

Prolyl oligopeptidase inhibition reduces alpha-synuclein aggregation in a cellular model of multiple system atrophy

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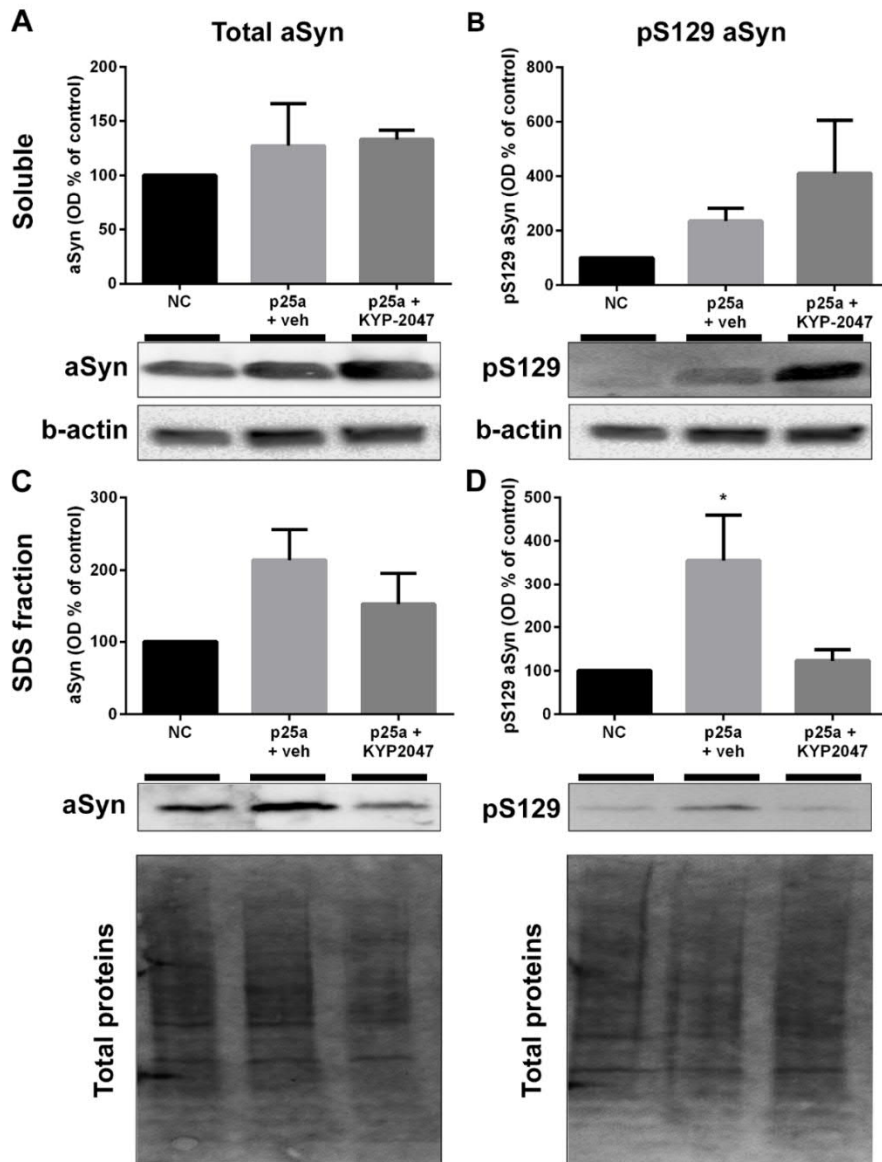


Figure S1. Effect of PREP inhibition on aSyn and pS129 aSyn aggregation after 24 h incubation. OLN-AS7 cells transfected with p25 α showed elevated soluble total and serine 129 phosphorylated aSyn (pS129 aSyn) but this was not significant (A-B). In the SDS-fraction, aSyn and pS129 aSyn were elevated but only the phosphorylated form was significantly increased from control (C-D). 24 h incubation with 10 μ M KYP-2047 reduced the levels of pS129 aSyn close to control levels (NC, negative control). Data is presented as mean \pm SEM. *, $p < 0.05$, 1-way ANOVA with Tukey's post test (D). See supplementary figure S8 for uncut blots.

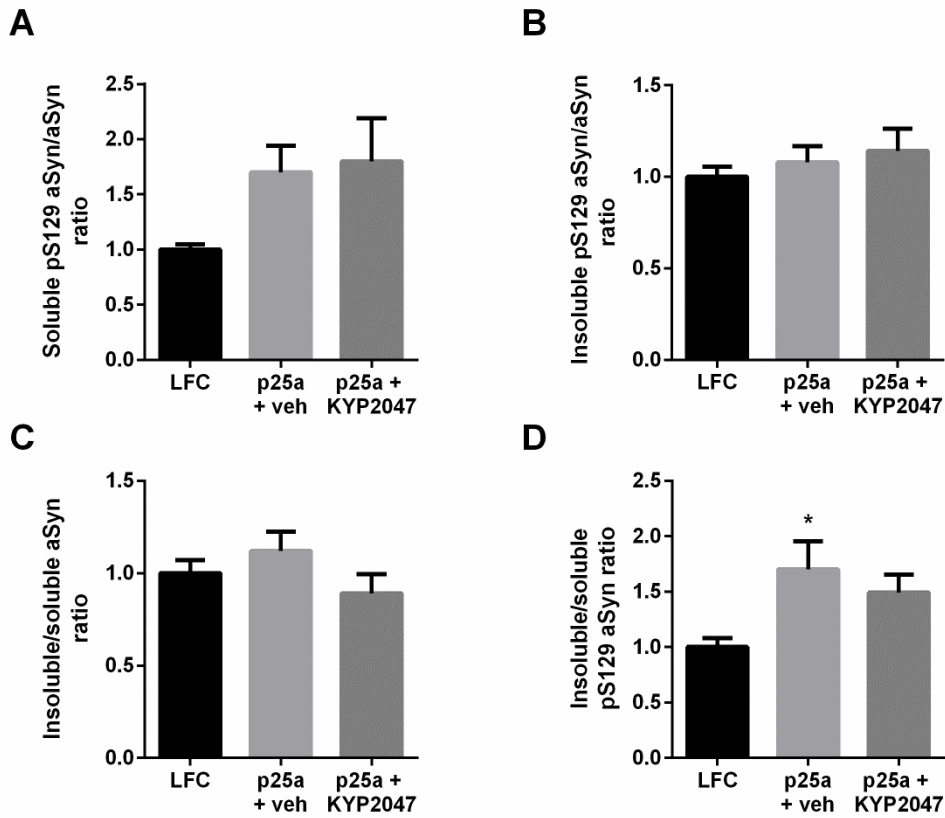


Figure S2. The effect of p25a transfection on aSyn ratios in OLN-AS7 cells. p25a did not alter the ratios between aSyn and pS129 aSyn (A-C) but significantly elevated the ratio between soluble and insoluble pS129 aSyn (D; $F_{2,17} = 6.784$, $p < 0.05$ LFC vs. p25a+vehicle; 1-way ANOVA with Tukey's post-test).

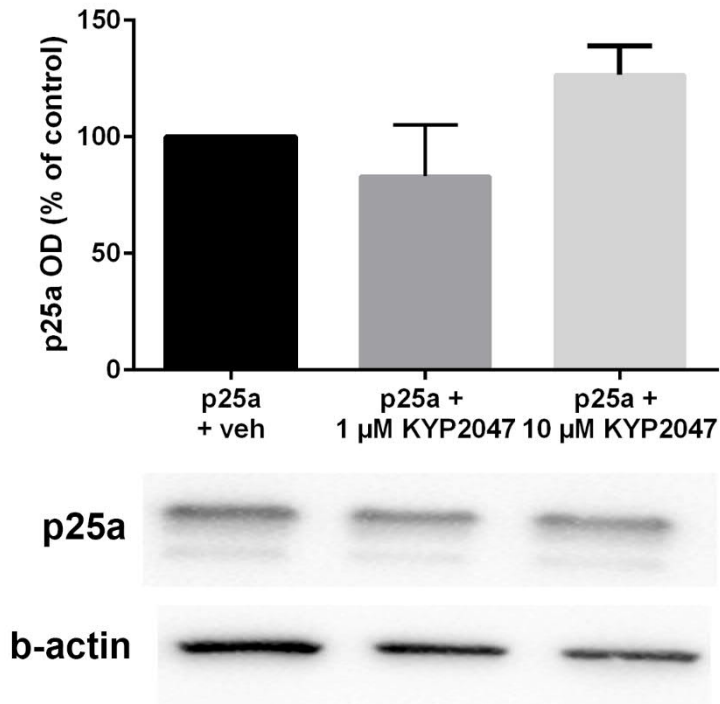


Figure S3. PREP inhibition has no effect on p25a levels after 48 h incubation. See Supplementary Fig. S9 for uncut blots.

Figure 3A / aSyn

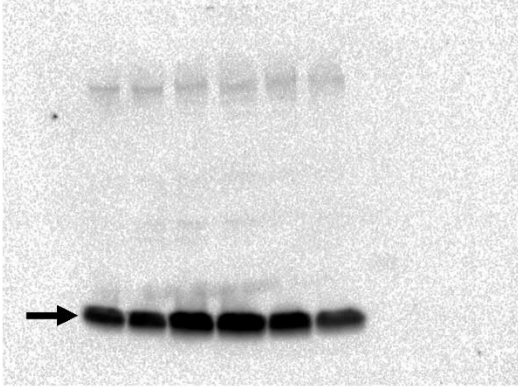


Figure 3B / pS129

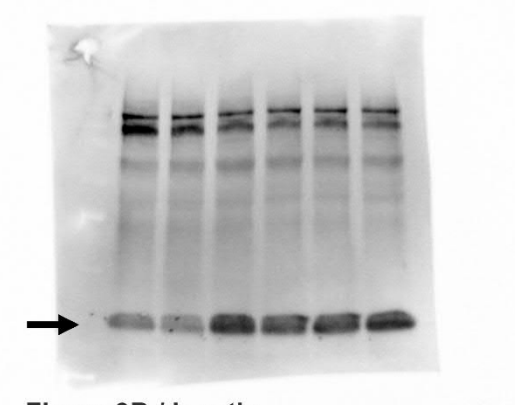


Figure 3A / b-actin

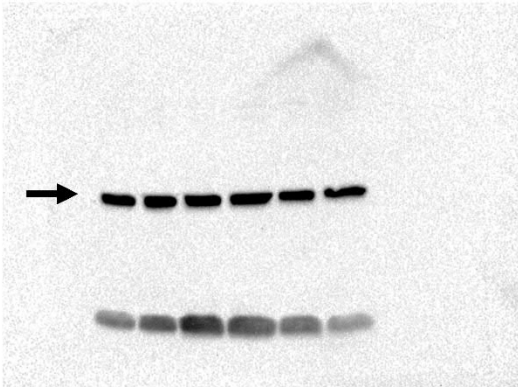


Figure 3B / b-actin

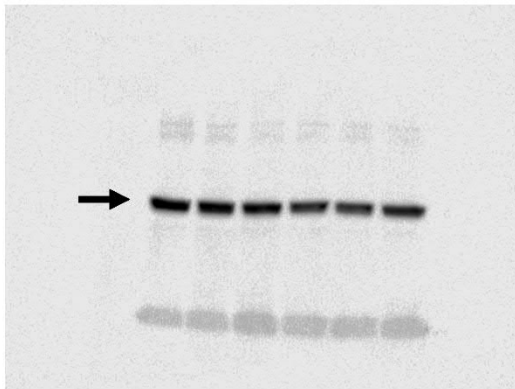


Figure 3C / aSyn

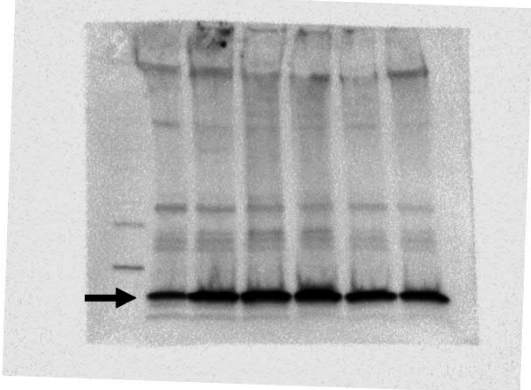
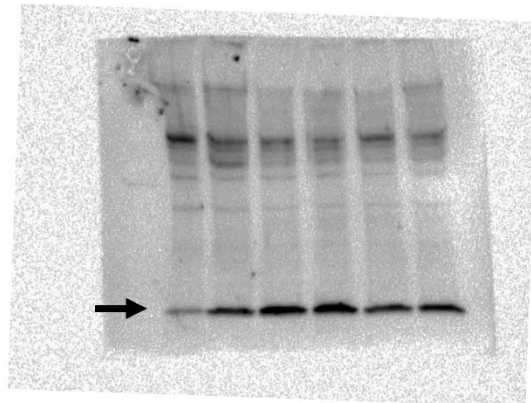
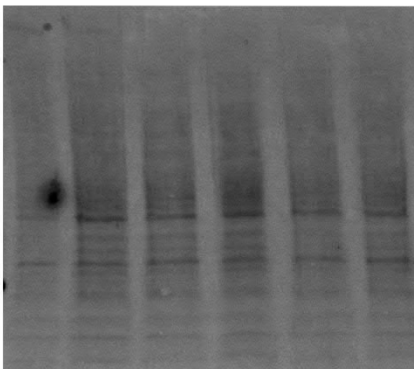


Figure 3D / pS129



Total protein



Total protein

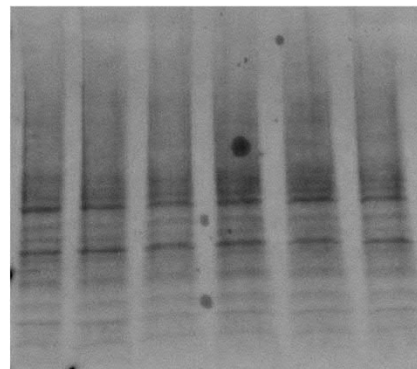


Figure S4. Uncut blots for Figure 3. Arrowhead marks the presented and analyzed band.

Figure 4A / PP2Ac

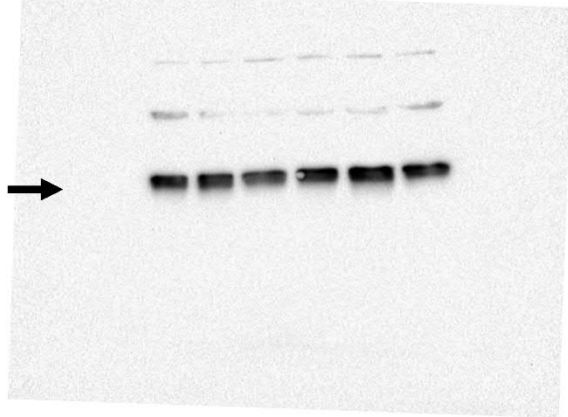


Figure 4B / pPP2Ac

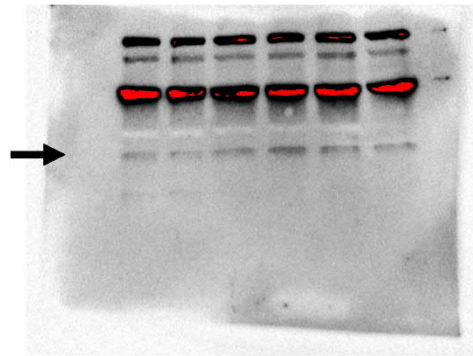


Figure 4A / b-actin

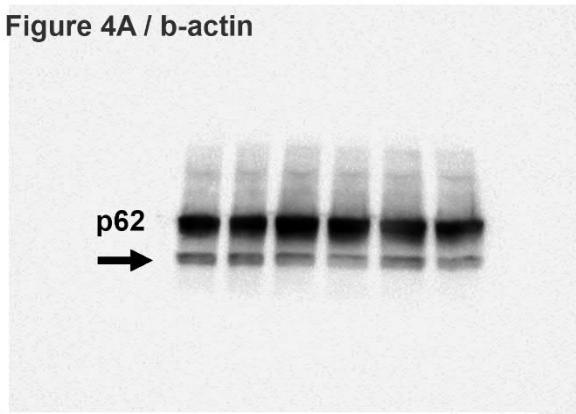


Figure 4B / b-actin

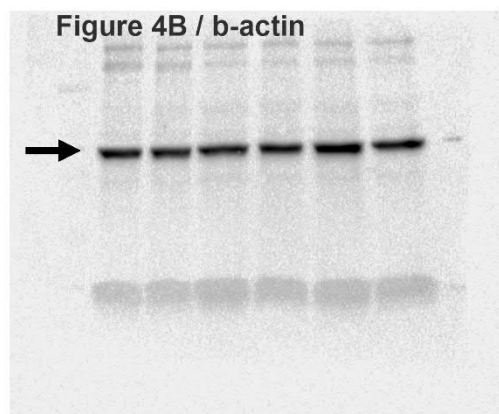


Figure 4C / p62

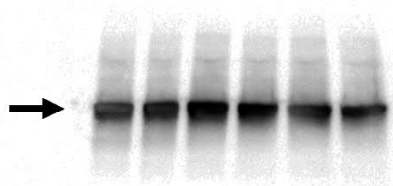


Figure 4D / LC3B

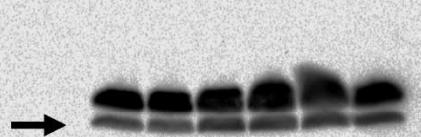


Figure 4C / b-actin

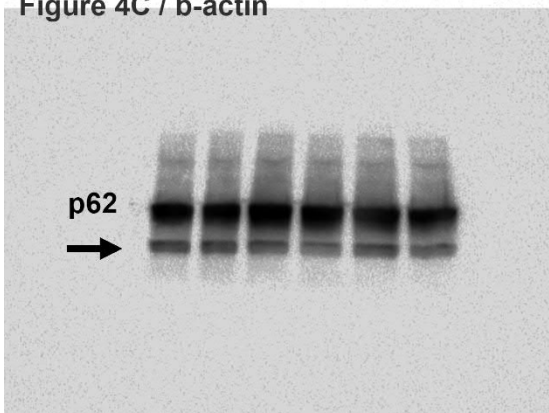


Figure 4D / b-actin

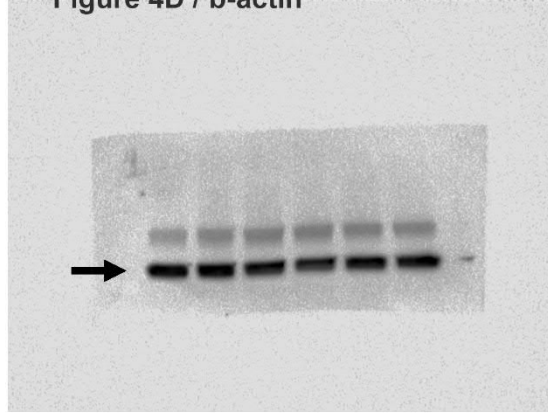
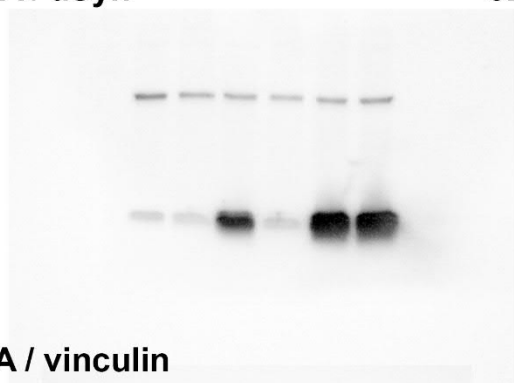
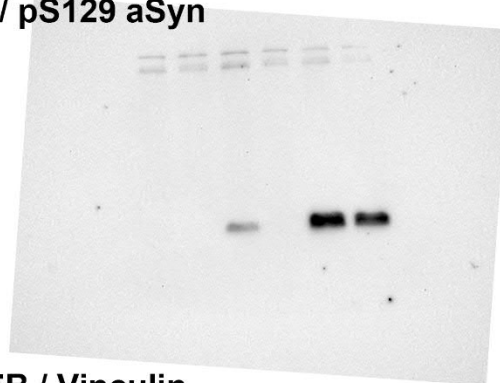


Figure S5. Uncut blots for Figure 4. Arrowhead marks the presented and analyzed band.

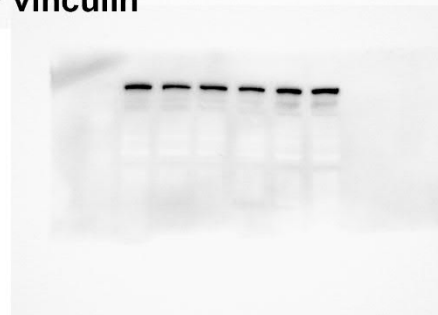
5A / aSyn



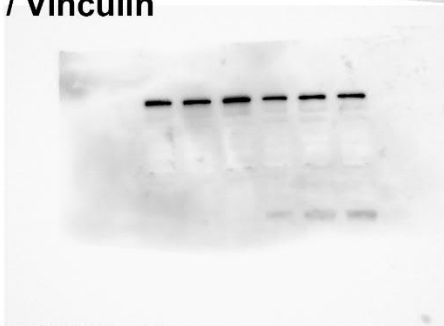
5B / pS129 aSyn



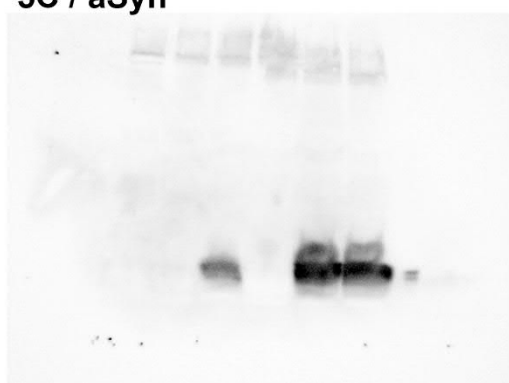
5A / vinculin



5B / Vinculin



5C / aSyn



5D / pS129 aSyn

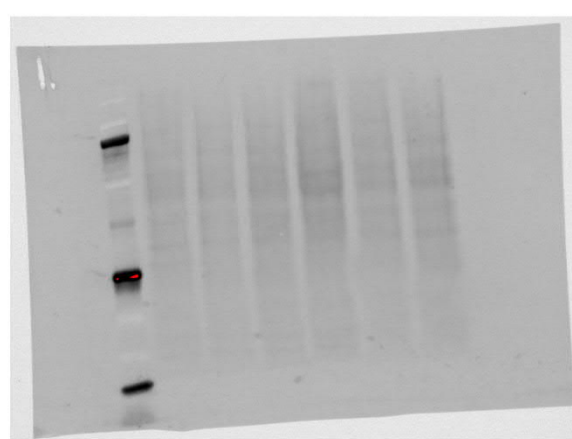
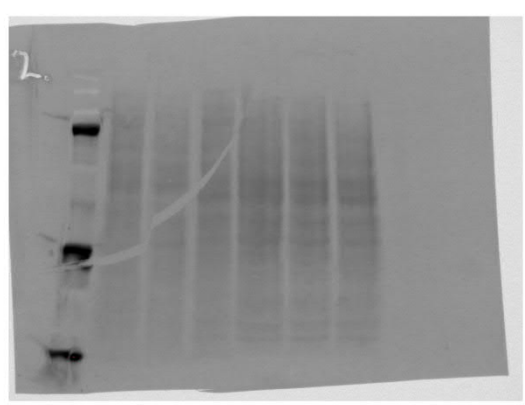
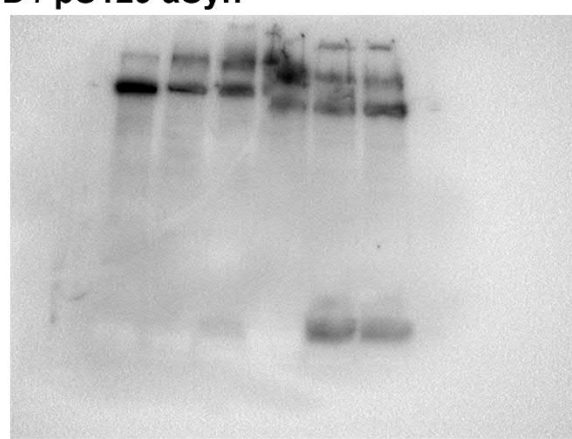


Figure S6. Uncut blots for Figure 5.

Fig 6A / PP2Ac

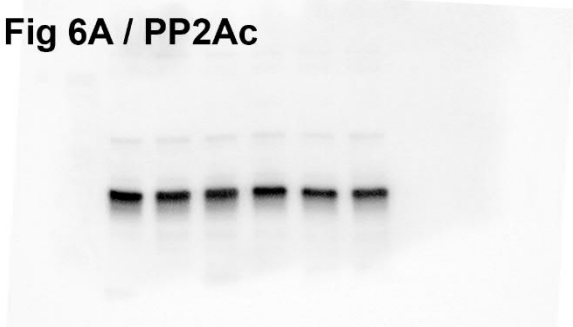


Fig 6B / pPP2Ac

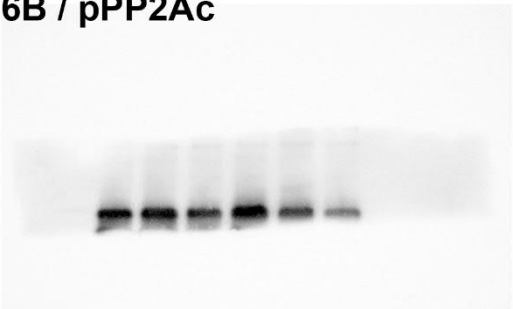


Fig 6A / vinculin

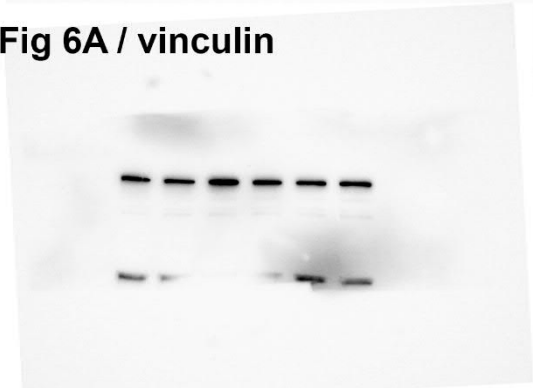


Fig 6B / vinculin

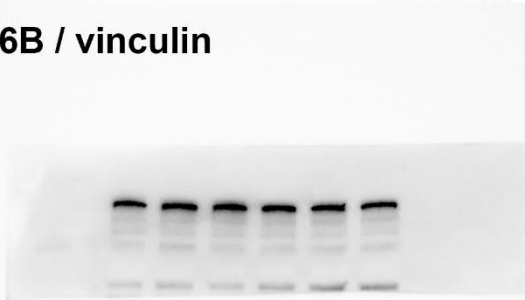


Fig 6C / p62

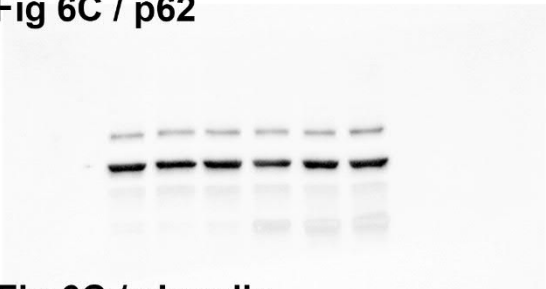


Fig 6D / LC3B

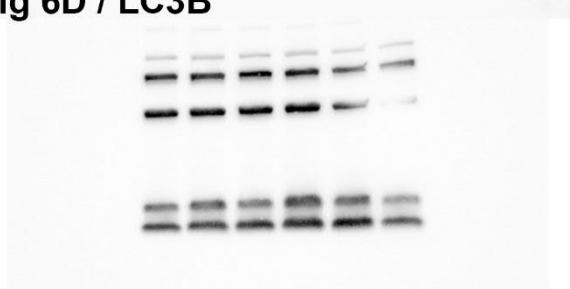


Fig 6C / vinculin

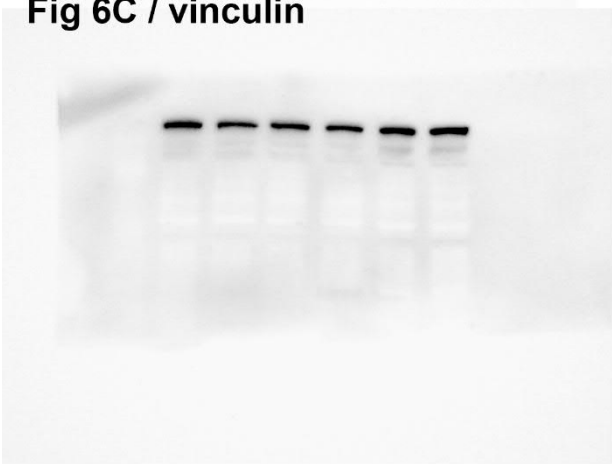


Fig 6D / vinculin

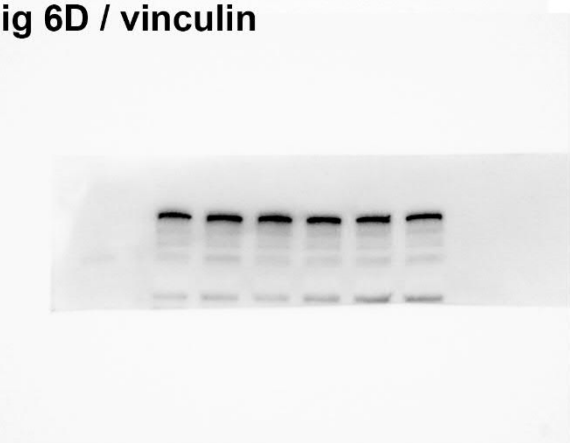


Figure S7. Uncut blots for Figure 6.

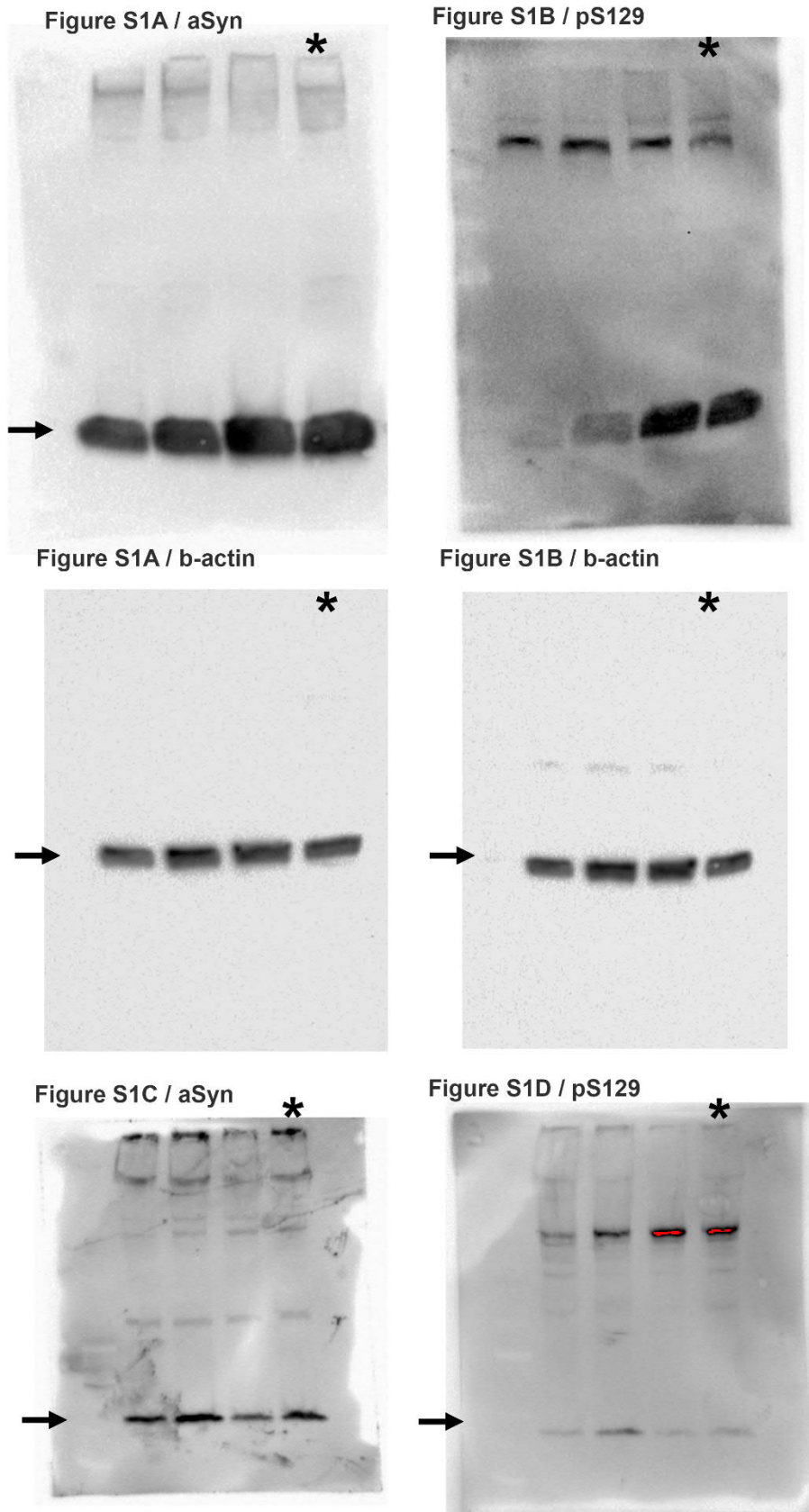


Figure S8. Uncut blots for Figure S1. Arrowhead marks the presented and analyzed band. * marks for experimental PREP inhibitor not published in this article (4th lane).

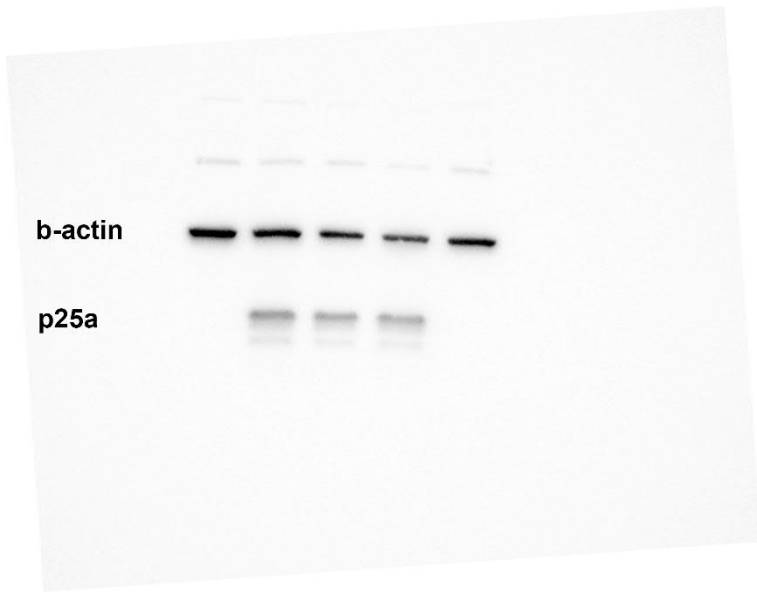


Figure S9. Uncut blots for Figure S3.