Supplementary Figure 1.

Scatter plots representing the densitometric ratio of levels for TH, alpha-synuclein, phospho-alpha-synuclein, GFAP, RAB12, GBA, VPS13C and Cathepsin D with respect to Total Protein as measured in the substantia nigra in the brains of Vehicle or Captopril treated groups. One-way ANOVA confirmed there was no statistical difference between protein expression in captopril or vehicle treated groups thus, Sham + captopril and Sham + vehicle samples were pooled and Radiation + captopril and Radiation + vehicle samples were pooled for overall data analysis resulting in n=8 for Sham and n=6 for Radiation.

Supplementary Figure 2.

Scatter plots representing the densitometric ratio of levels for ATP5A, SDHB and NDUF8 with respect to Total Protein as measured in the substantia nigra in the brains of Vehicle or Captopril treated groups. One-way ANOVA confirmed there was no statistical difference between protein expression in captopril or vehicle treated groups thus, Sham + captopril and Sham + vehicle samples were pooled and Radiation + captopril and Radiation + vehicle samples were pooled for overall data analysis resulting in n=8 for Sham and n=6 for Radiation.

Supplementary Figure 3.

Images of the full-length blots for alpha-synuclein, phospho-alpha-synuclein, tyrosine hydroxylase and GBA1 along with their associated Total Protein stains. Blots correspond to the cropped images in Figure 1.

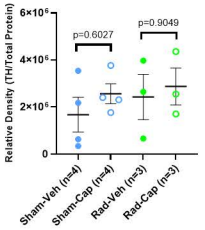
Supplementary Figure 4.

Images of the full-length blots for GFAP, RAB12, VPS13C and Cathepsin D along with their associated Total Protein stains. Blots correspond to the cropped images in Figure 1.

Supplementary Figure 5.

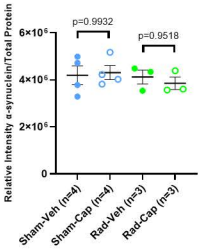
Images of the full-length blots for ATP5A, SDHB and NDUF8 along with their associated Total Protein stains. Blots correspond to the cropped images in Figure 2.

Tyrosine Hydroxylase



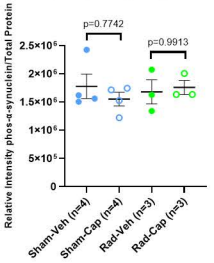
ANOVA summary	
F	0.5287
P value	0.6726
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.1369

alpha-synuclein



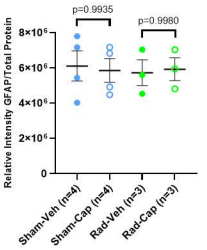
ANOVA summary	
F	0.3170
P value	0.8129
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.08684

phospho-alpha-synuclein



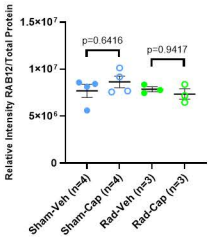
ANOVA summary	
F	0.3651
P value	0.7798
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.09872

GFAP



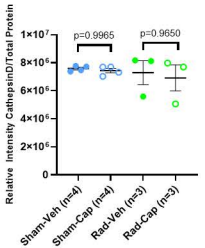
ANOVA summary	
F	0.04565
P value	0.9863
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.01351

RAB12



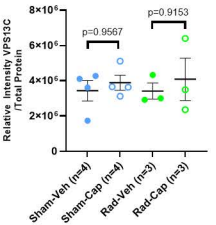
ANOVA summary	
F	0.8667
P value	0.4899
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.2064

Cathepsin D



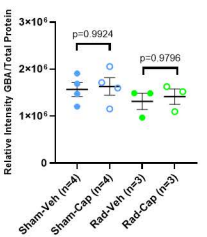
ANOVA summary	
F	0.2770
P value	0.8408
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.07671

VPS13C



ANOVA summary	
F	0.2284
P value	0.8746
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.06412

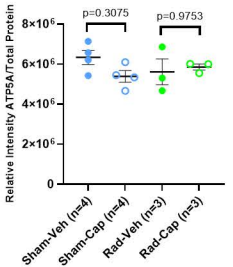
GBA



ANOVA summary	
F	0.6926
P value	0.5772
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.1720

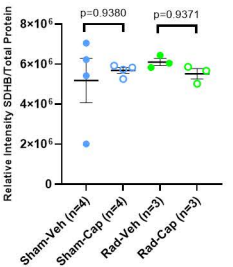
Supplementary Figure 1

ATP5A



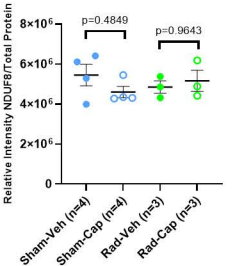
ANOVA summary	
F	1.232
P value	0.3486
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.2699

SDHB



ANOVA summary	
F	0.3261
P value	0.8066
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.08912

NDUF8

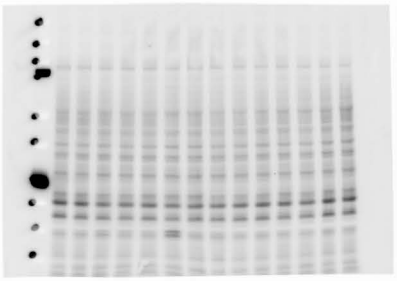


ANOVA summary	
F	0.8006
P value	0.5214
P value summary	ns
Significant diff. among means (P < 0.05)?	No
R squared	0.1937

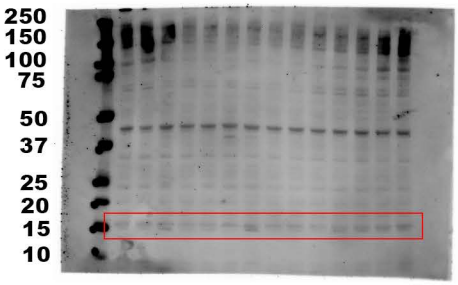
Supplementary Figure 2

Alpha synuclein 1:1000
14 kDa

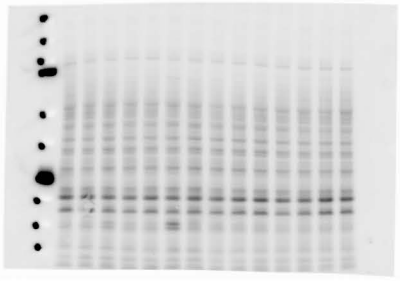
Total Protein
alpha synuclein



phospho-Alpha synuclein 1:1000
14kDa

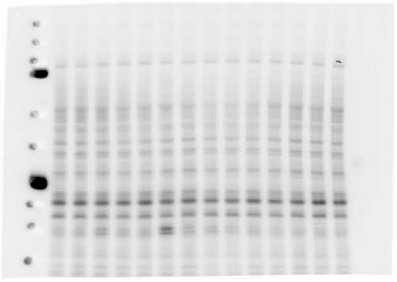


Total Protein
phospho-alpha synuclein

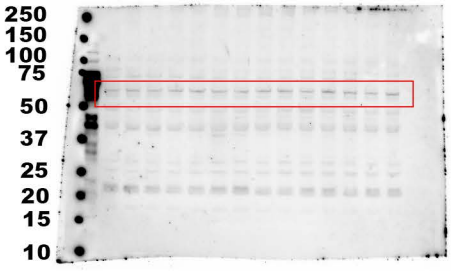


Tyrosine Hydroxylase 1:1000
60kDa

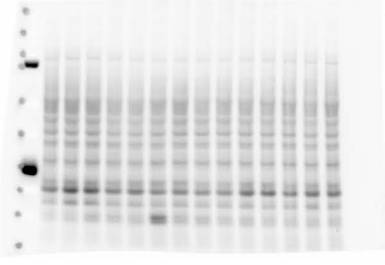
Total Protein
Tyrosine Hydroxylase



GBA 1:500
60-65 kDa

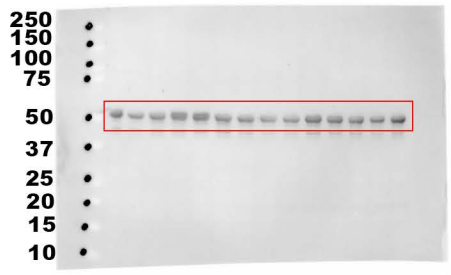


Total Protein
GBA

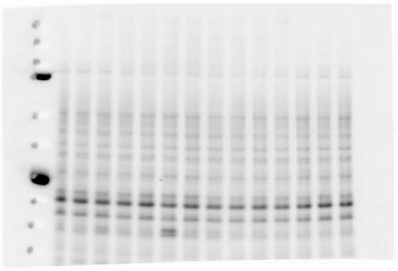


Supplementary Figure 3

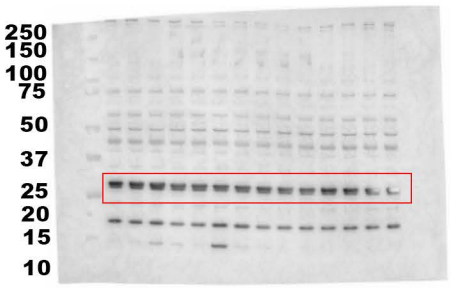
GFAP 1:40000
50kDa



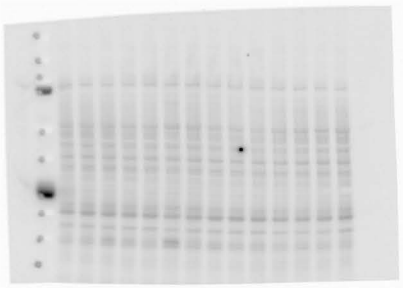
Total Protein
GFAP



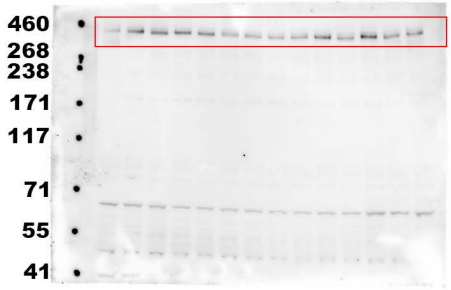
RAB12 1:1000
28kDa



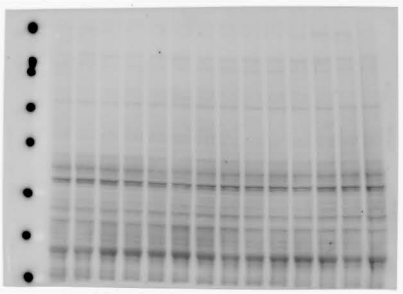
Total Protein
RAB12



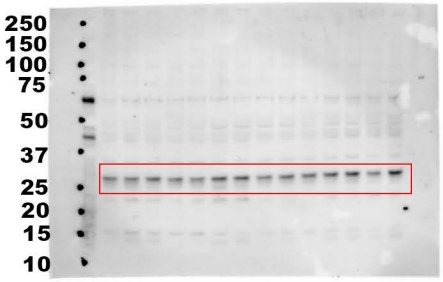
VPS13C 1:2000
422kDa



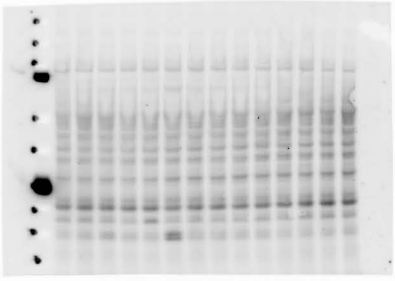
Total Protein
VPS13C



Cathepsin D 1:2500
32kDa



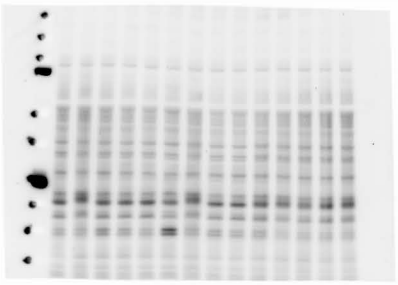
Total Protein
Cathepsin D



Supplementary Figure 4

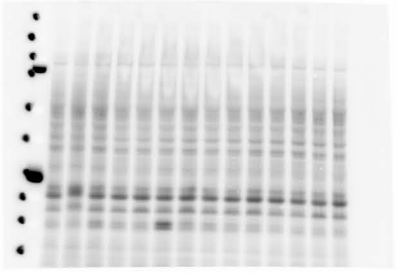
ATP5A 1:1000
60kDa

Total Protein
ATP5A

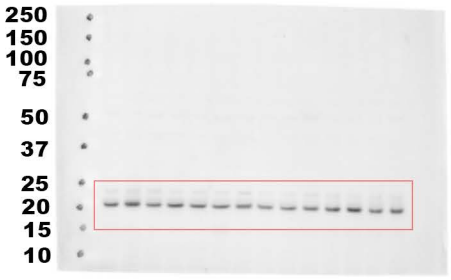


SDHB 1:500
32kDa

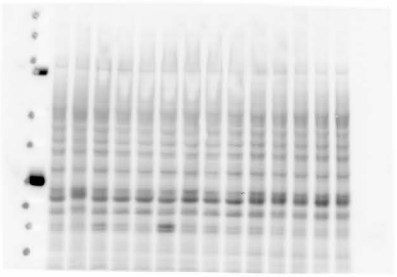
Total Protein
SDHB



NDUF8 1:500
22kDa



Total Protein
NDUF8



Supplementary Figure 5