

Supplementary Information

pS396/pS404 (PHF1) tau vaccine outperforms pS199/pS202 (AT8) in rTg4510 tauopathy model

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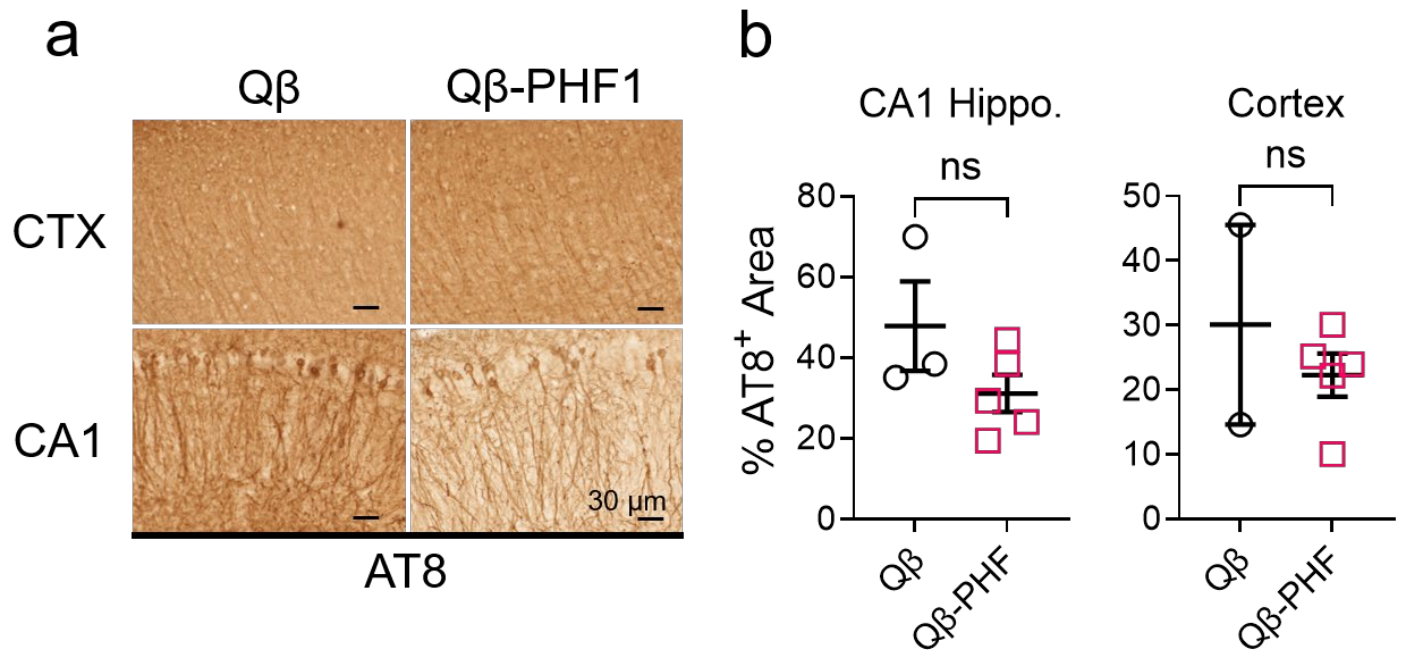
Kiran Bhaskar, Ph.D.

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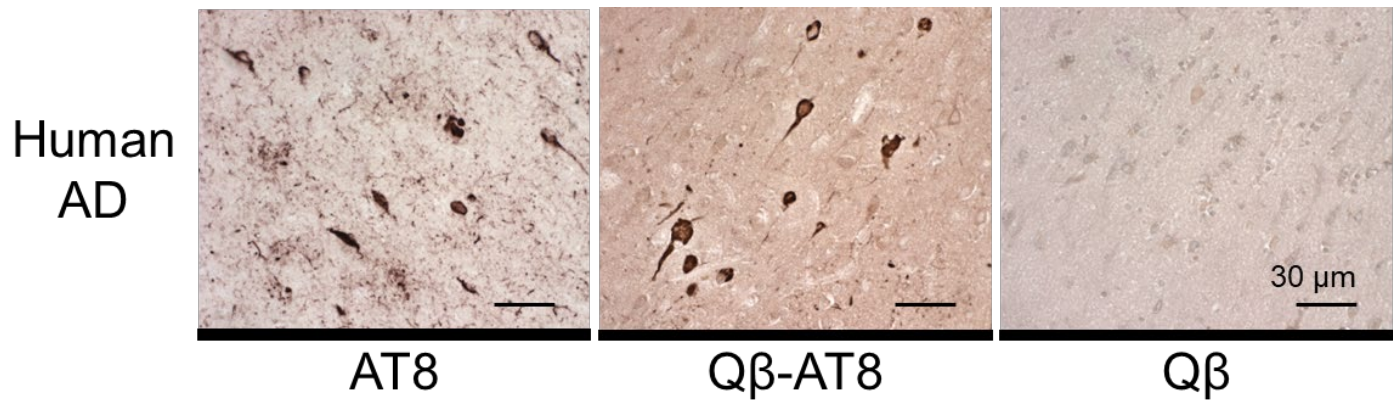
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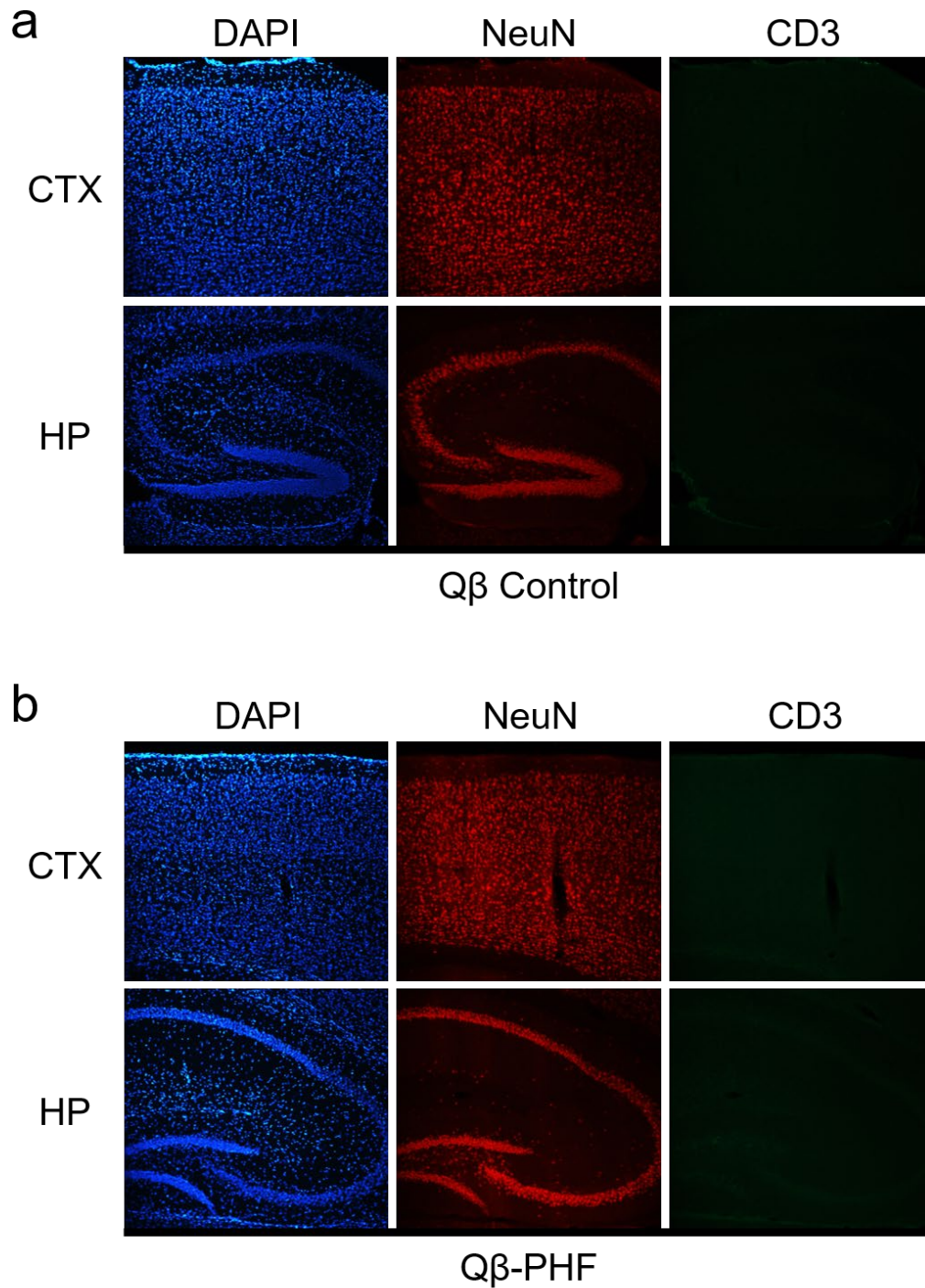
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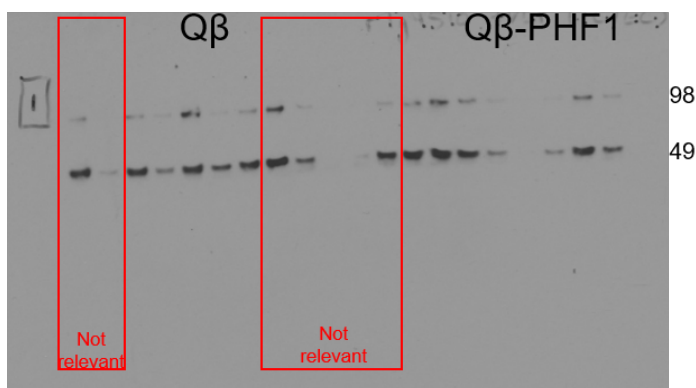
Supplementary Fig 1. Q β -PHF1 vaccination fails to reduce AT8 pathology in rTg4510 mice. **a.** IHC of brain sections from Q β Control and Q β -PHF1 vaccinated rTg4510 mice using AT8 was performed to validate the observations from Western blot analysis that soluble AT8 levels are unchanged in Q β -PHF1 vaccinated mice compared to Q β Controls. **b.** No significant differences are observed in AT8 staining between Q β Control and Q β -PHF1 vaccinated rTg4510 mice in either the cerebral cortex or CA1 hippocampus. Student's t-test; $p > 0.05$.



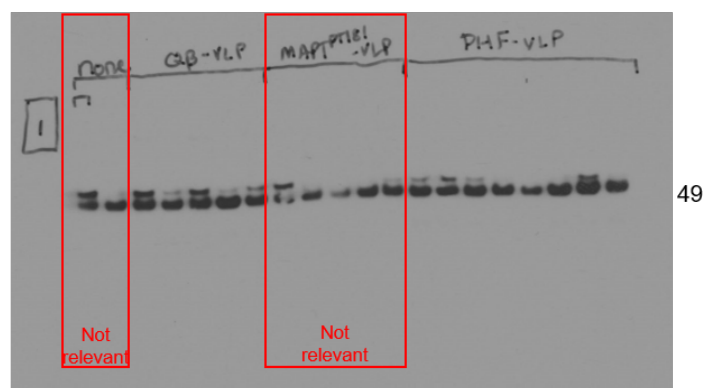
Supplementary Fig 2. Immune sera from Q β Control and Q β -AT8 vaccinated mice was used to stain human post-mortem hippocampal sections from AD brain tissue and compared to AT8 histopathology. Q β -AT8 immune sera stained somatodendritic NFT and ghost tangle histopathology in AD brain tissue similarly to AT8 but did not robustly stain other pathological features observed in AT8 such as neuropil threads or neuritic plaques. Q β Control sera did not exhibit specific staining of any tau pathology.



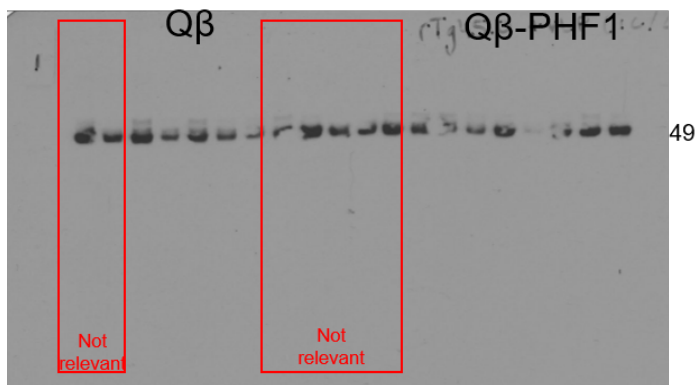
Supplementary Fig 3. Q β -PHF1 vaccination does not promote autoreactive CD3⁺ T-cell invasion into the brain. Immunofluorescence staining of all nuclei (DAPI), neuronal nuclei (NeuN), or T-cells (CD3) in the brains of (a) Q β Control or (b) Q β -PHF1 vaccinated rTg4510 mice showing no invasion of T cells into the brain.



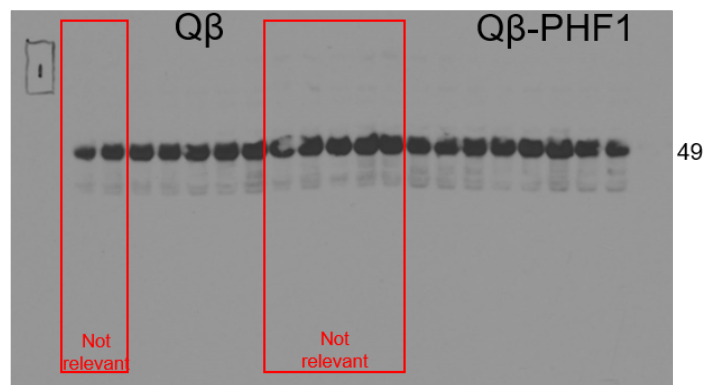
AT180



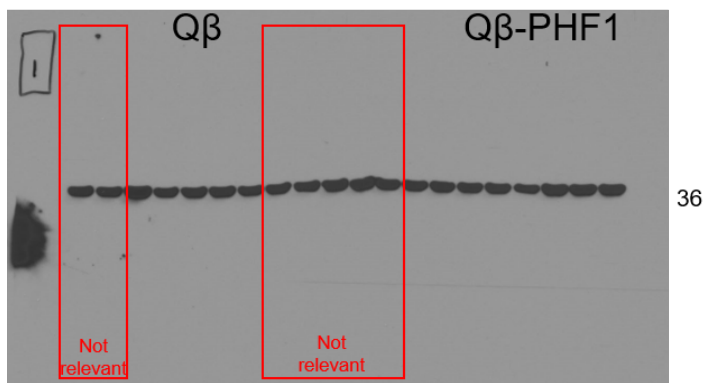
AT8



PHF1

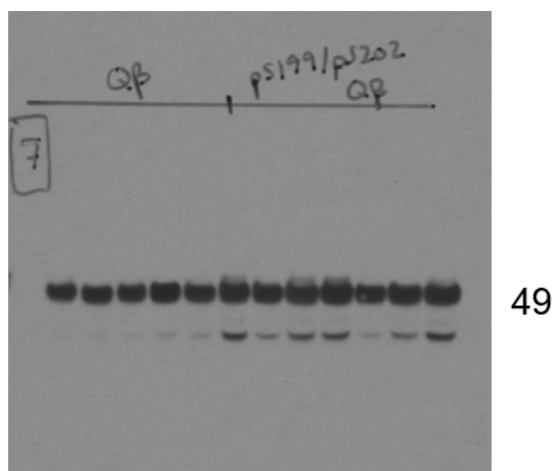


Tau5

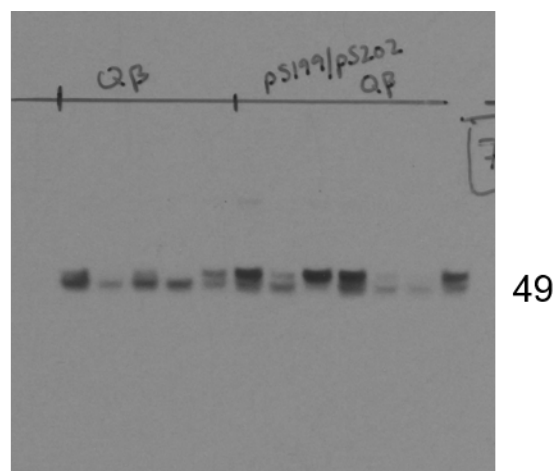


GAPDH

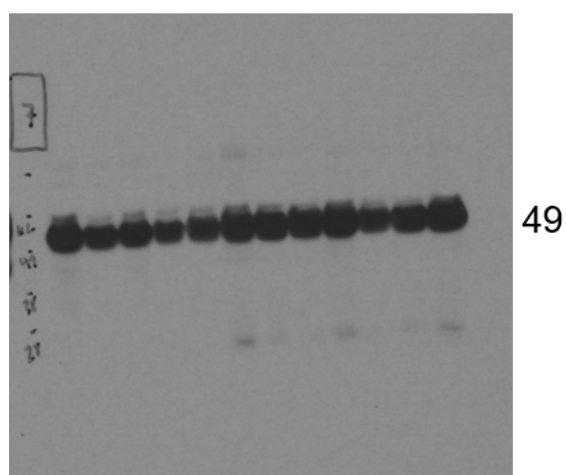
Supplementary Fig 4. Uncropped Western blot films used for Figure 3a.



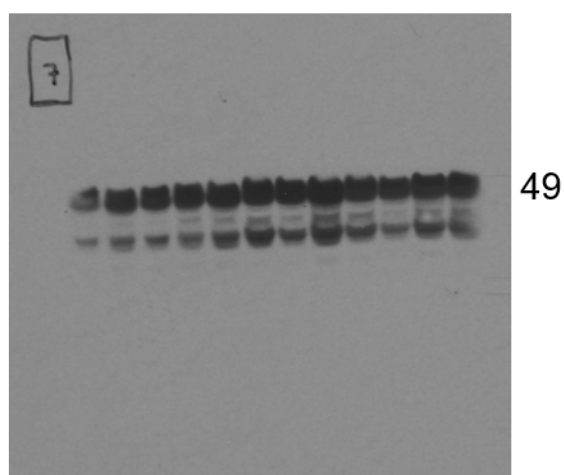
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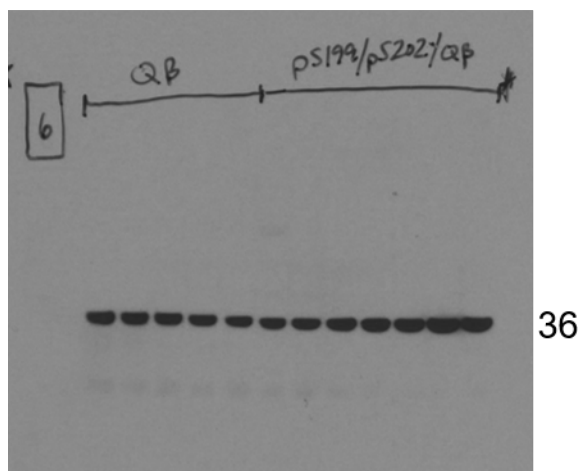
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PHF1

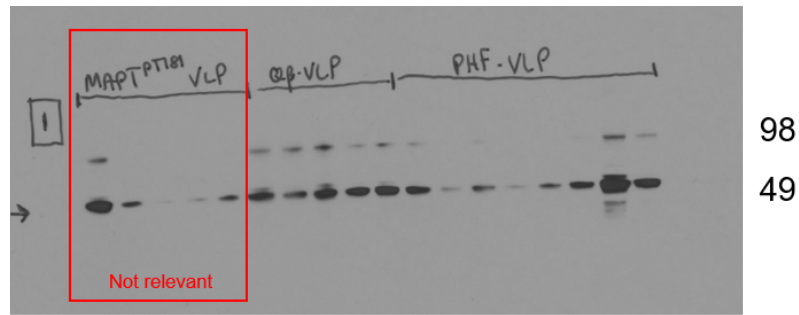


Tau5

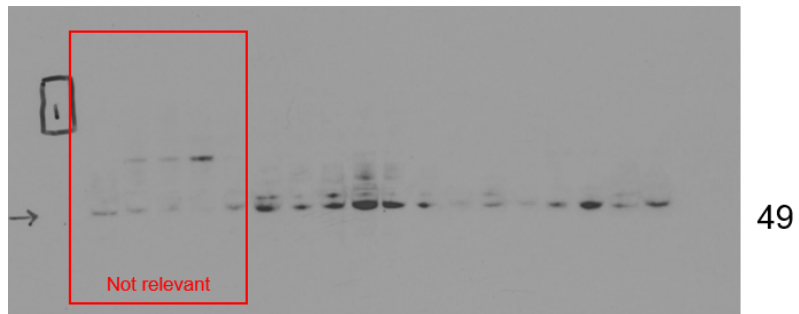


GAPDH

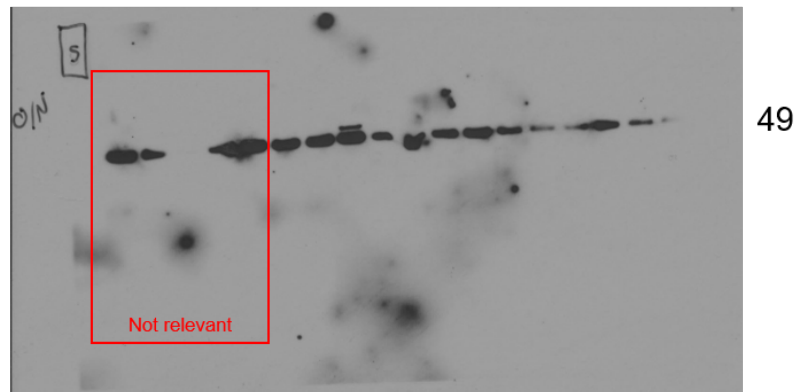
Supplementary Fig 5. Uncropped Western blot films used for Figure 3e.



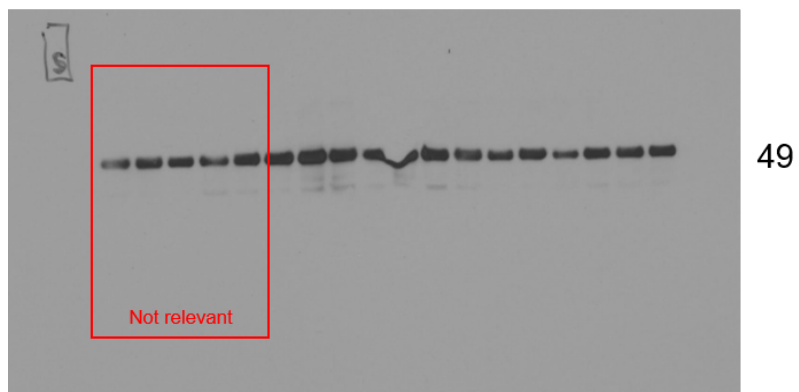
AT8 Insol.



Tau12 Insol.

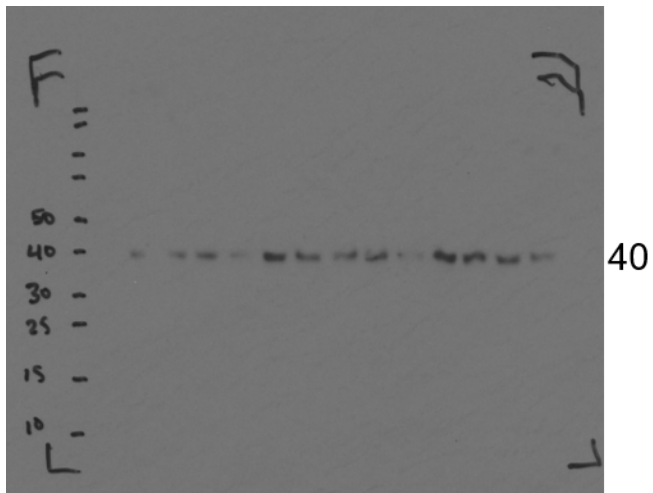


AT8 Sol.

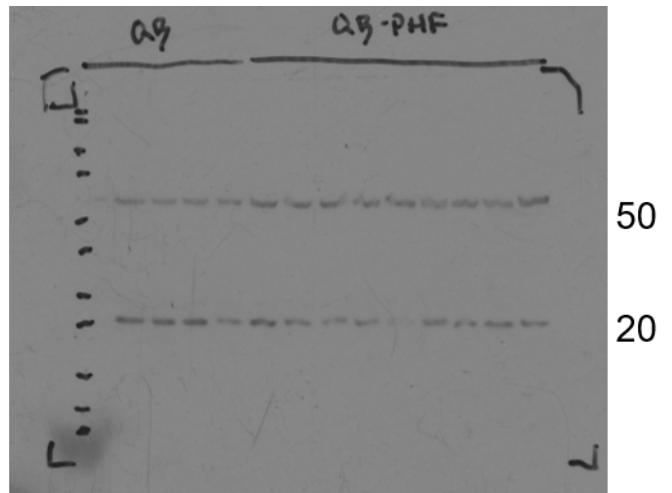


Tau12 Sol.

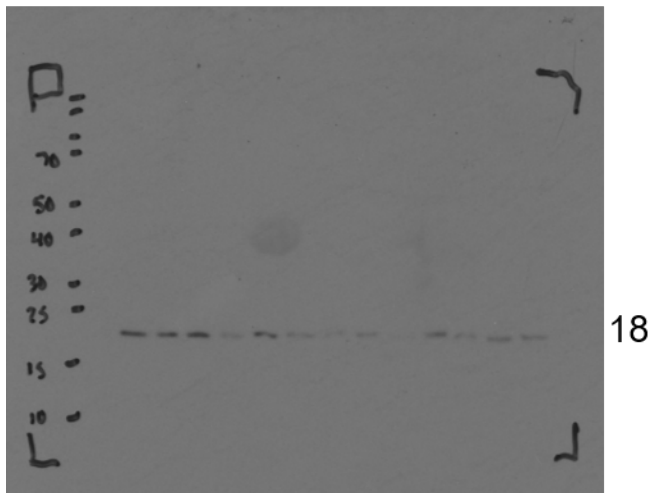
Supplementary Fig 6. Uncropped Western blot films used for Figure 4a.



IκB-α



pro-caspase-1 &
cleaved caspase-1



cleaved IL-1β



GAPDH

Supplementary Fig 7. Uncropped Western blot films used for Figure 5c.