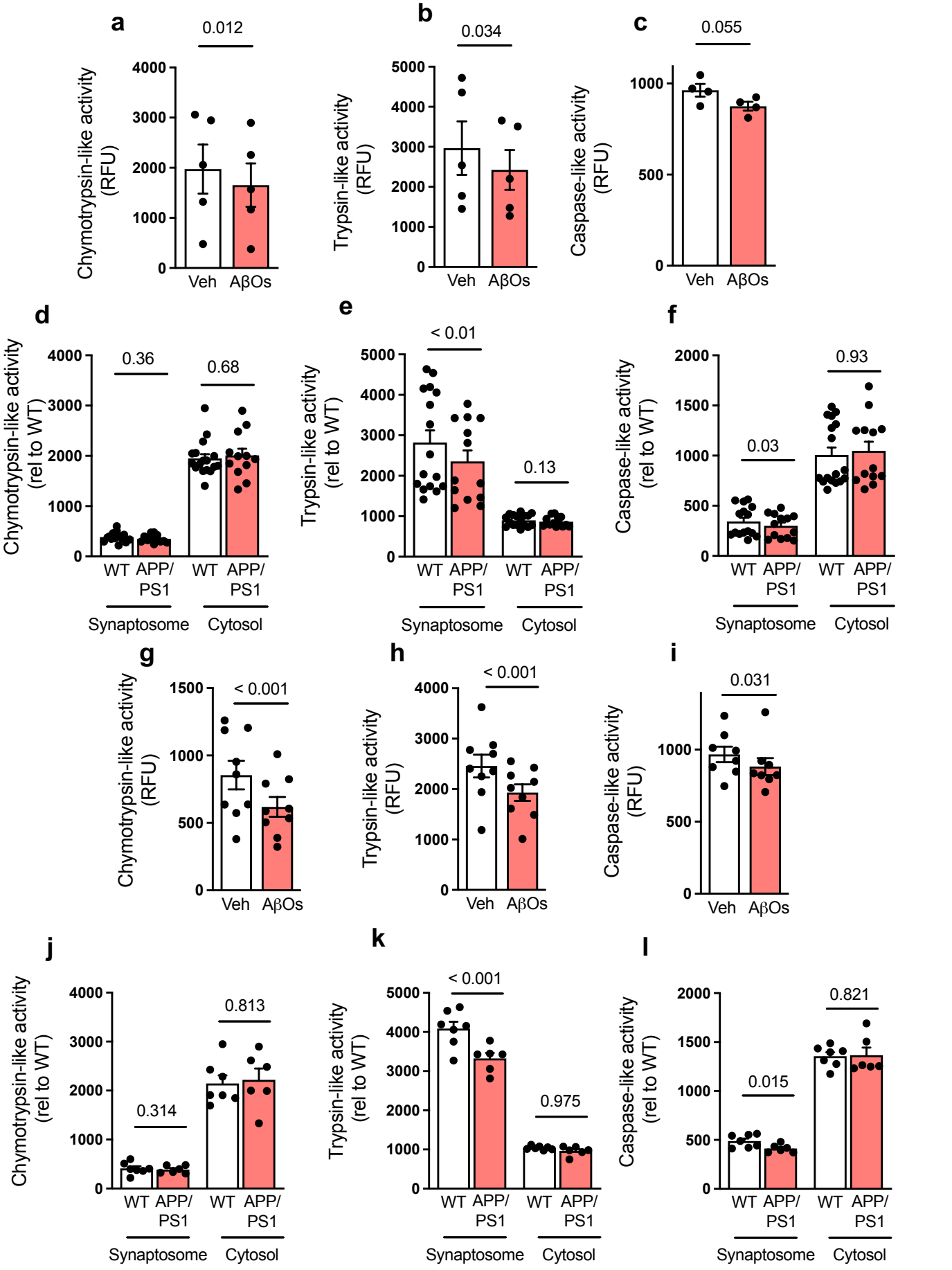
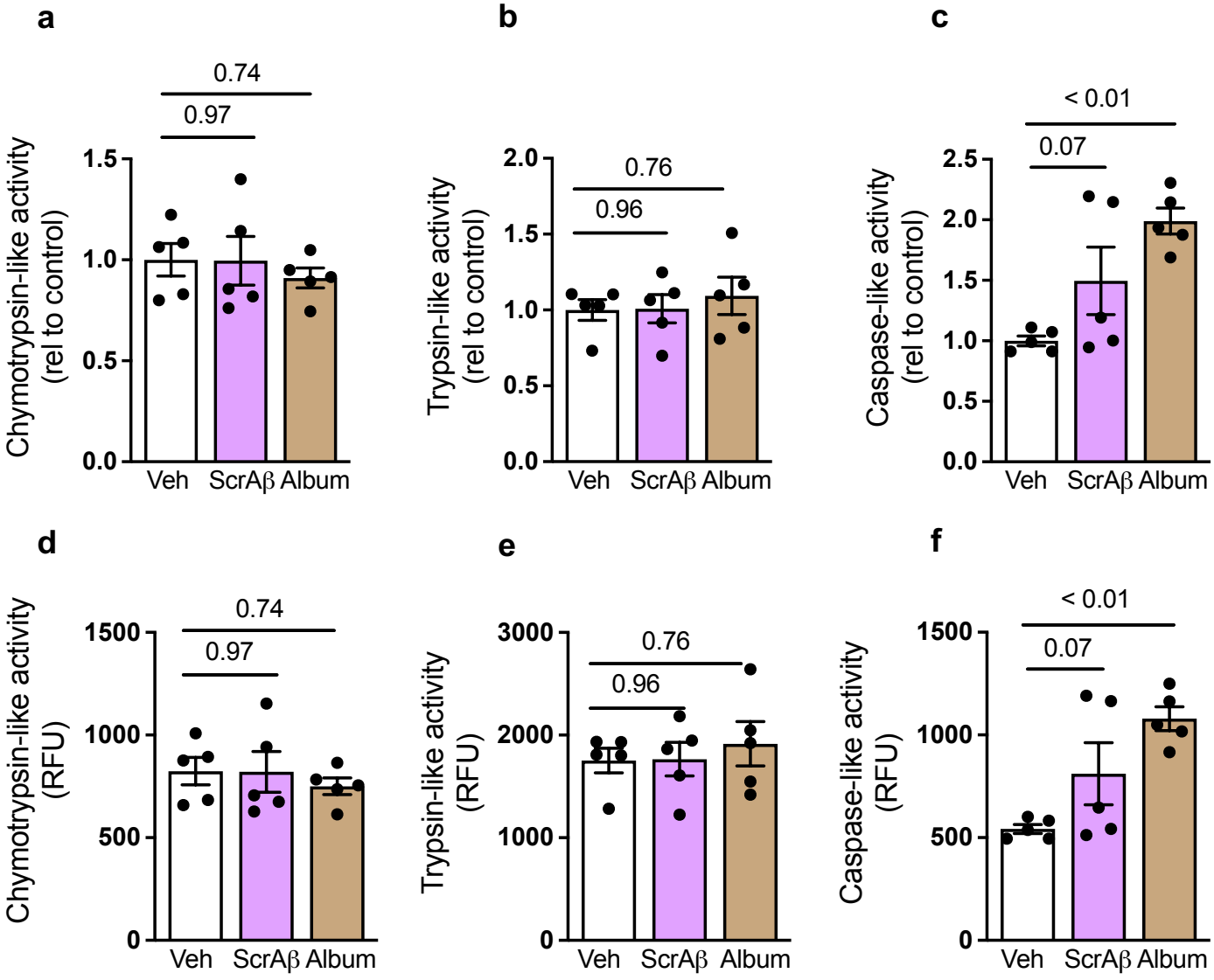
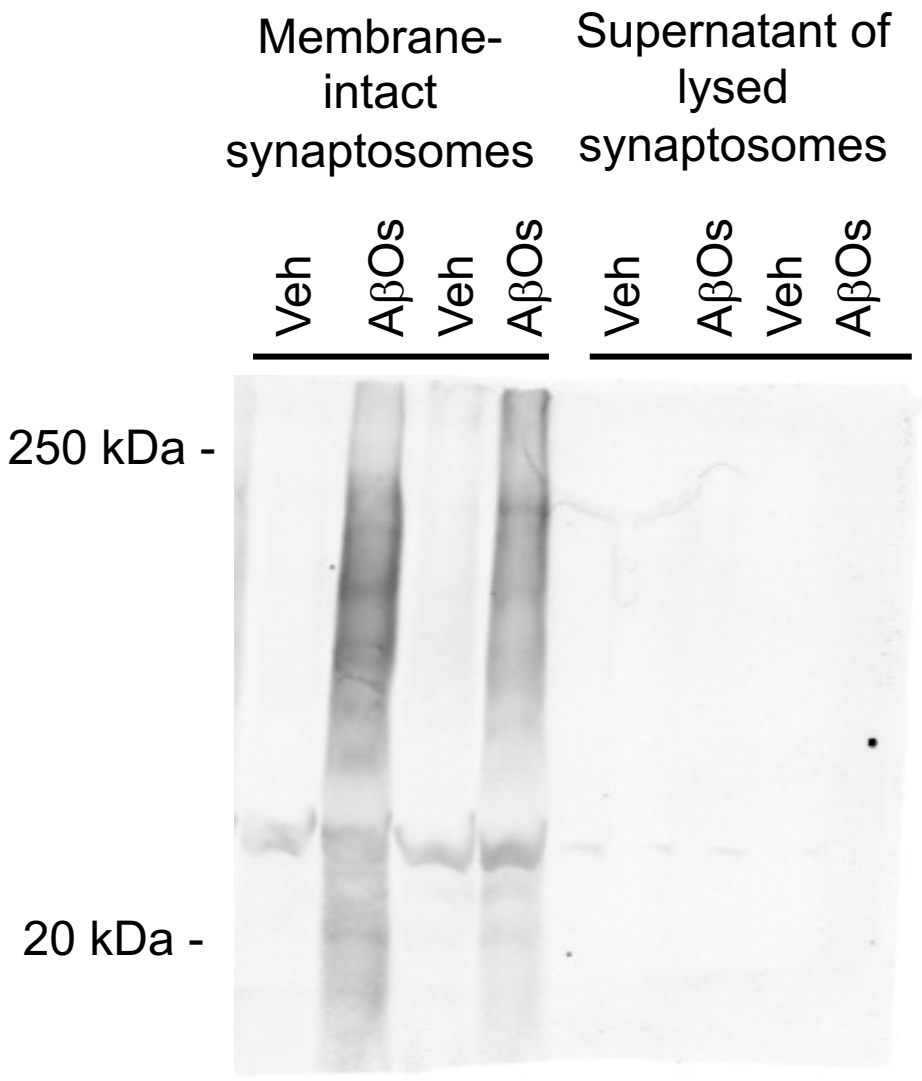

a
0.012
Chymotrypsin-like activity (RFU)
4000
3000
2000
1000
0
Veh
AβOs
b
0.034
Trypsin-like activity (RFU)
5000
4000
3000
2000
1000
0
Veh
AβOs
c
0.055
Caspase-like activity (RFU)
1000
500
0
Veh
AβOs
d
0.36
0.68
Chymotrypsin-like activity (rel to WT)
4000
3000
2000
1000
0
WT
APP/ PS1
WT
APP/ PS1
Synaptosome
Cytosol
e
< 0.01
0.13
Trypsin-like activity (rel to WT)
5000
4000
3000
2000
1000
0
WT
APP/ PS1
WT
APP/ PS1
Synaptosome
Cytosol
f
0.03
0.93
Caspase-like activity (rel to WT)
2000
1500
1000
500
0
WT
APP/ PS1
WT
APP/ PS1
Synaptosome
Cytosol
g
< 0.001
Chymotrypsin-like activity (RFU)
1500
1000
500
0
Veh
AβOs
h
< 0.001
Trypsin-like activity (RFU)
4000
3000
2000
1000
0
Veh
AβOs
i
0.031
Caspase-like activity (RFU)
1000
500
0
Veh
AβOs
j
0.314
0.813
Chymotrypsin-like activity (rel to WT)
4000
3000
2000
1000
0
WT
APP/ PS1
WT
APP/ PS1
Synaptosome
Cytosol
k
< 0.001
0.975
Trypsin-like activity (rel to WT)
5000
4000
3000
2000
1000
0
WT
APP/ PS1
WT
APP/ PS1
Synaptosome
Cytosol
l
0.015
0.821
Caspase-like activity (rel to WT)
2000
1500
1000
500
0
WT
APP/ PS1
WT
APP/ PS1
Synaptosome
Cytosol

Supplementary Figure 1. Relative fluorescence units related to main figures in the manuscript . (A-L) Data expressed as relative fluorescence units for Panels 2A-C (A-C), 3A-C (D-F), 3I-K (G-I), 4A-C (J-L).


a
b
c
d
e
f
Chymotrypsin-like activity (rel to control)
Trypsin-like activity (rel to control)
Caspase-like activity (rel to control)
Chymotrypsin-like activity (RFU)
Trypsin-like activity (RFU)
Caspase-like activity (RFU)
0.74
0.97
0.76
0.96
< 0.01
0.07
Veh
ScrAβ
Album

Supplementary Figure 2. Scrambled Aβ peptide or albumin does not cause proteasome inhibition. (A-C) Hippocampi from naive mice were harvested and synaptosomes were isolated. Synaptosome preparations were then exposed to Scrambled Aβ (ScrAβ), albumin, or vehicle for 1 h at 37 ºC, and proteasomal chymotrypsin-, trypsin-, and caspase-like activities were measured and normalized by control. (D-F) Data expressed as relative fluorescence units for graphs A-C (n = 5 synaptosomal preparations from independent mice; Two-tailed One-way Anova with Holm Sidak correction.


Membrane-intact synaptosomes
Supernatant of lysed synaptosomes
Veh
AβOs
Veh
AβOs
Veh
AβOs
Veh
AβOs
250 kDa -
20 kDa -

Supplementary Figure 3. AβOs were not detected in soluble fractions of synaptosome preparations. Synthetic AβOs or vehicle were added to synaptosome preparations for 20 min at 37º C. The synaptosome preparations were either lysed in standard conditions or with a hypothonic buffer and centrifuged to 15 000 g for 10 min at 4ºC to remove membrane fraction. We detected AβOs selectively in total synaptosomes preparations and not in the lysed supernatant, nor in vehicle-treated synaptosomes (n = 2).

a

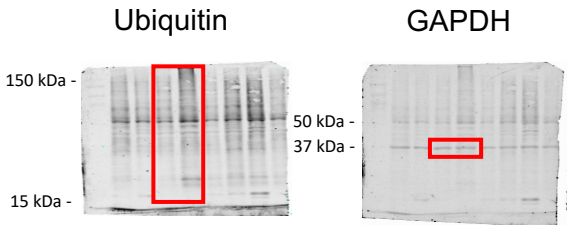


Fig 1a

b

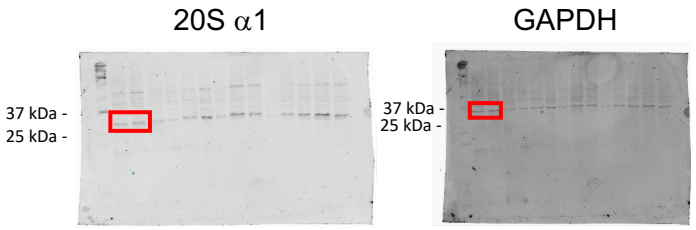


Fig 1b

c

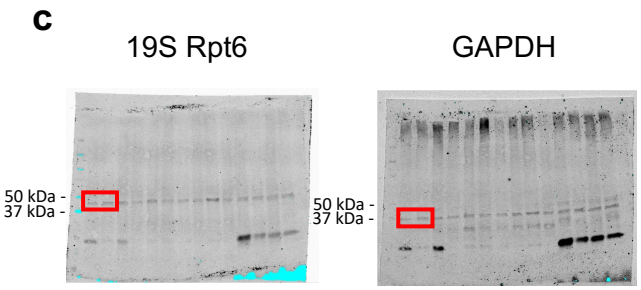


Fig 1c

d

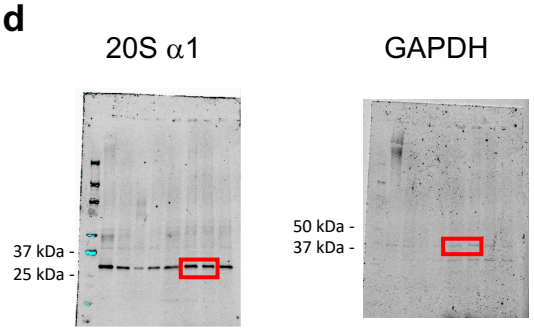


Fig 1g

e

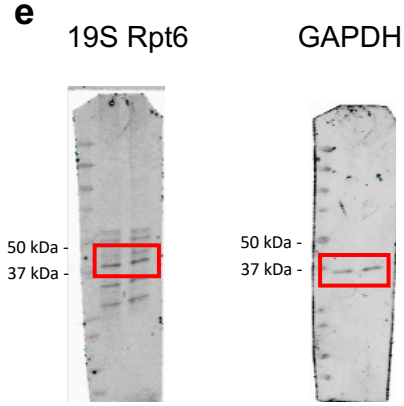


Fig 1h

f

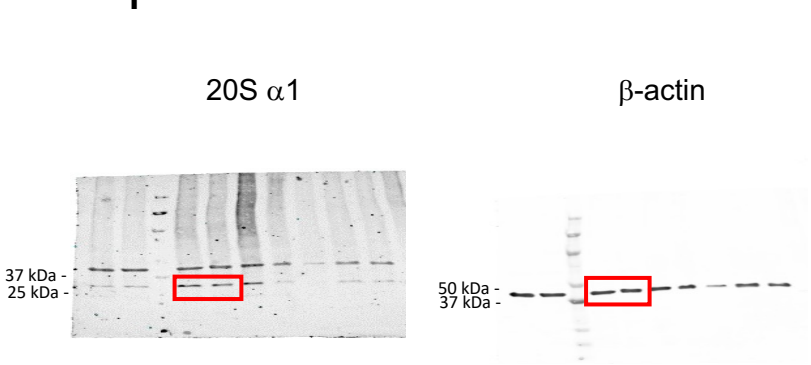


Fig 2d

g

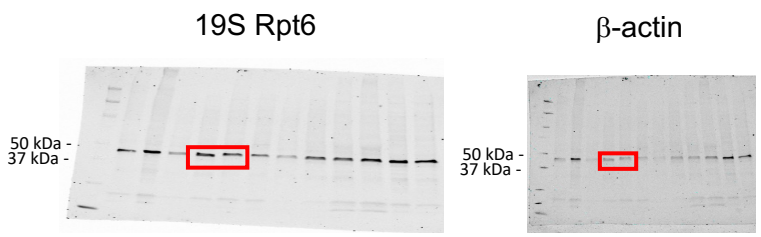


Fig 2e

Supplementary Figure 4. Full blots relative to panels presented in Figures 1 and 2.

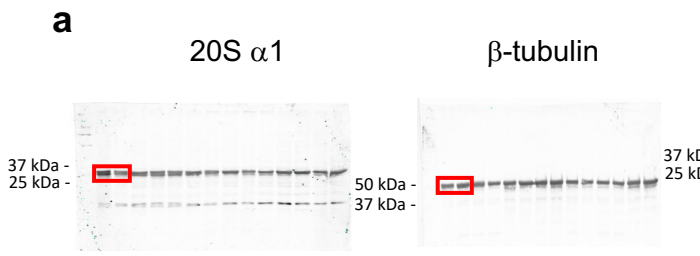


Fig 4d

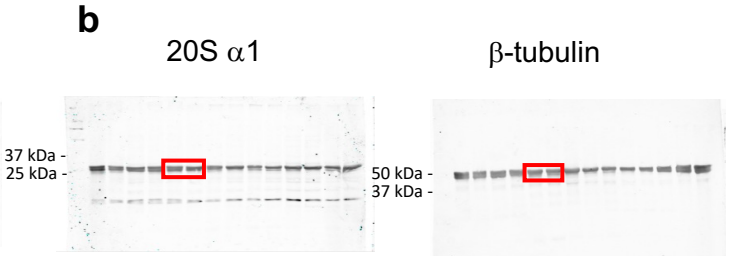


Fig 4e

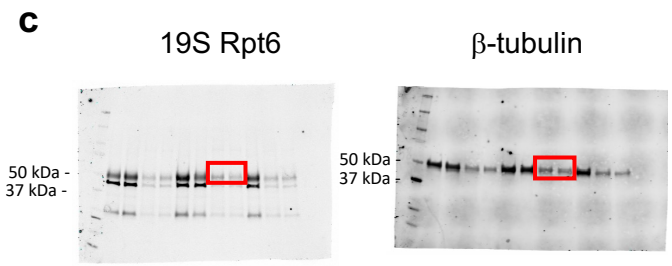


Fig 4f

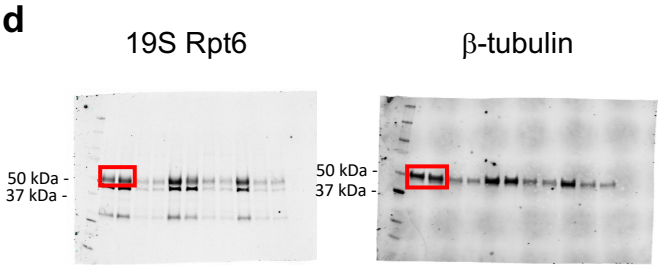


Fig 4g

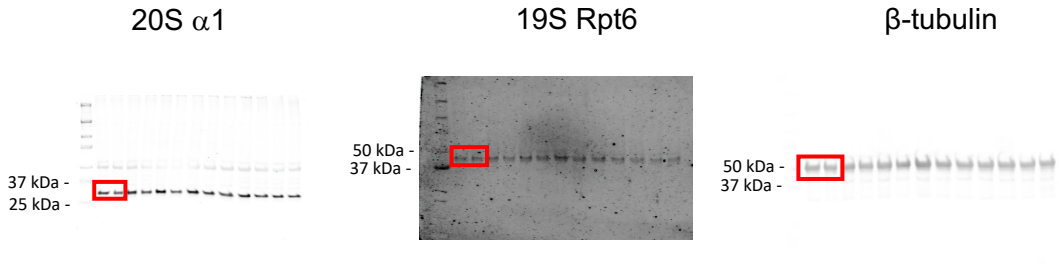


Fig 5d

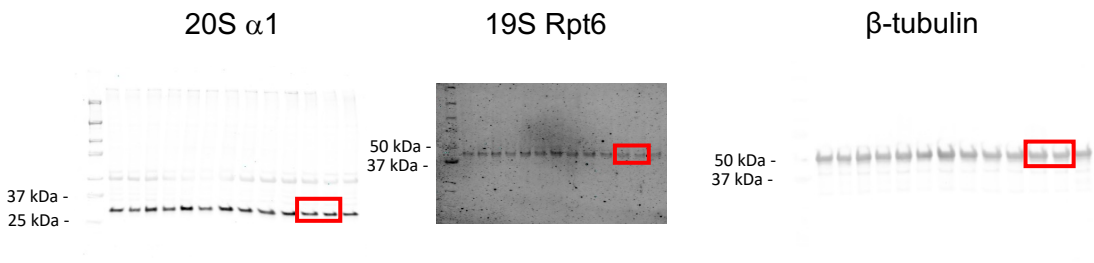


Fig 5e

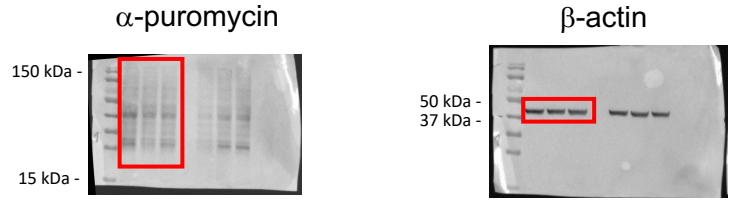


Fig 6e

Supplementary Figure 5. Full blots relative to panels presented in Figures 4, 5 and 6.