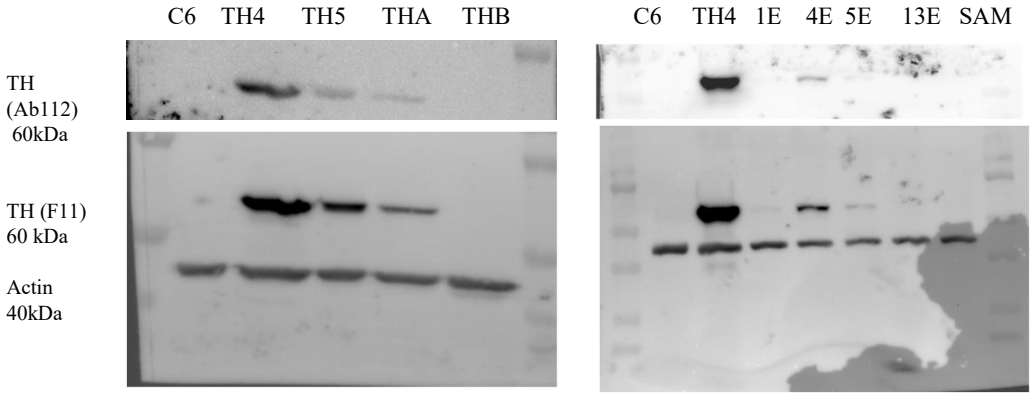
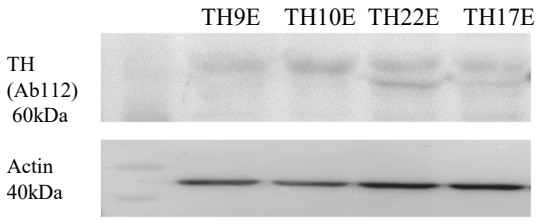
GEN	ID	Sense	Species	FW	RW
TH	25085	Neg	Rat	CACCGGGTCACTTACTGTTAGACCT	AAACAGGTCTAACAGTAAGTGACCC
TH	25085	Neg	Rat	CACCGGAAGGCCTTAGGGAGCTGCC	AAACGGCAGCTCCCTAAGGCCTTCC
TH	25085	Pos	Rat	CACCGGAGACACAGAATGTTCCAGA	AAACTCTGGAACATTCTGTGTCTCC
TH	25085	Neg	Rat	CACCGGTGCCAGCACATATACCGAC	AAACGTCGGTATATGTGCTGGCACC
TH	25085	Neg	Rat	CACCGGAACATGGCCCATGTCCTGG	AAACCCAGGACATGGGCCATGTTCC
TH	25085	Pos	Rat	CACCGAGAGCTCTCTAACCAAACCA	AAACTGGTTTGGTTAGAGAGCTCTC
TH	25085	Neg	Rat	CACCGTACGTCGTGCCTCGGGCTGA	AAACTCAGCCCGAGGCACGACGTAC
TH	25085	Neg	Rat	CACCGAATTAGATCTAATGGGACGG	AAACCCGTCCCATTAGATCTAATTC
TH	25085	Pos	Rat	CACCGGCTGTGCCTGAGGGAGGCGG	AAACCCGCCTCCCTCAGGCACAGCC
TH	25085	Neg	Rat	CACCGGCCCCCTCGCCACAGCCCAA	AAACTTGGGCTGTGGCGAGGGGGCC
TH	25085	Neg	Rat	CACCGGCAGGATGCCAAGCAGGCCG	AAACCGGCCTGCTTGGCATCCTGCC
TH	25085	Neg	Rat	CACCGAGCCCTTAGGAAATCCAGCA	AAACTGCTGGATTTCCTAAGGGCTC
TH	25085	Neg	Rat	CACCGCCTGCCCTACGTCGTGCCTC	AAACGAGGCACGACGTAGGGCAGGC

Supplementary Table 1. Sequences tested as *Th sgRNA*.

Supplementary Figure 1.

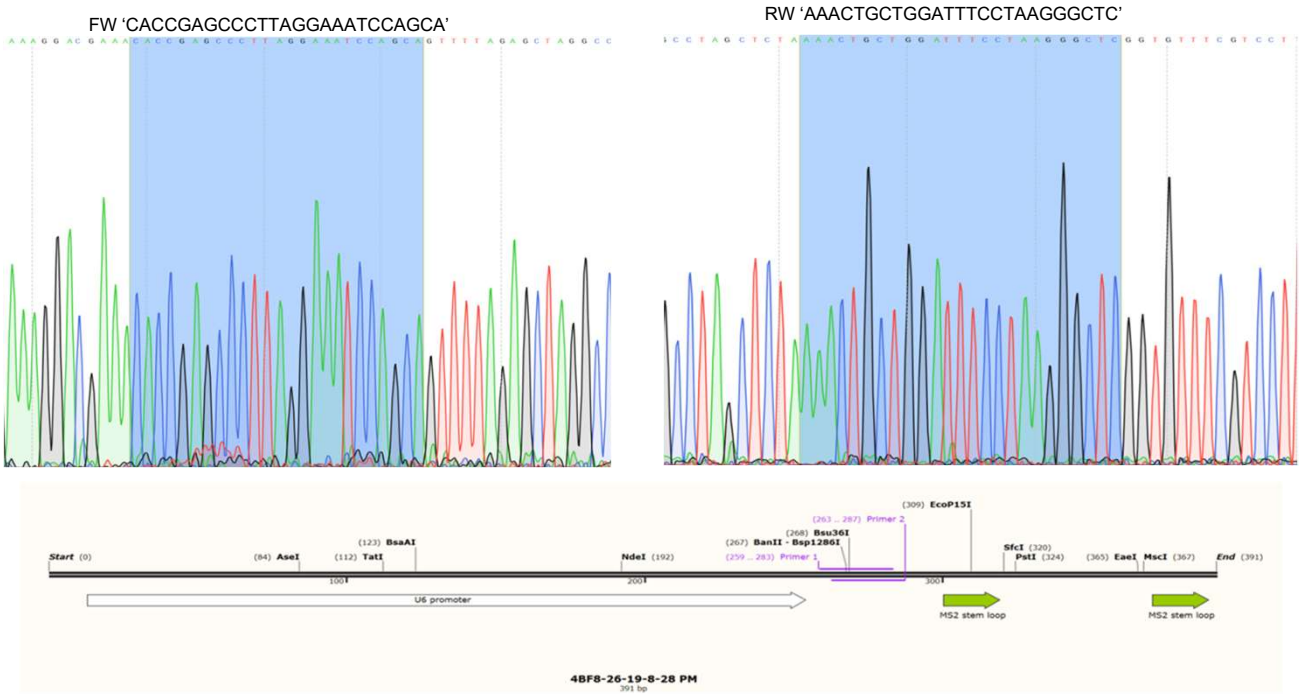


*25 µg of loaded protein.

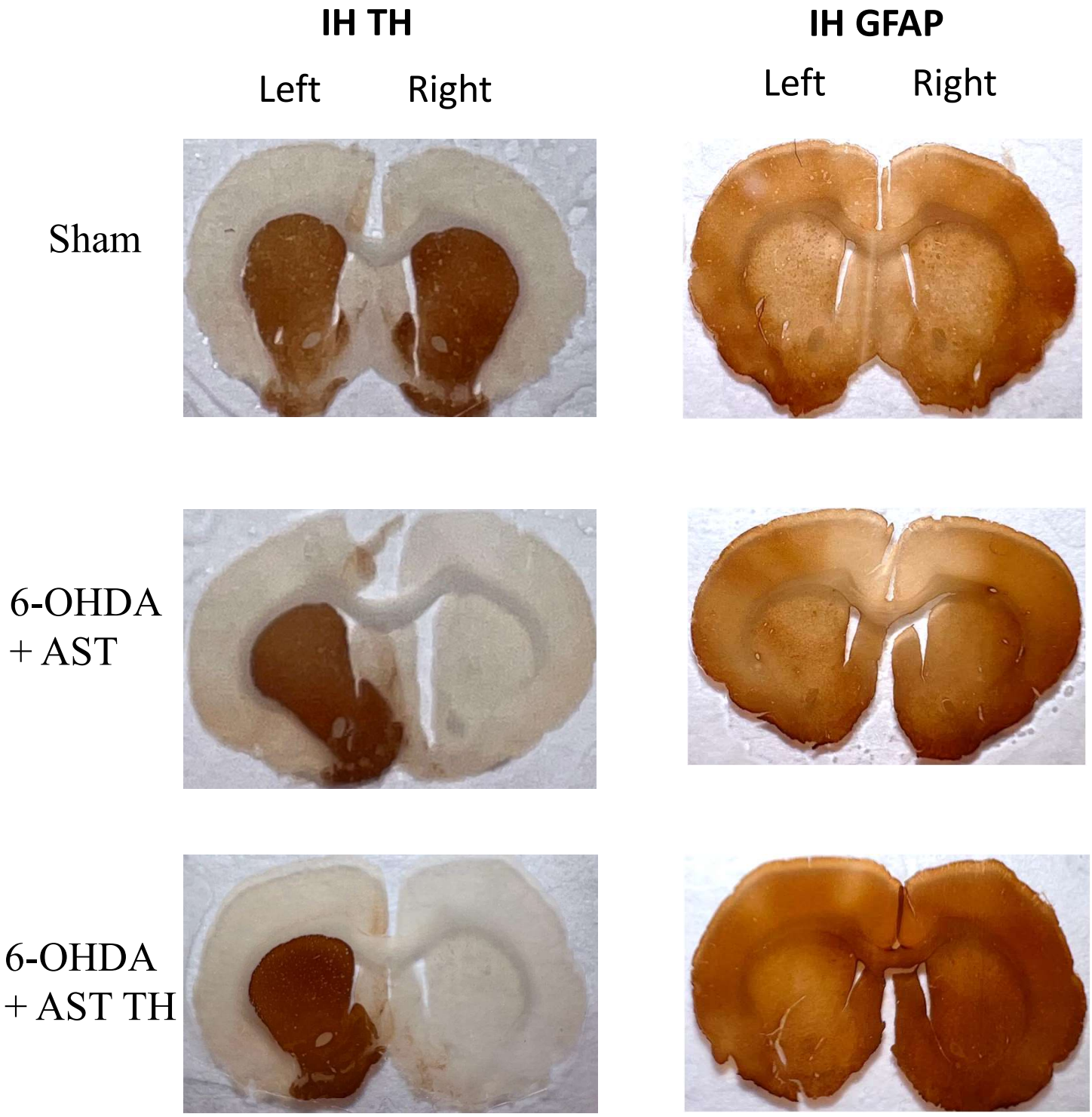


*50 µg of loaded protein.

A) Western Blot of the tested *Th* sgRNA in the transfected C6 cell line.

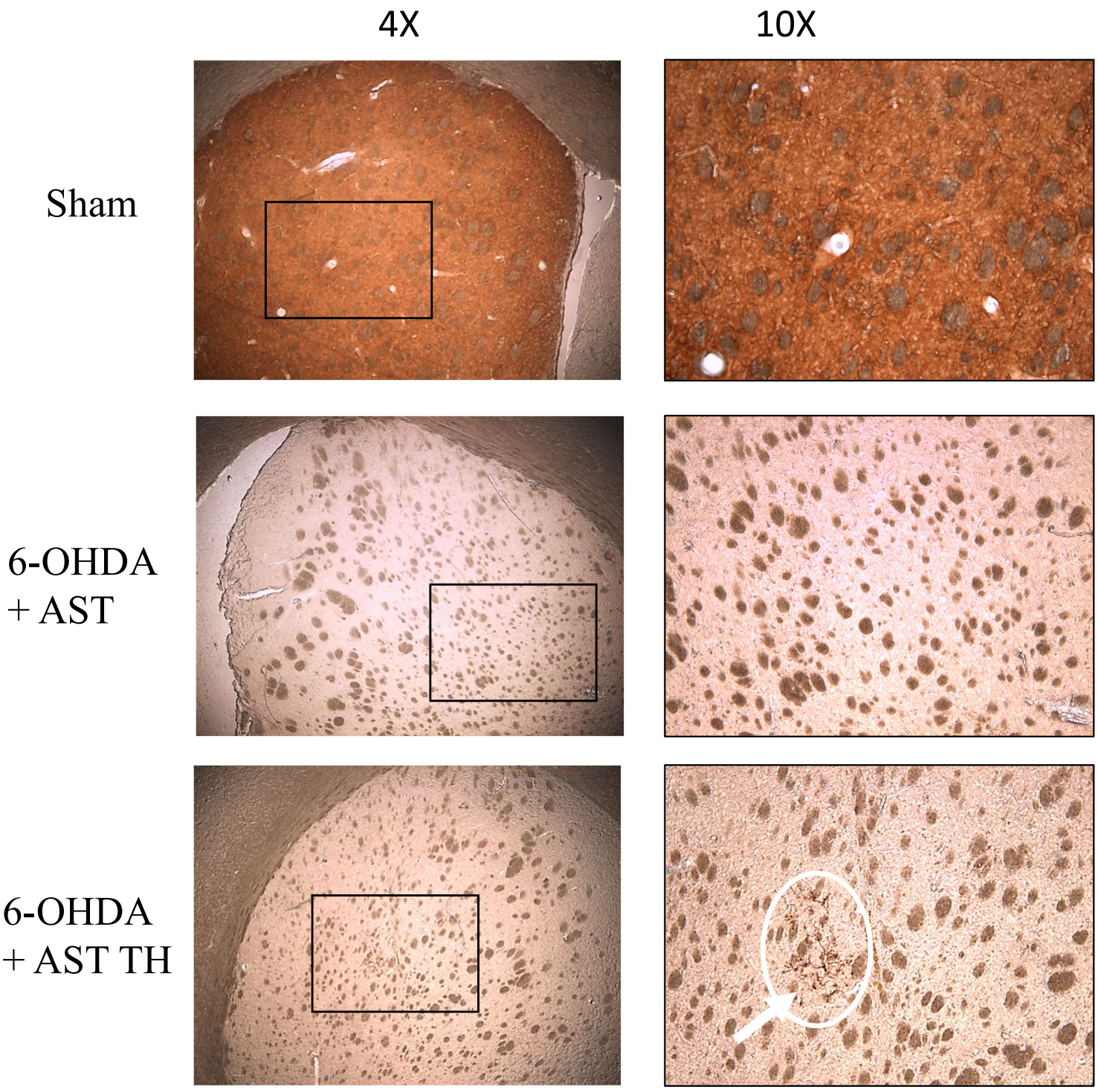


B) Sequencing *Th*4 sgRNA

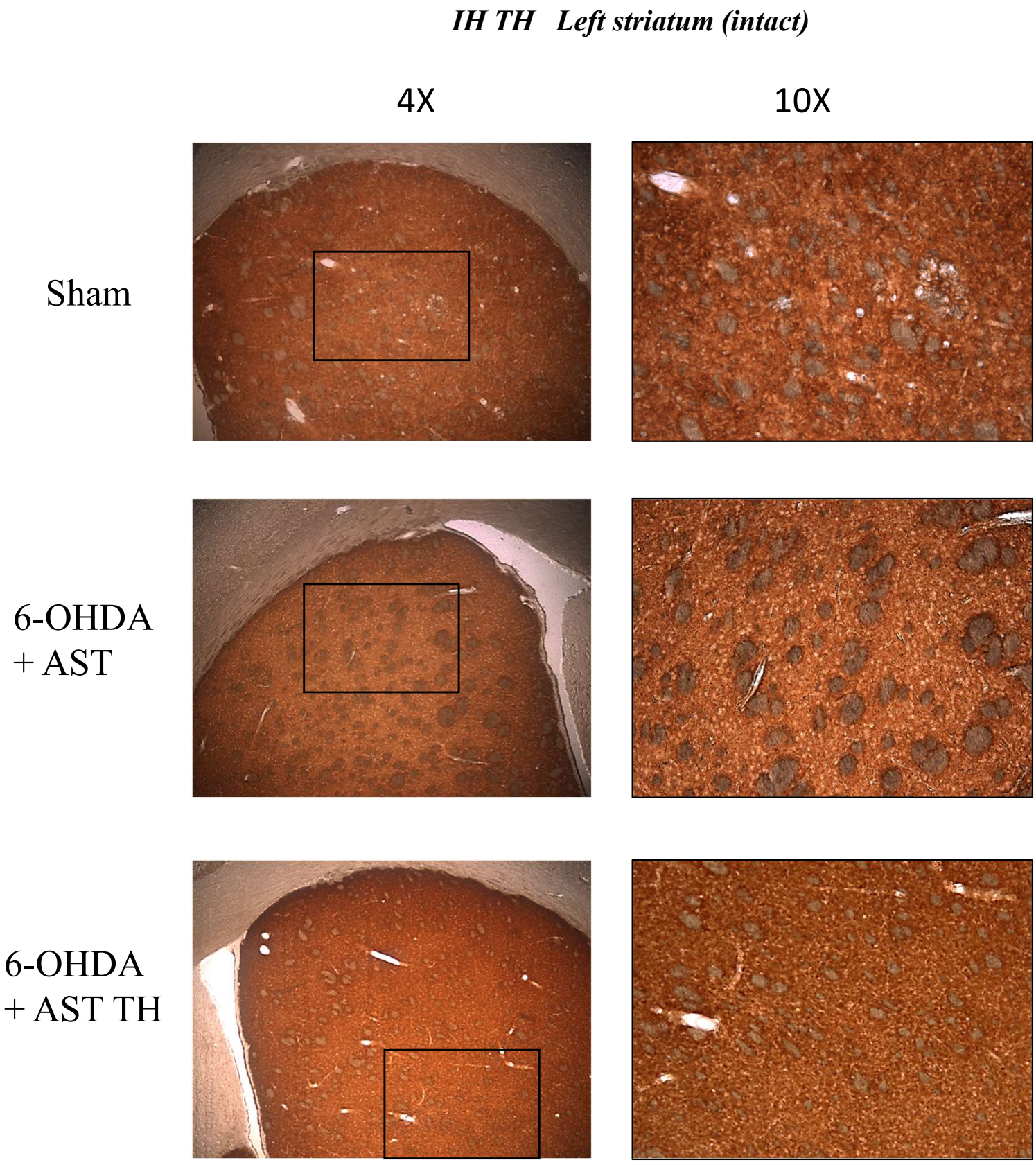


Supplementary Figure 2. TH and GFAP Immunochemistry brain slices of the experimental groups.

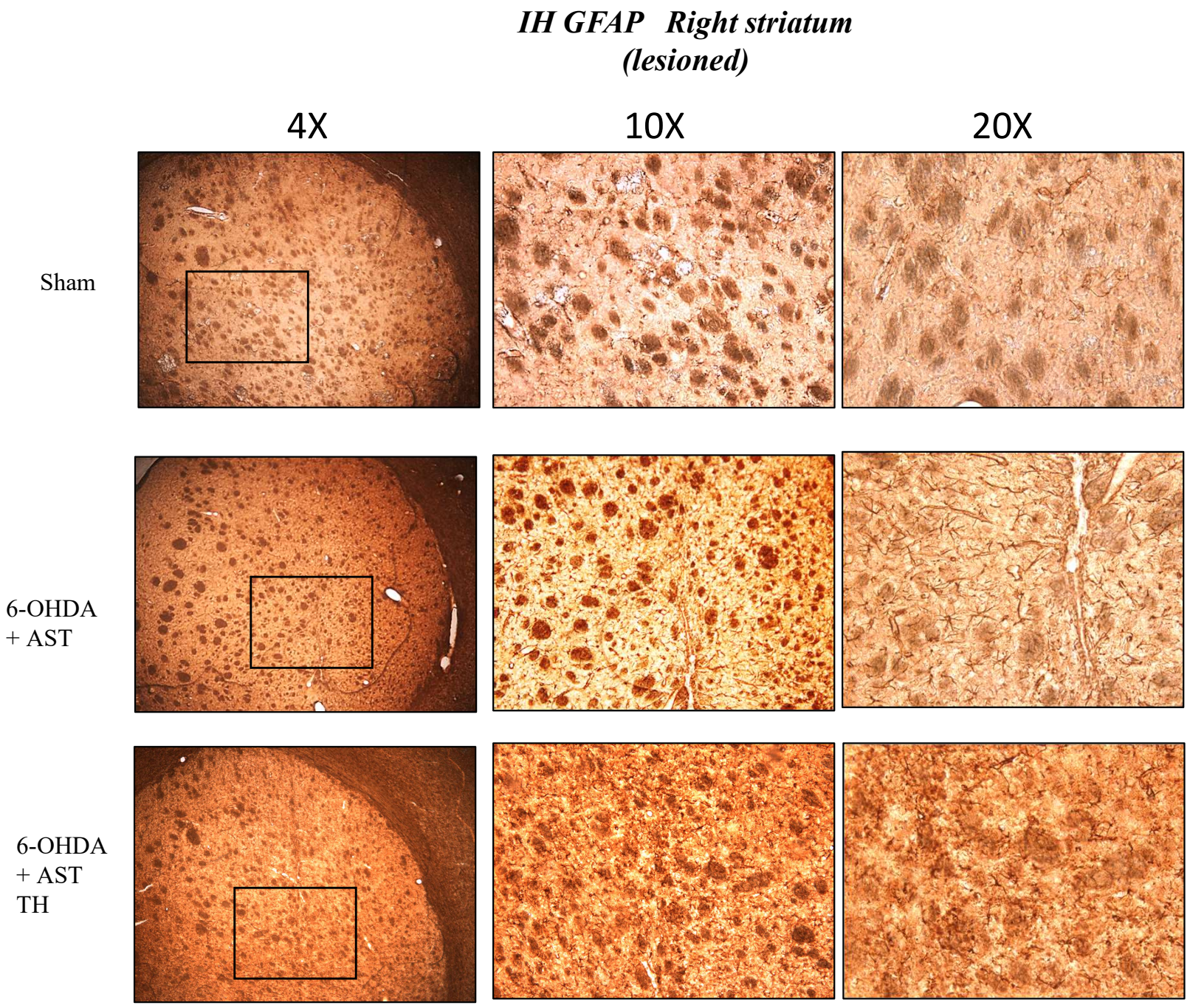
IH TH Right striatum (lesioned)



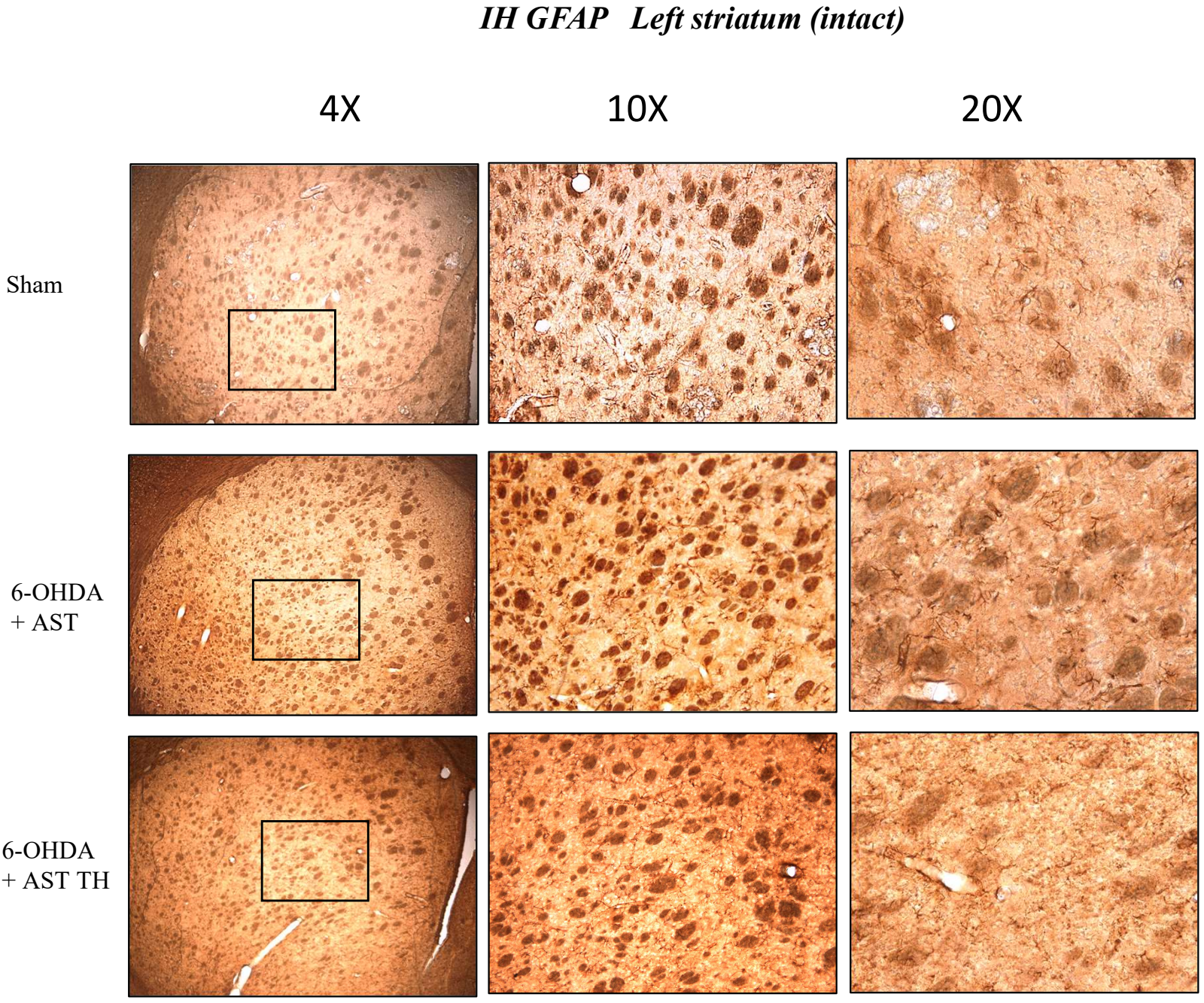
Supplementary Figure 3A. TH Immunohistochemistry of 6-OHDA lesioned (right) *striatum* side between the experimental groups.



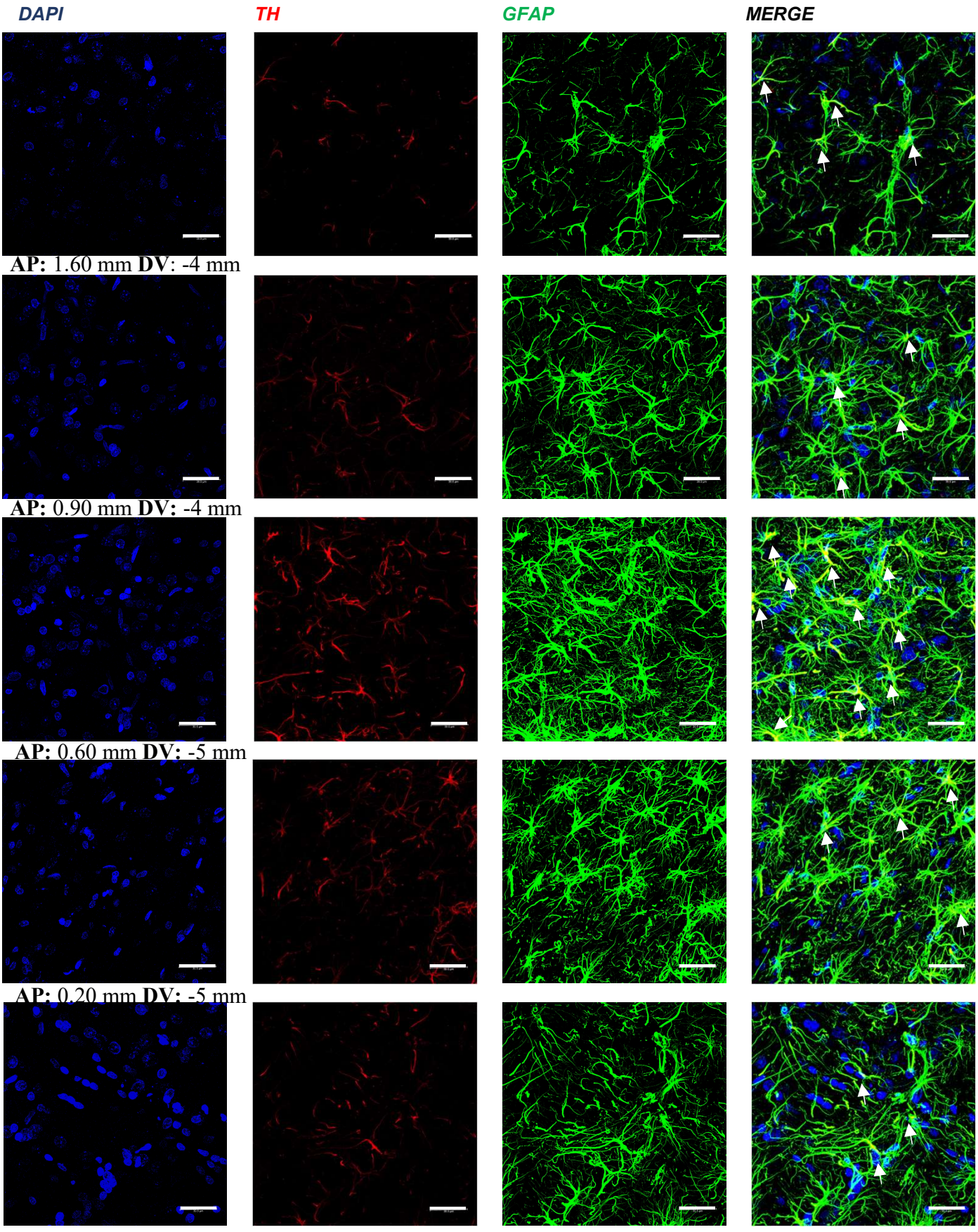
Supplementary Figure 3B. TH Immunohistochemistry of intact (left) *striatum* side between the experimental groups.



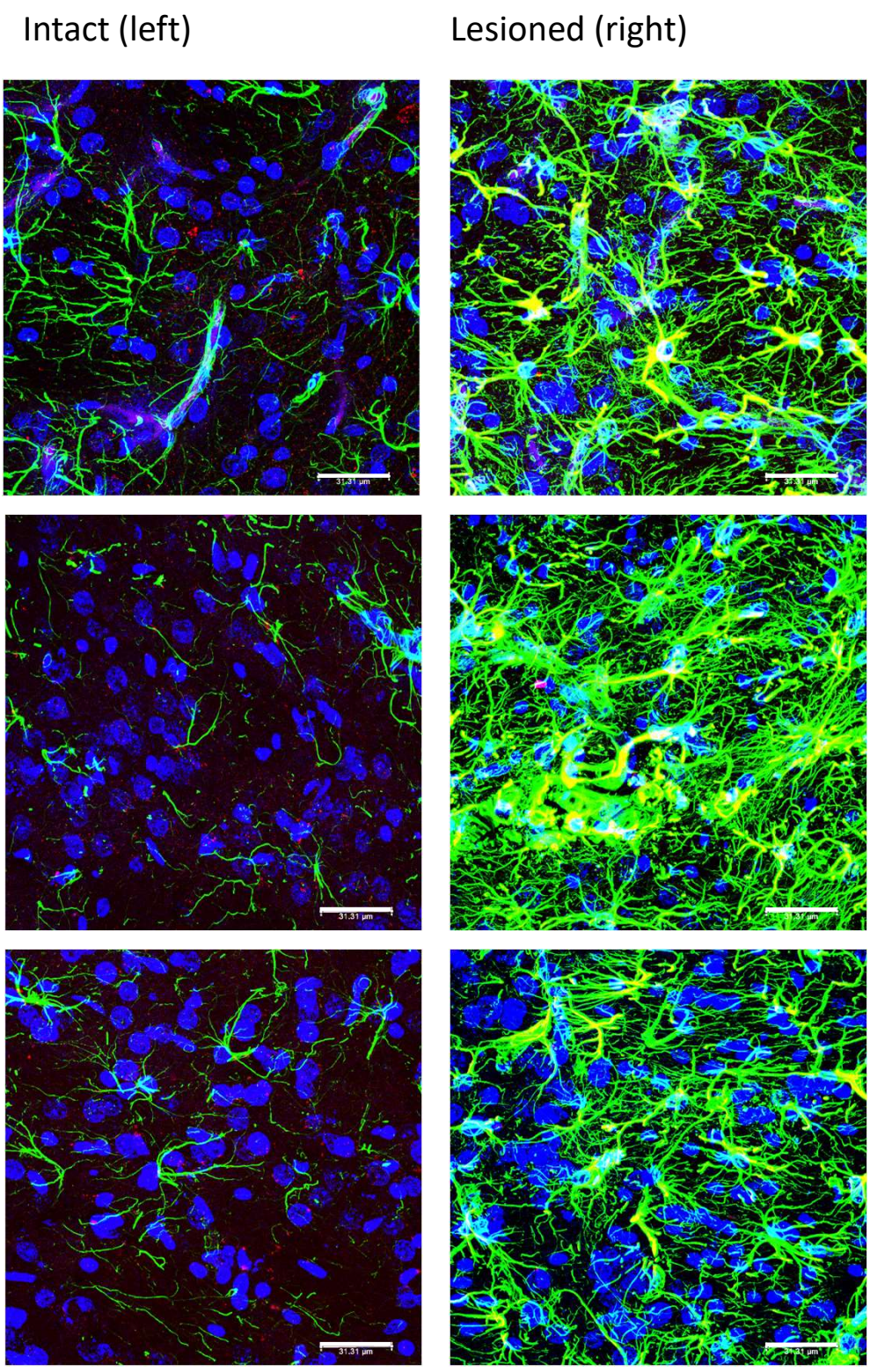
Supplementary Figure 4A. GFAP Immunohistochemistry of 6-OHDA lesioned (right) *striatum* side between the experimental groups.



Supplementary Figure 4B. GFAP Immunohistochemistry of intact (left) *striatum* side between the experimental groups.



Supplementary Figure 5. Complementary figure of confocal images presents at Figure 6. DAPI (nuclei) in blue fluorescent signal, Th is revealed with red, and GFAP with a green fluorescent signal. Cells expressing both Th and GFAP show a yellow signal. Bars represent 30 µm.



Supplementary Figure 6. GFAP expression between intact and 6-OHDA lesioned *striatum* side of 6-OHDA + AST TH group. DAPI (nuclei) in blue fluorescent signal, Th is revealed with red, and GFAP with a green fluorescent signal. Bars represent 30 µm.