

**Novel enhancement mechanism of tyrosine hydroxylase enzymatic activity by nitric oxide through S-nitrosylation**

by

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## Supplementary information

Fig. S1. Estimation of percentage of S-nitrosylation in *in vitro* and *in vivo* samples. In the *in vitro* (A) and *in vivo* (B) biotin switch assay, the supernatant before and after Neutraavidin-agarose beads S-nitrosylated protein pull-down were analyzed by Western blotting. The density of the bands were quantified by Image J. The percentage of S-nitrosylated proteins were estimated by comparing the TH protein before and after pull-down. Figure S1 A-B included cropped images and the original blot images are included in the Supplementary Information file.

Table 1. The estimated percentage of TH S-nitrosylation *in vitro*

GSH	GSNO	GSNO	GSNO	GSNO	GSNO
200 $\mu$ M	10 $\mu$ M	50 $\mu$ M	100 $\mu$ M	200 $\mu$ M	400 $\mu$ M
7%	4%	16%	23%	24%	27 %

Table 2. The estimated percentage of TH S-nitrosylation *in vivo*

APO	APO
-	+
9%	15%

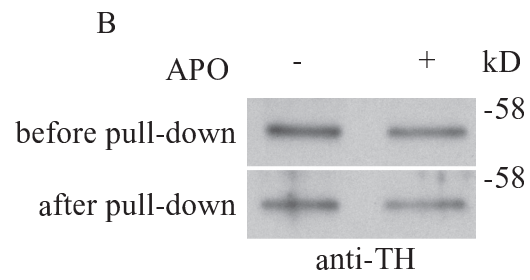
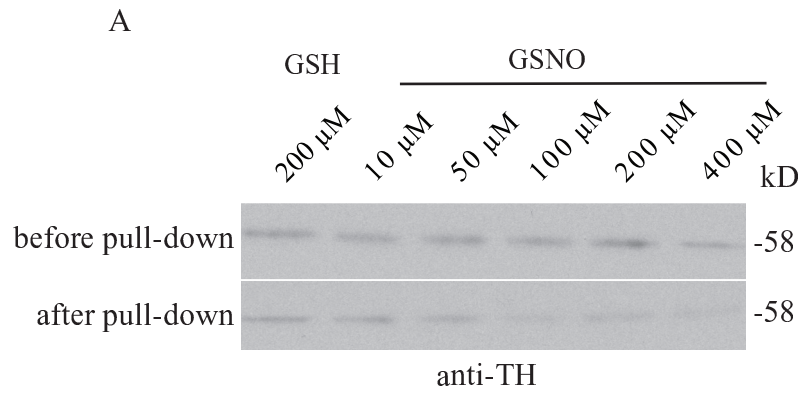
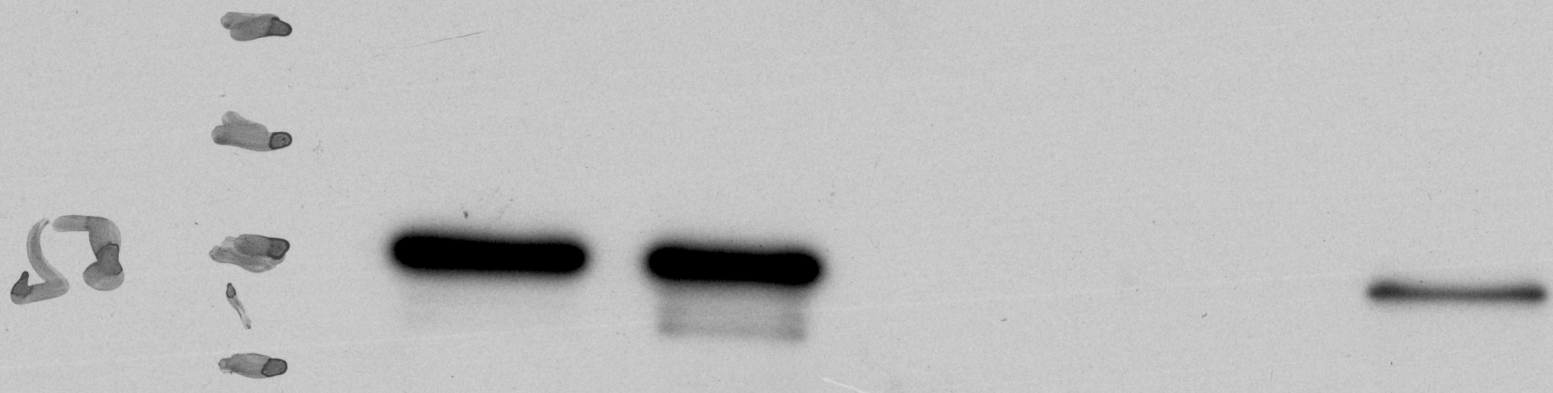


Fig S1

Original blot images of Figure 1 A-E, Figure 2 A-D, Fig 4 A-D, Figure 5 A-C, Figure 6 A&B and Figure S1 A&B



TH. 293T overexpress  
B. S. A.

input

H W

pull down

H W

1  
1  
1  
1  
1  
1  
1



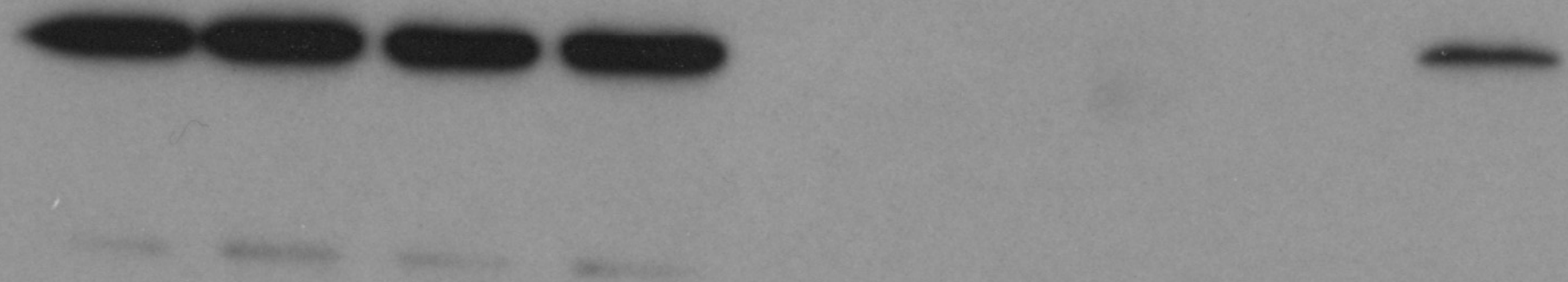
ctrl no. 5





2  
r

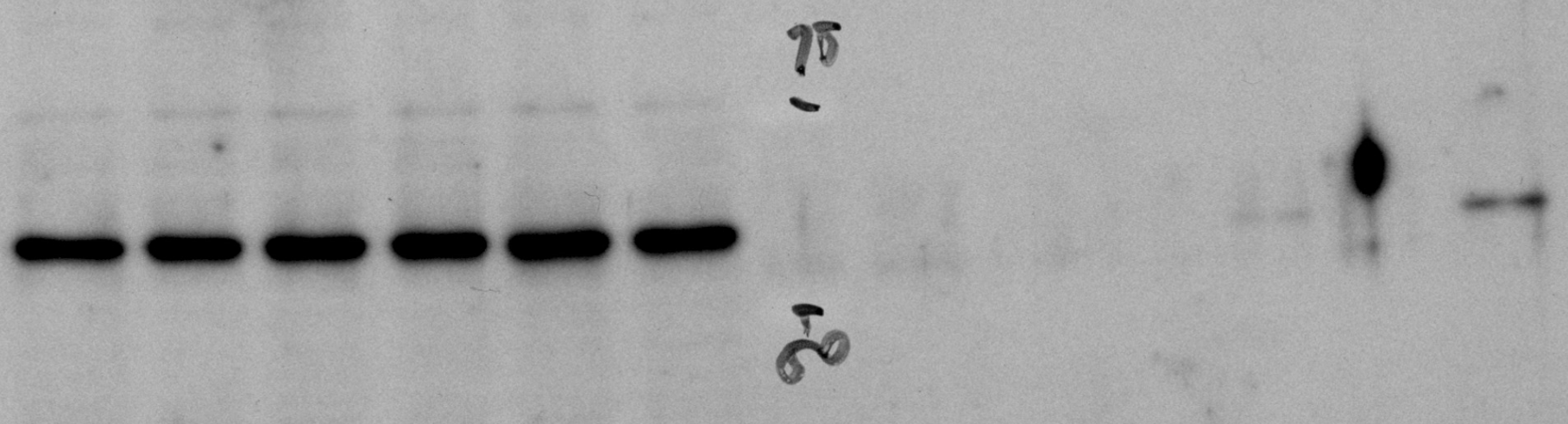
-	-	+	+	+	-	+	+
-	+	-	+	+	+	-	+





T  
do  
c  
hi

+	-	-	-	-	-	+	+	-	-	-	-
-	+	-	-	-	-	+	+	-	-	-	-
+	+	-	-	+	+	+	+	-	-	+	+
+	+	-	+	-	+	+	+	-	+	-	+



Input

pull down

250  
100  
75  
50

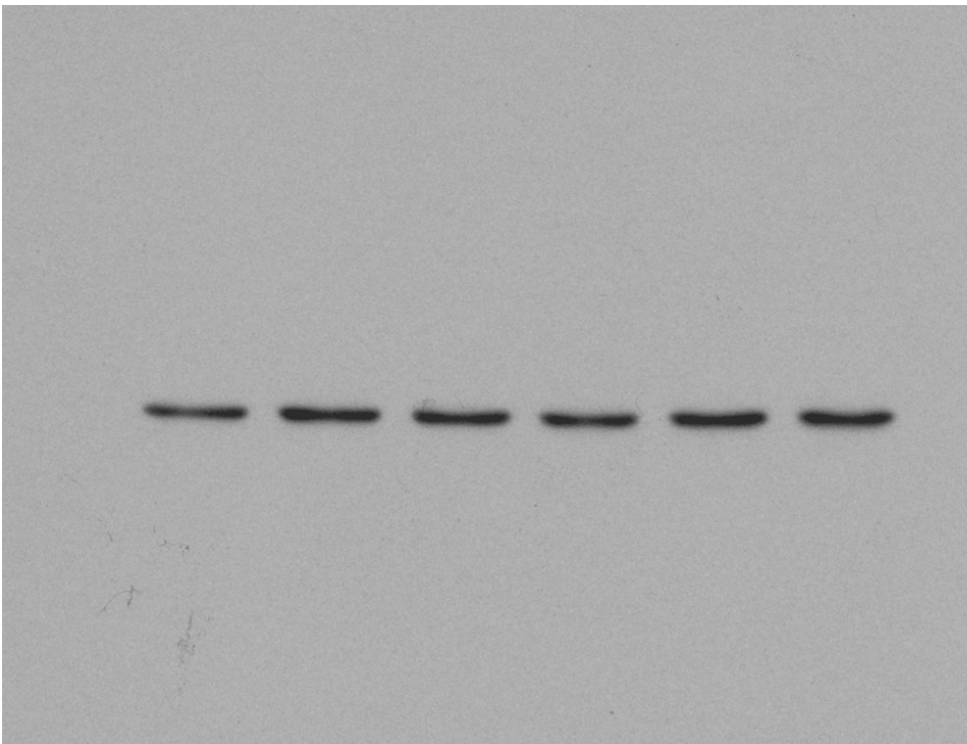
-  
-  
-  
-  
-

Ctrl

H

M







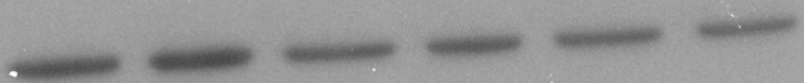


ETM

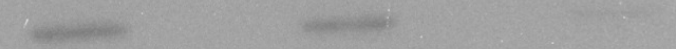
Striatum lysate  
ETC

WT                  M1                  M2  
H NO   H NO   H NO   H NO

1  
2  
3  
4  
5  
6  
7



FUT                  M1                  M2  
H NO   H NO   H NO



75

80

-

-

-

-

-

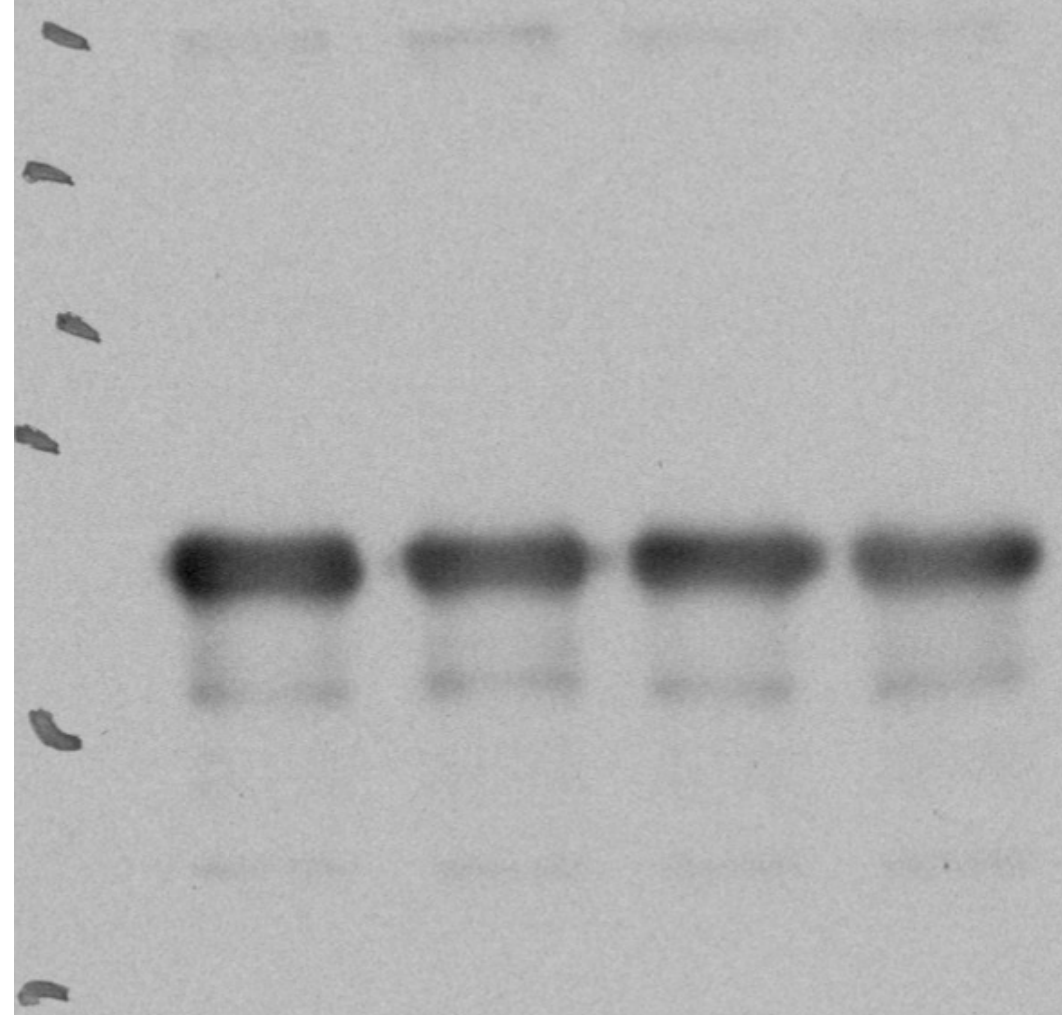
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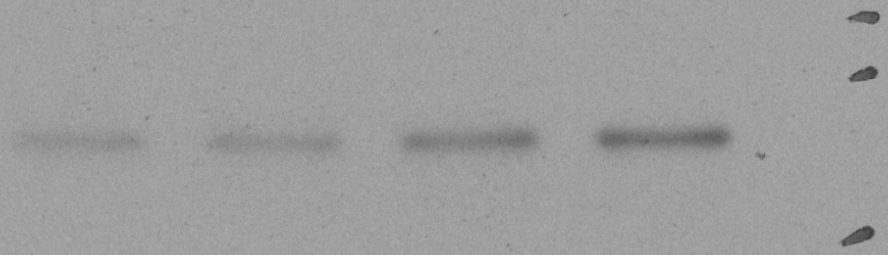
WT  
H NO

MZ  
H MO



WT  
H NO

M2H  
H NO



WT  
H NO

M2H  
H NO



Ctrl

APP  
in pres

—

—

—

—

Ctrl

Pres  
APP

—

—

Striatum  
ctrl Apo

175

-

150

-

100

-

75

-

50





CON

APP

— —

75



9





