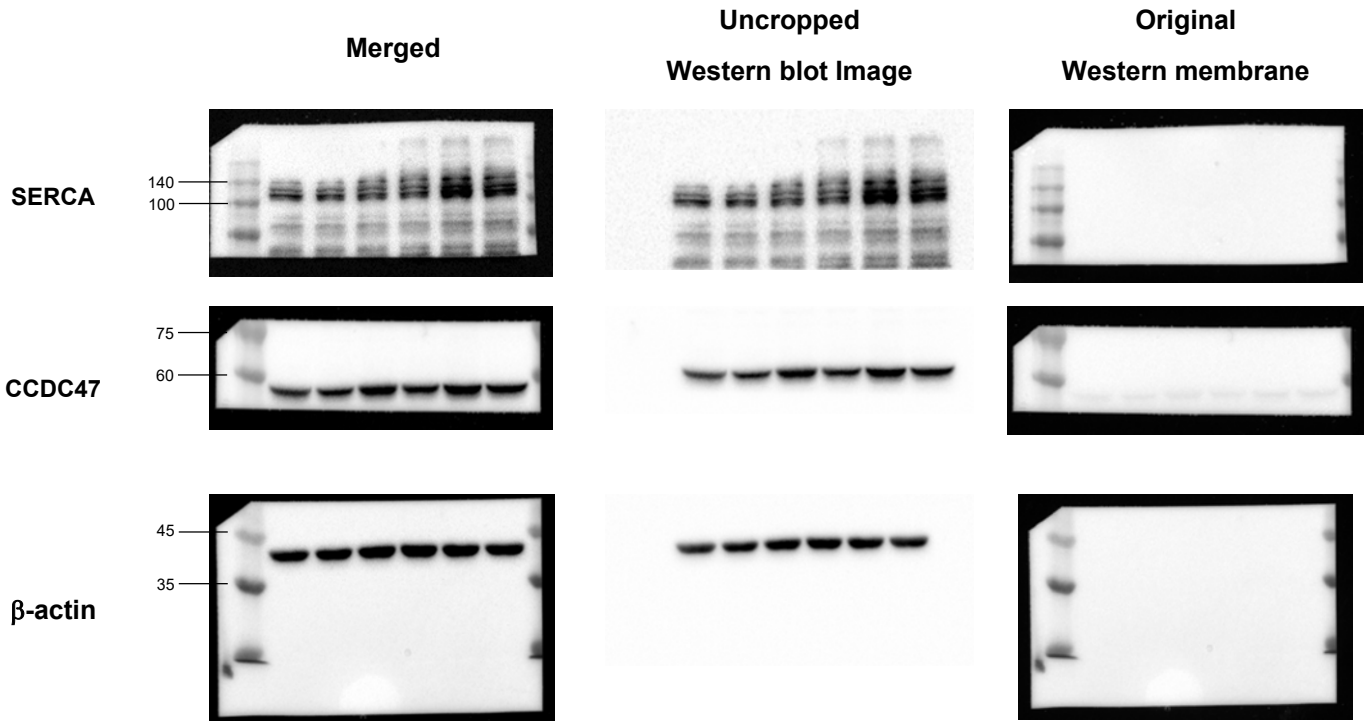
Supplementary Figure S4

Uncropped Western blot images

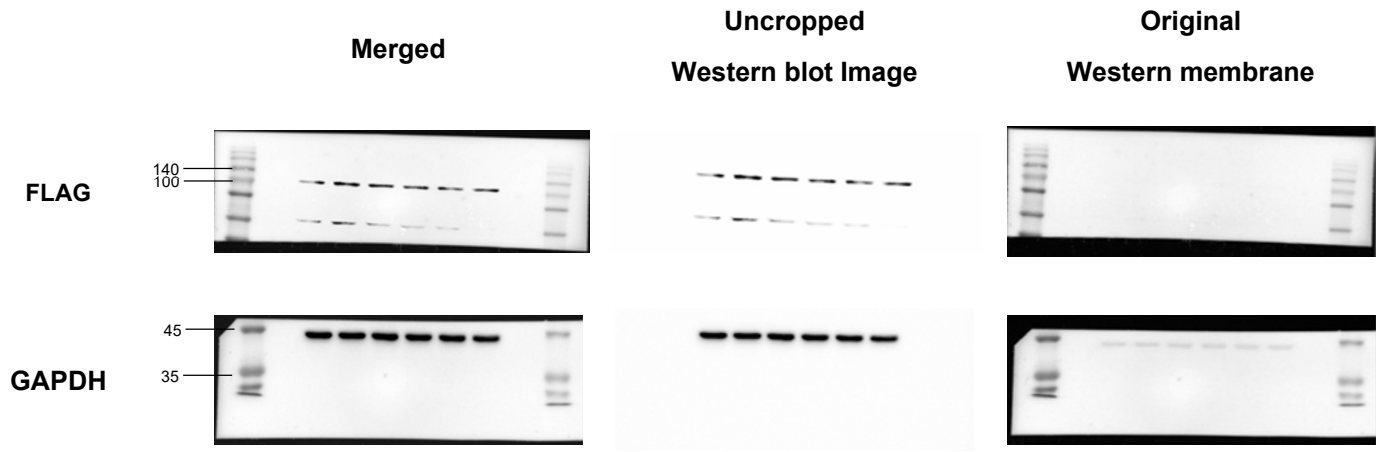
A (Figure 3A)



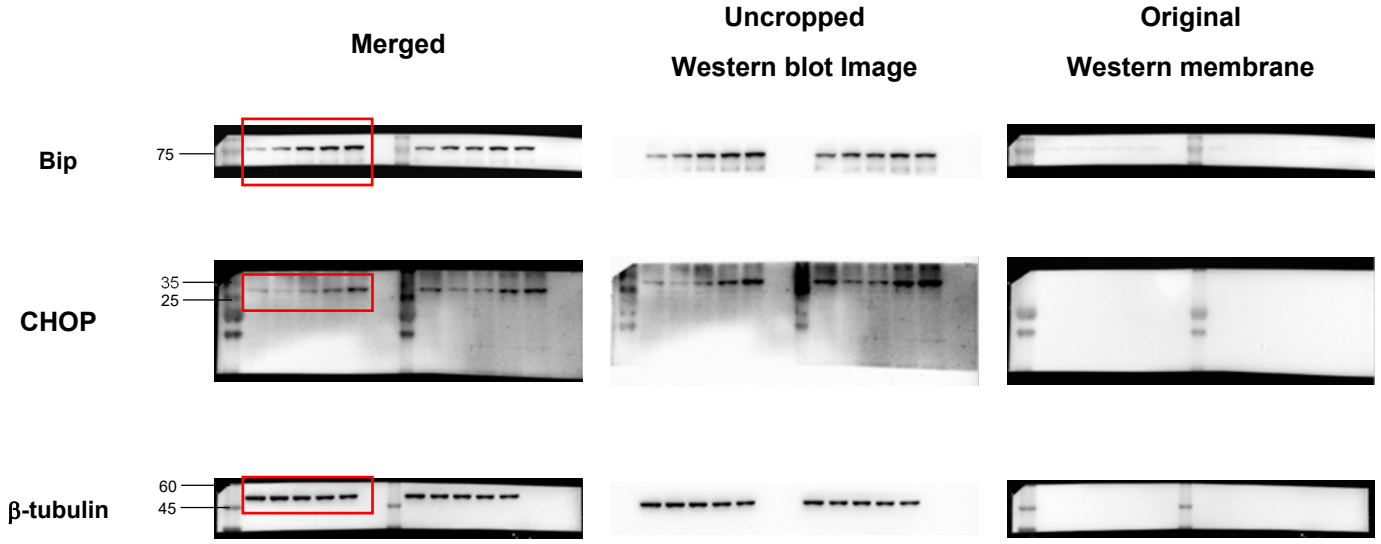
B (Figure 3B)



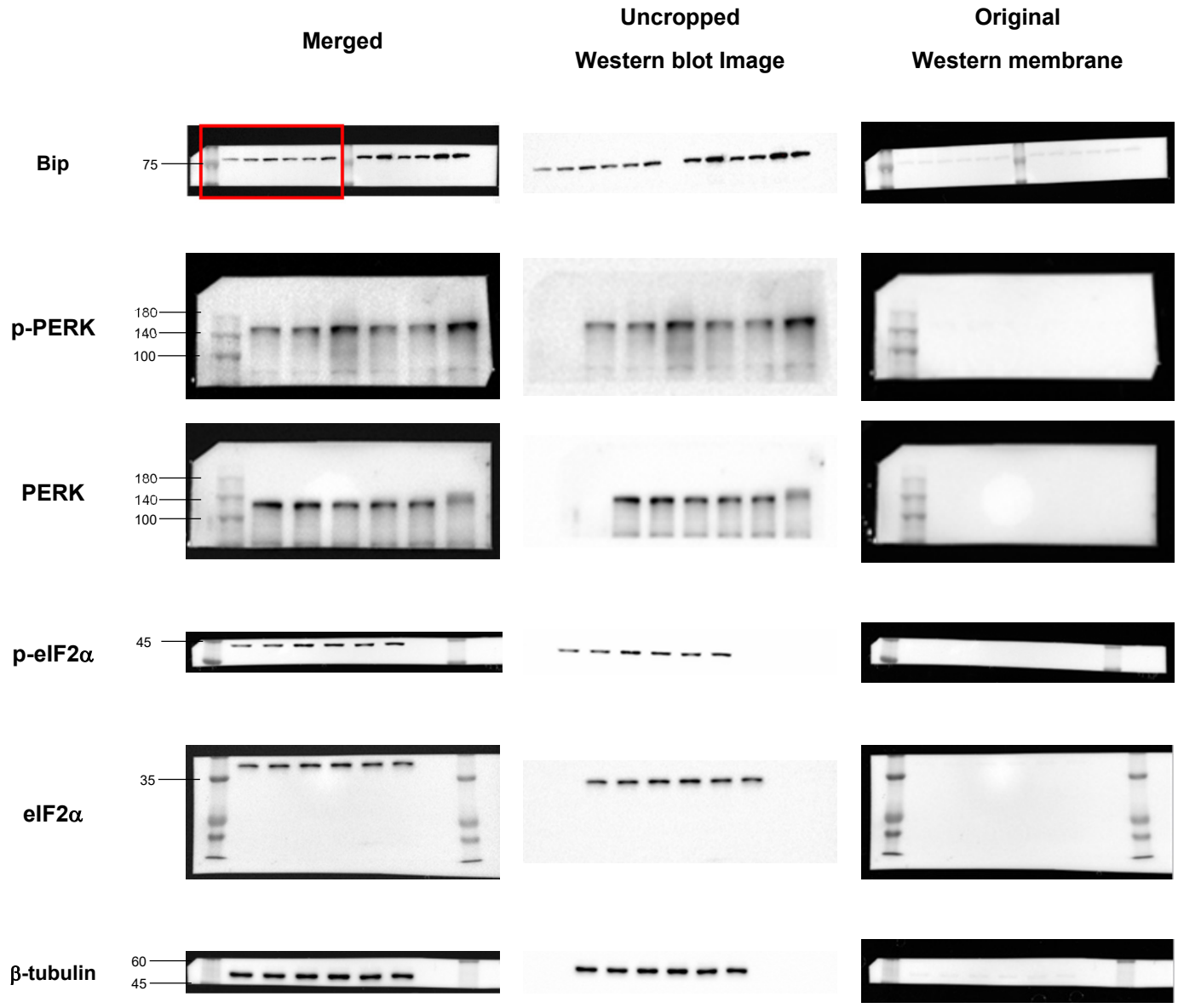
C (Figure 3F)



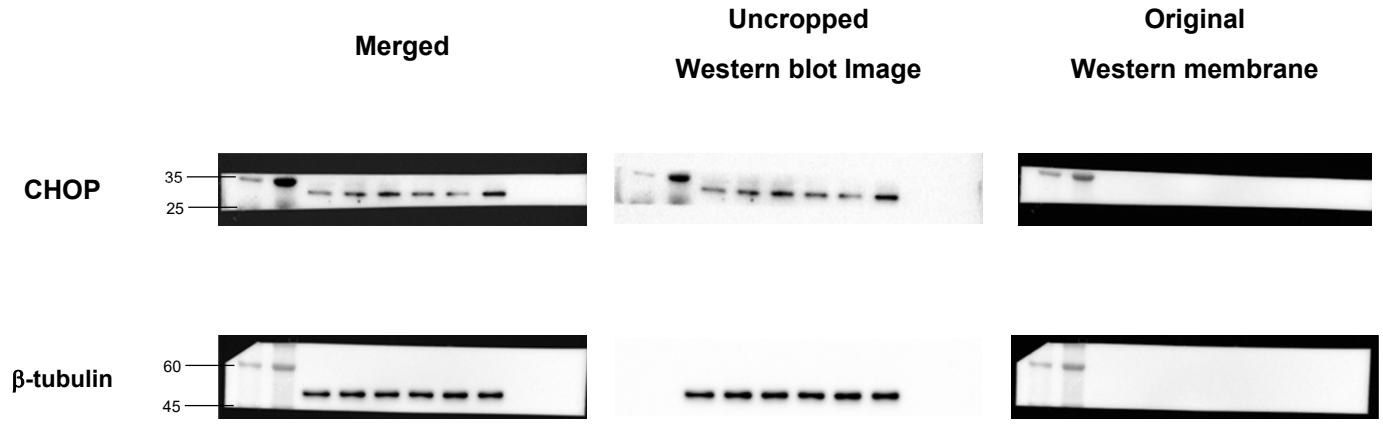
D (Figure 5A)



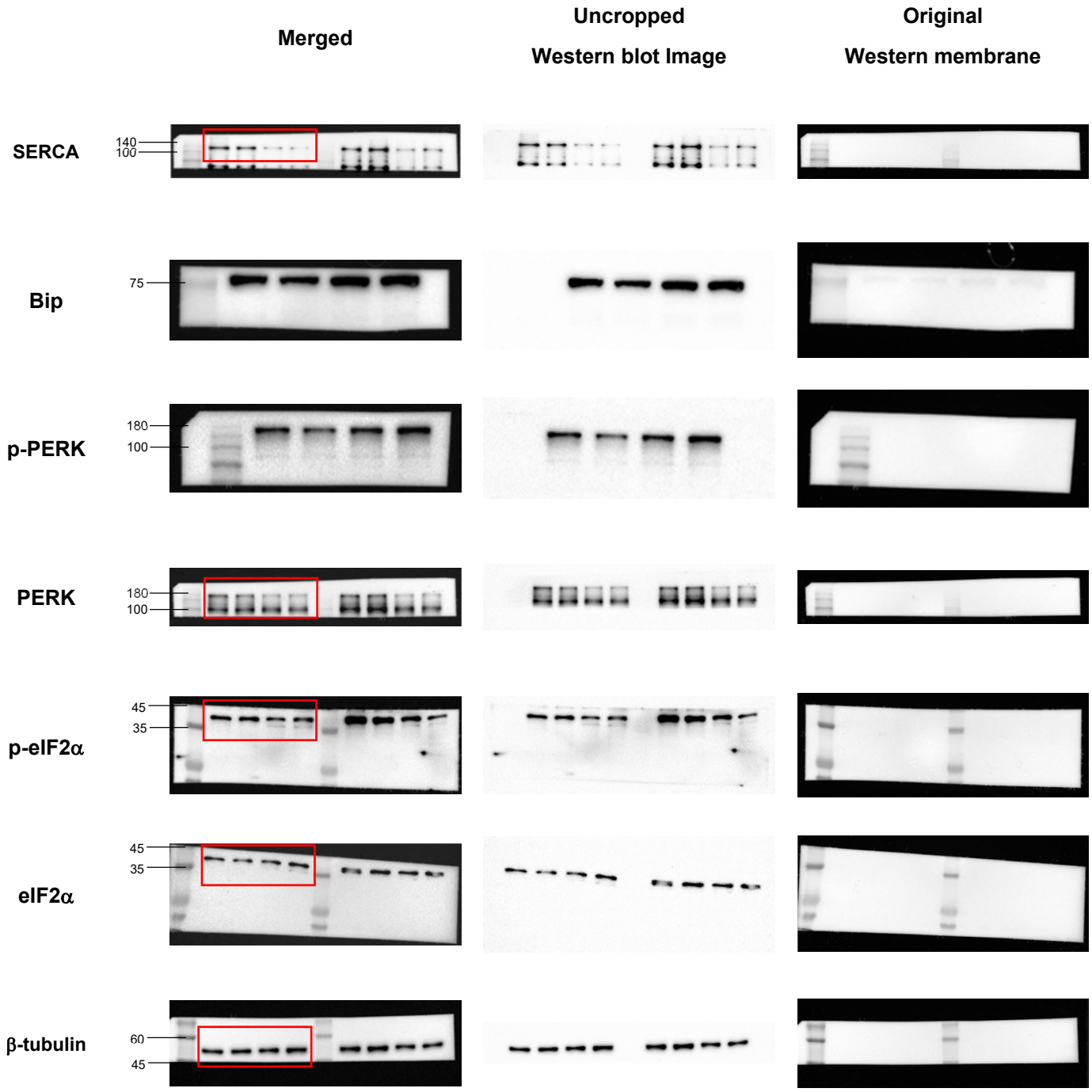
E (Figure 5B)



F (Figure 5C)



G (Figure 6D)


Merged
Uncropped
Western blot Image
Original
Western membrane
SERCA
140
100
Bip
75
p-PERK
180
100
PERK
180
100
p-eIF2α
45
35
eIF2α
45
35
β-tubulin
60
45