

Supplementary Figure legends

Supplementary Figure 1

Sup. Fig.1A shows a schematic representation of GST-A2-(288-341) construct. Sup. Fig. 1B shows a band-shift assay where the addition of increasing concentrations of GST-A2-288-341 (as indicated) is able to disrupt the TDP-43 supramolecular complexes induced by the addition of 321-366 peptide. Quantification of TDP-43 complexes from three independent experiments was performed (Sup. Fig. 1C, as indicated by arrow). Molar ratios between peptide/TDP-43 protein in the mix were 2.5 to 1.

Supplementary Figure 2

Sup. Fig.2 shows the TDP-43 distribution in U2OS cells after the presence (20 h) of TAT-342-366 (A) or TAT-pControl (B). Appreciable amounts of cytoplasmic TDP-43 aggregates were observed when TAT-342-366 peptide was used with respect to TAT-pControl. White arrows indicate TDP-43 aggregates. Sup. Fig.2C shows the distribution of TDP-43 without peptide addition. Sup. Fig. 2D shows the quantification of TDP-43 aggregates using an ImageJ derived software.

Supplementary Figure 3

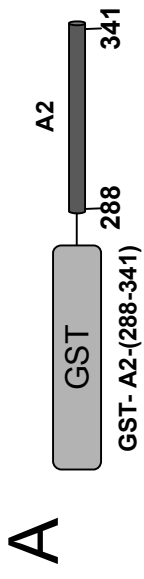
Sup.Fig.3 shows an immunofluorescence analysis of the cellular distribution of flag-TDP-43WT, flag-TDP-43 Δ 321-366 and flag-TDP-43 F147,149/L (red) cotransfected with a control EGFP protein (green) in U2OS cells.

Supplementary Figure 4

Sup.Fig.4 shows a Western blot analysis of samples from U2OS cells co-transfected with EGFP-12xQ/N and flag-TDP-43 (left and central panels), and plus HA-Ubiquitin plasmid (right panel). The membrane was blotted separately against anti-Flag and anti-TDP-43 (left panel), anti-p409/p410 (central panel) or anti-HA (right panel) antibodies. A prolonged exposure of the autoradiographic film was performed (bottom panels). Two biological experiments are shown (sample A and B).

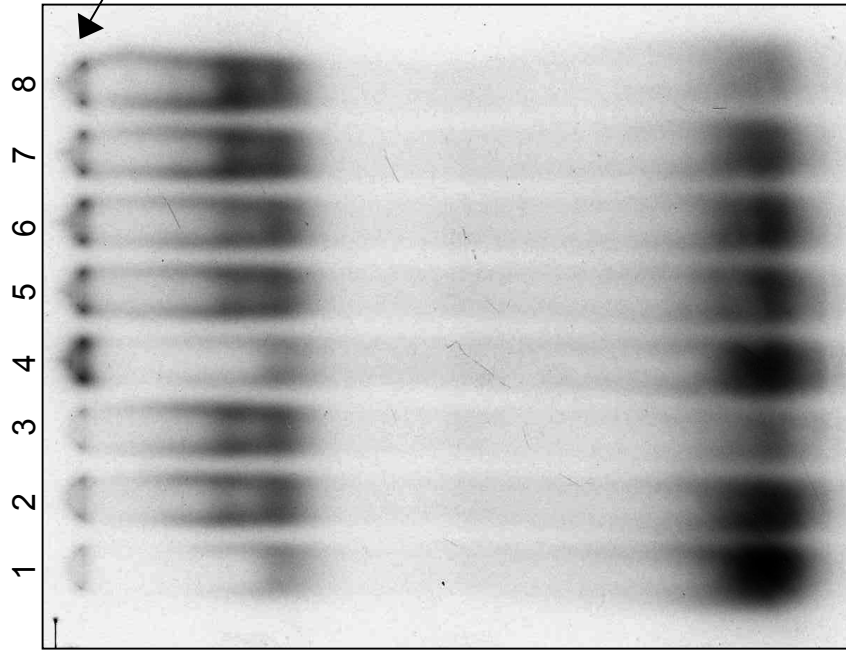
Supplementary Figure 5

Sup.Fig.5 shows an immunofluorescence analysis of the cellular distribution of flag-TBPH or flag-TBPH Δ C (1-332) (red) cotransfected with EGFP or EGFP-12x/QN (green).



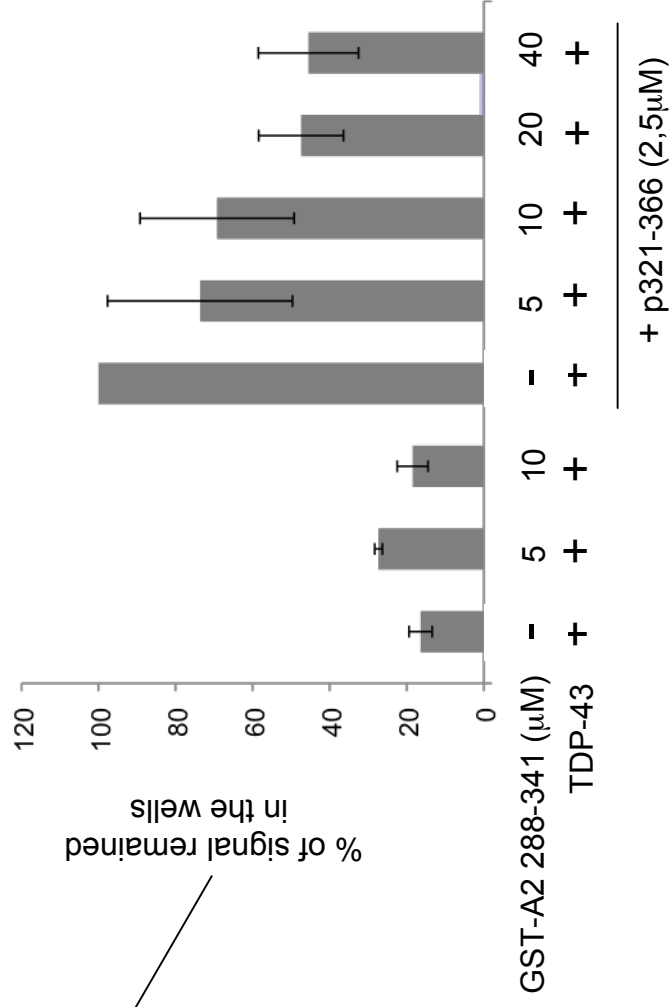
B

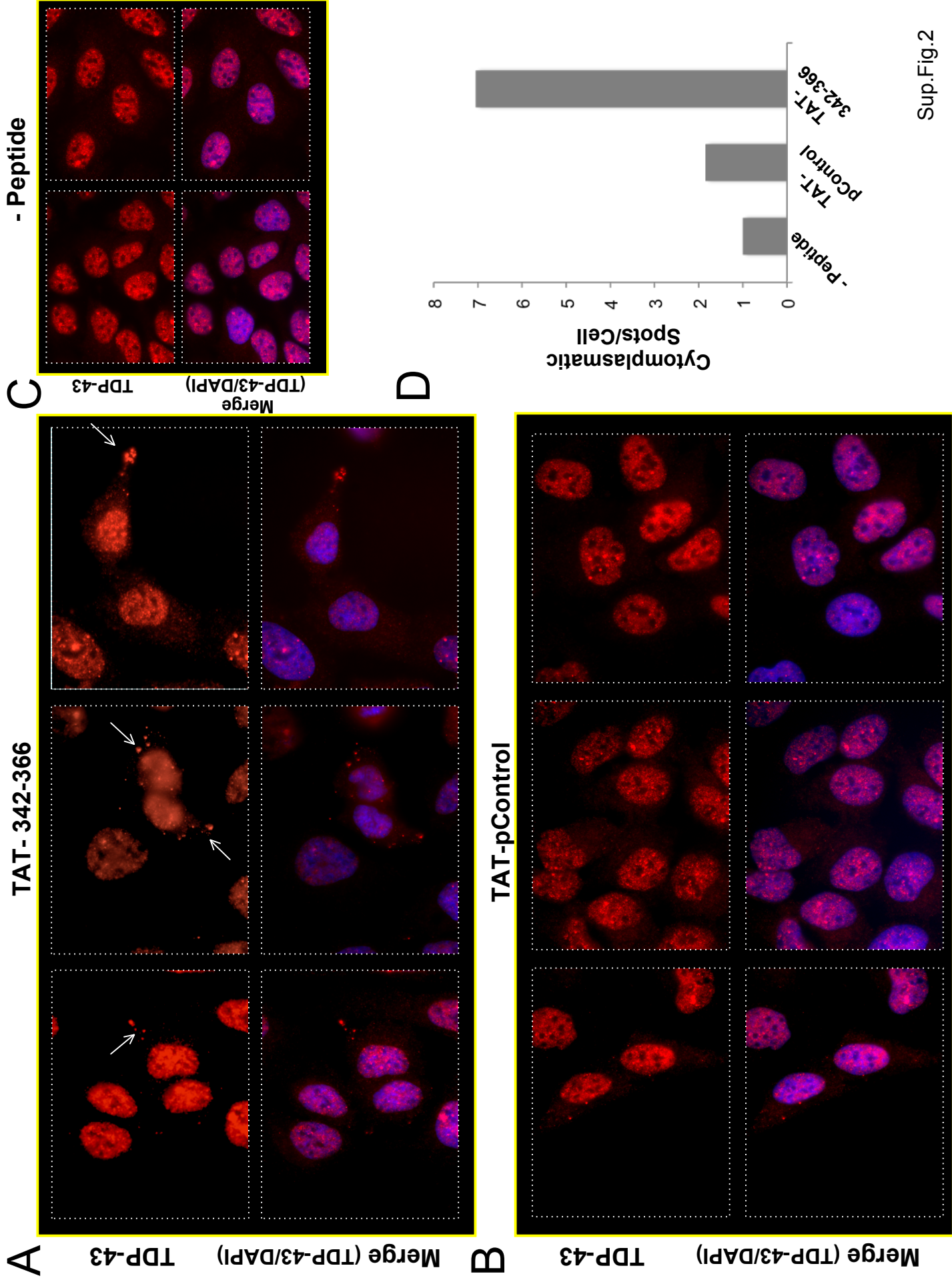
+ p321-366 (2,5 μ M)

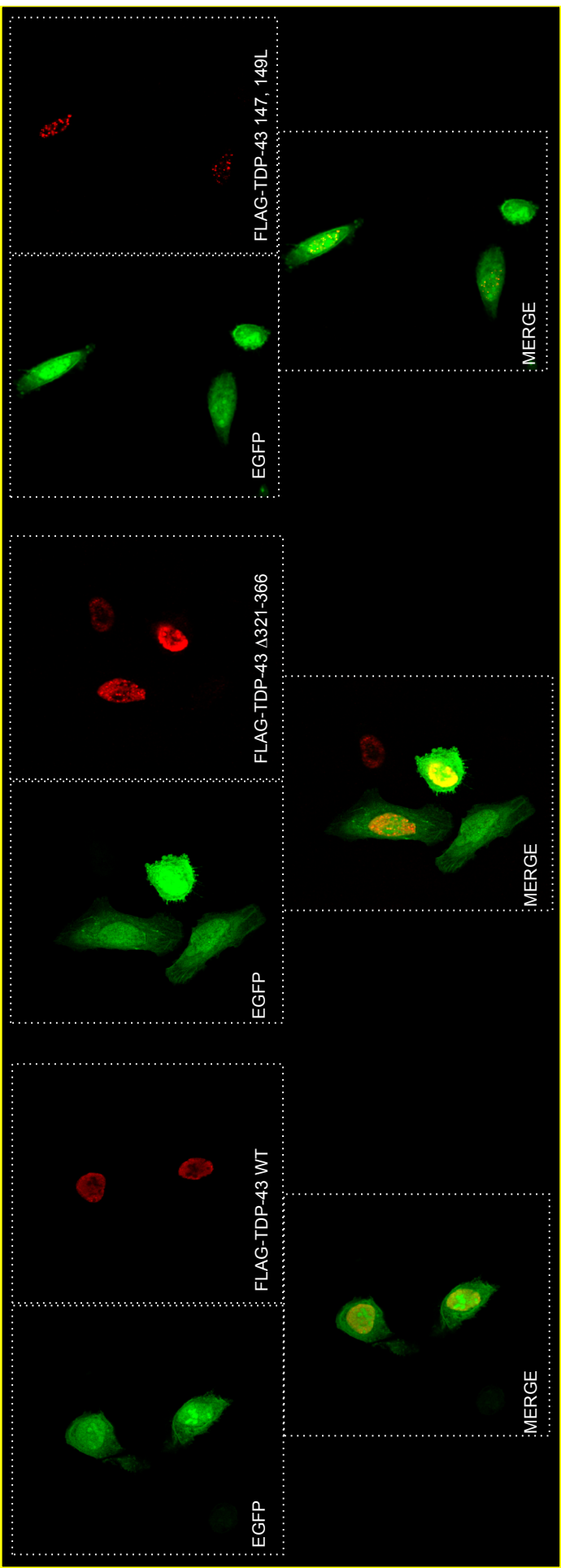


- 5 10 20 40 GST-A2 288-341 (μ M)
+ + + + + TDP-43 (1 μ M)

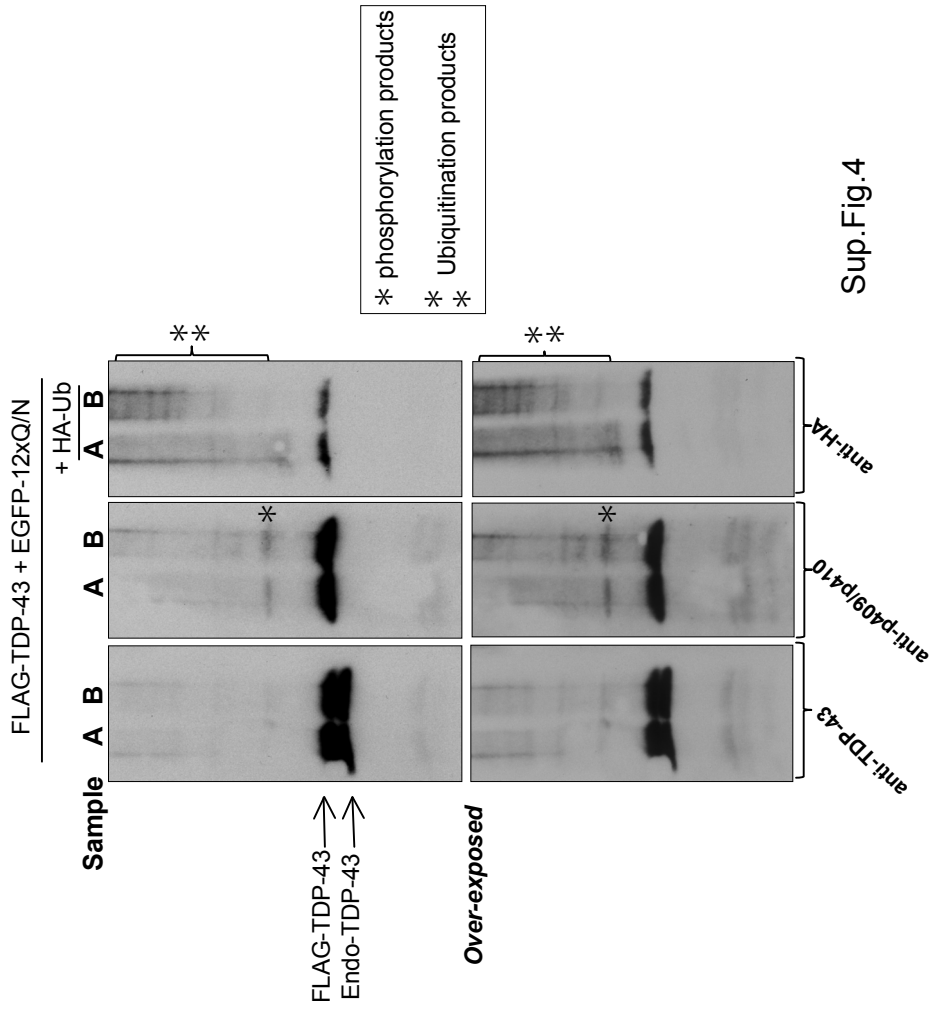
C



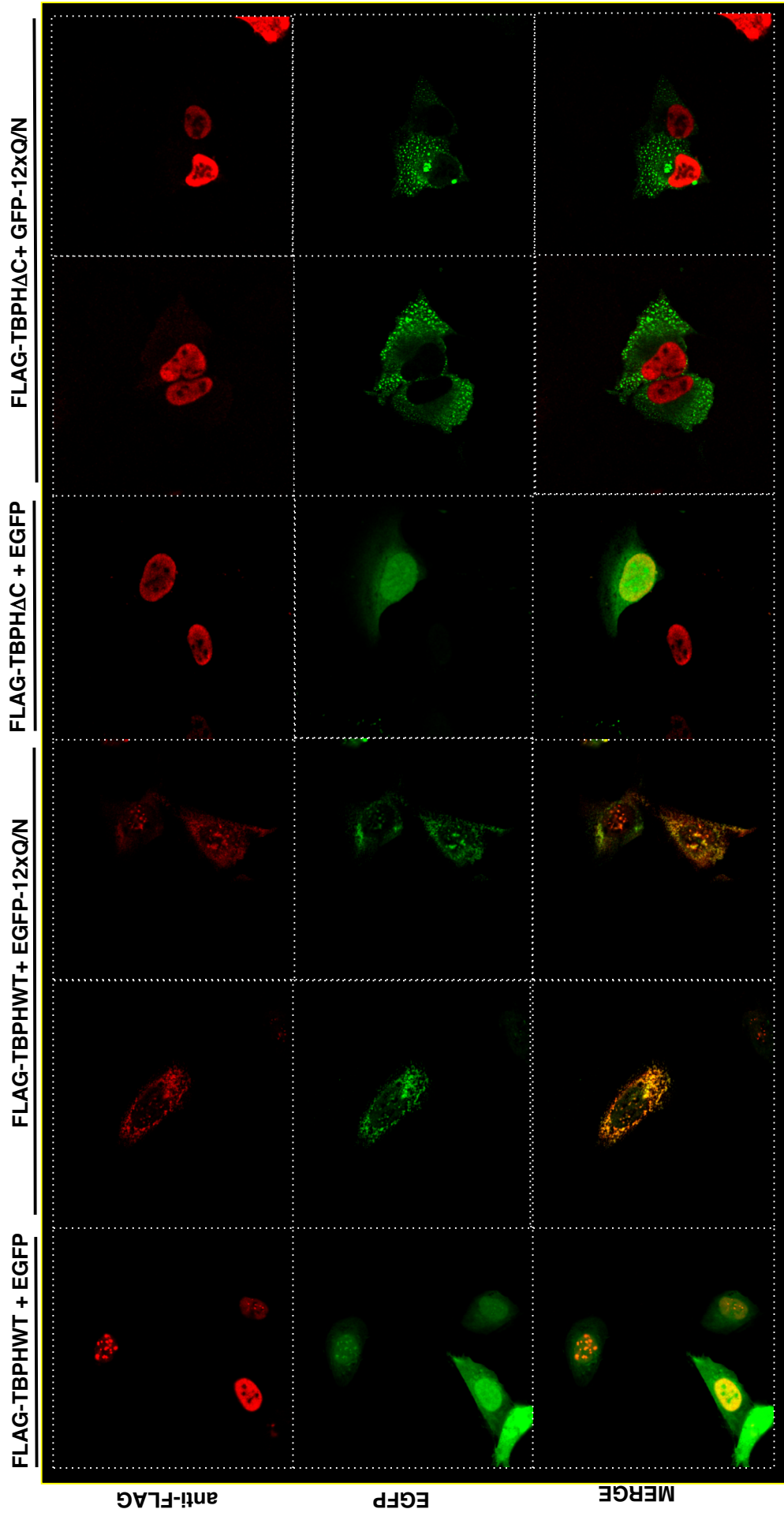




Sup.Fig.3



Sup.Fig.4



Sup.Fig.5