

Supplementary material

Table S1. Primary antibodies used for Western blotting and IHC

Primary antibody	Manufacturing details	Dilution
Iba1	Wako Chemicals(#019-19741)	1/500
MAGL	Cayman Chemical (#100035)	1/500
GPR55	Abcam (#ab41515-100)	1/500
CB2	Abcam (#ab3561)	1/200
NAPE-PLD	Abcam (#ab95397)	1/1000
GFAP [G3893]	Sigma-Aldrich (#083M4785)	1/500
CB1	Abcam (#ab23703)	1/100
FAAH	Cayman Chemical (#101600)	1/100
DAGLβ	bioNova Científica (#orb182976)	1/100
COX-2 [D5H5]	Cell Signaling Technology (#12282)	1/200
α-Adaptin [ERP7572]	Abcam (ab151720)	1/2000
DAGLα	bioNova Científica (#orb156533)	1/100
iNOS	Thermo Fisher Scientific (#PA1-036)	1/200
beta Amyloid (1-42)	Thermo Fisher Scientific (#44-344)	1/200
beta Amyloid (1-40)	Thermo Fisher Scientific (#44-136)	1/200
beta Amyloid	Abcam (#ab2539)	1/200

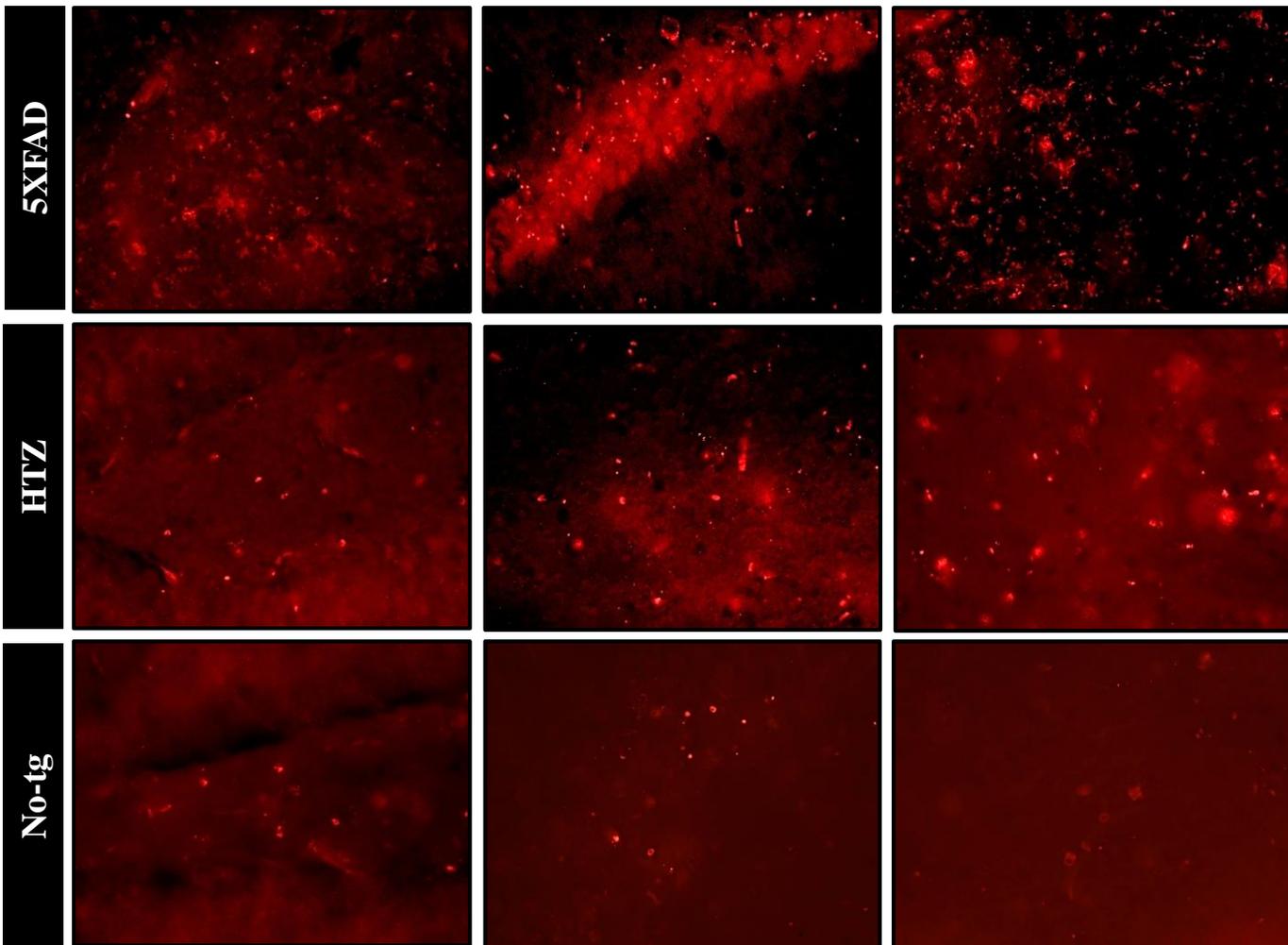
Abbreviations: Iba1, Ionized calcium binding adaptor molecule 1; MAGL: Monoacylglycerol lipase; GPR55: G protein-coupled receptor 55; CB2: Cannabinoid receptor type 2; NAPE-PLD: N-acyl phosphatidylethanolamine-specific phospholipase D; GFAP, glial fibrillary acidic Protein; CB1: Cannabinoid receptor type 1; FAAH: Fatty acid amide hydrolase; DAGL β : Diacylglycerol Lipase β ; COX-2, Cyclooxygenase 2; DAGL α : Diacylglycerol Lipase α ; iNOS: Inducible nitric oxide synthase.

Figure S1: GPR55 immunofluorescence on 5xFAD mice hippocampus with its negative control shown below.

DG 40X

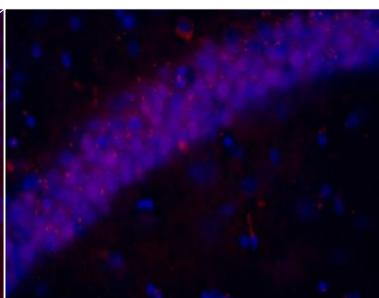
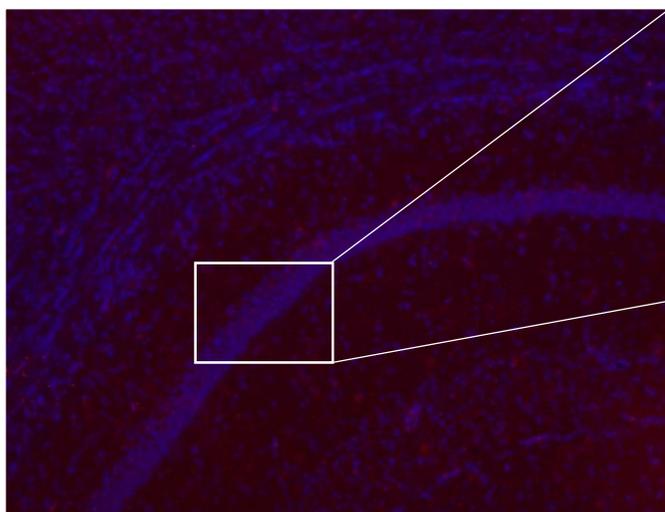
CA1 40X

CA3 40X



5XFAD - CA1 10X GPR55-DAPI

CA1 40X GPR55-DAPI



Negative control

Figure S2 (unedited blots): One whole membrane was used for DAGL α , α -Adaptin, CB1, FAAH, CB2 and MAGL immunoblottings on 5xFAD mice hippocampus (Figure 3&4)

Whole membranes from Gel 1. Individual membranes are shown below. **CB1** and **CB2** are represented in Figure 3a&b; **DAGL α** is represented in Figure 4a&d; **FAAH** and **MAGL** are represented in Figure 4b&d. All bands were quantified for histograms charts and statistical analysis. Proteins were normalized with α -Adaptin.

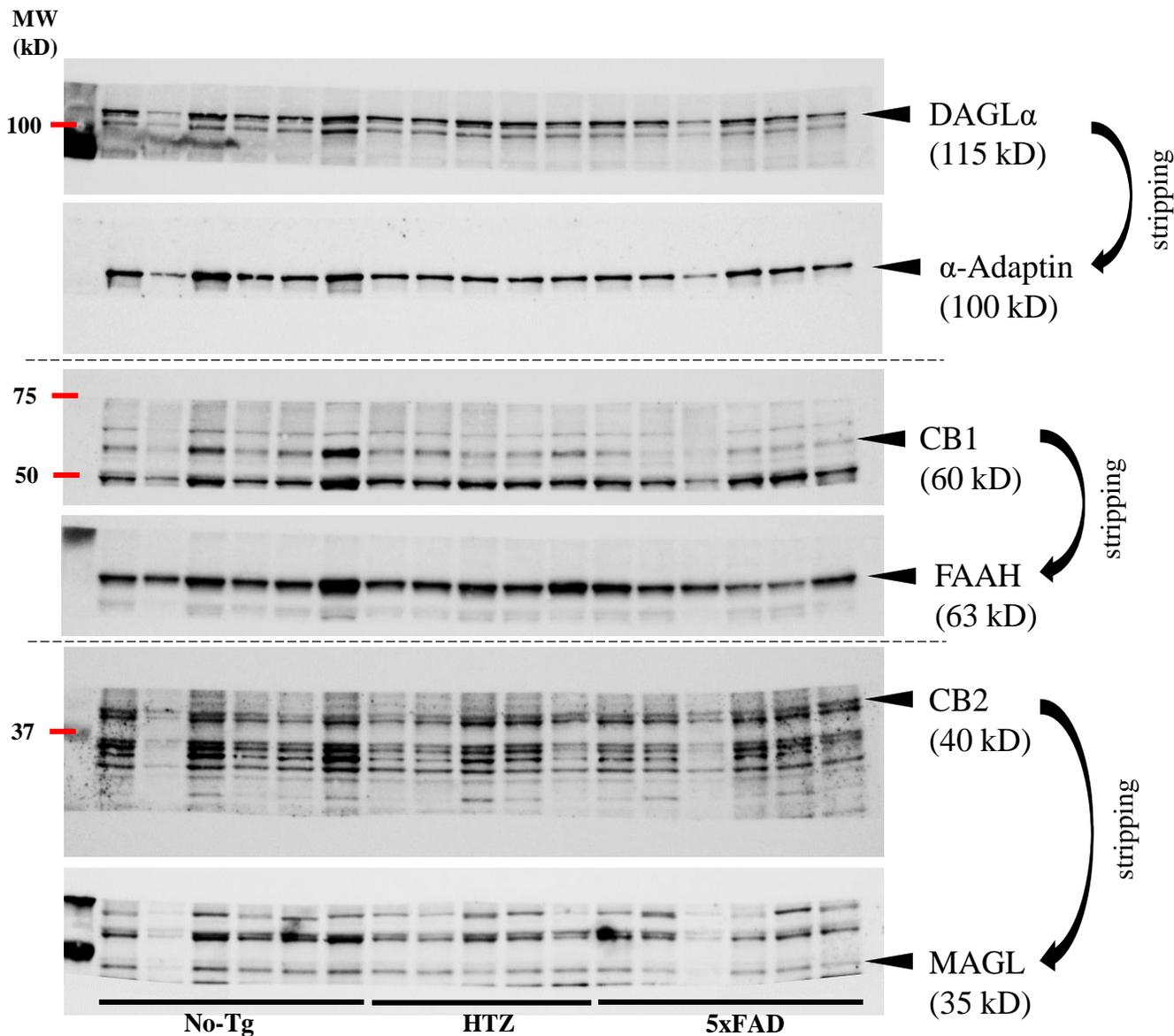


Figure S3 (unedited blots) : One whole membrane was used for COX-2, α -Adaptin, GFAP and GPR55 immunoblottings on 5xFAD mice hippocampus (Figure 3&5)

Whole membranes from Gel 2. Red Ponceau Staining and individual membranes are shown below. **GPR55** is represented in Figure 3a&b; **GFAP** is represented in Figure 5a&b; **COX-2** is represented in Figure 5f&g. All bands were quantified for histograms charts and statistical analysis. Proteins were normalized with α -Adaptin.

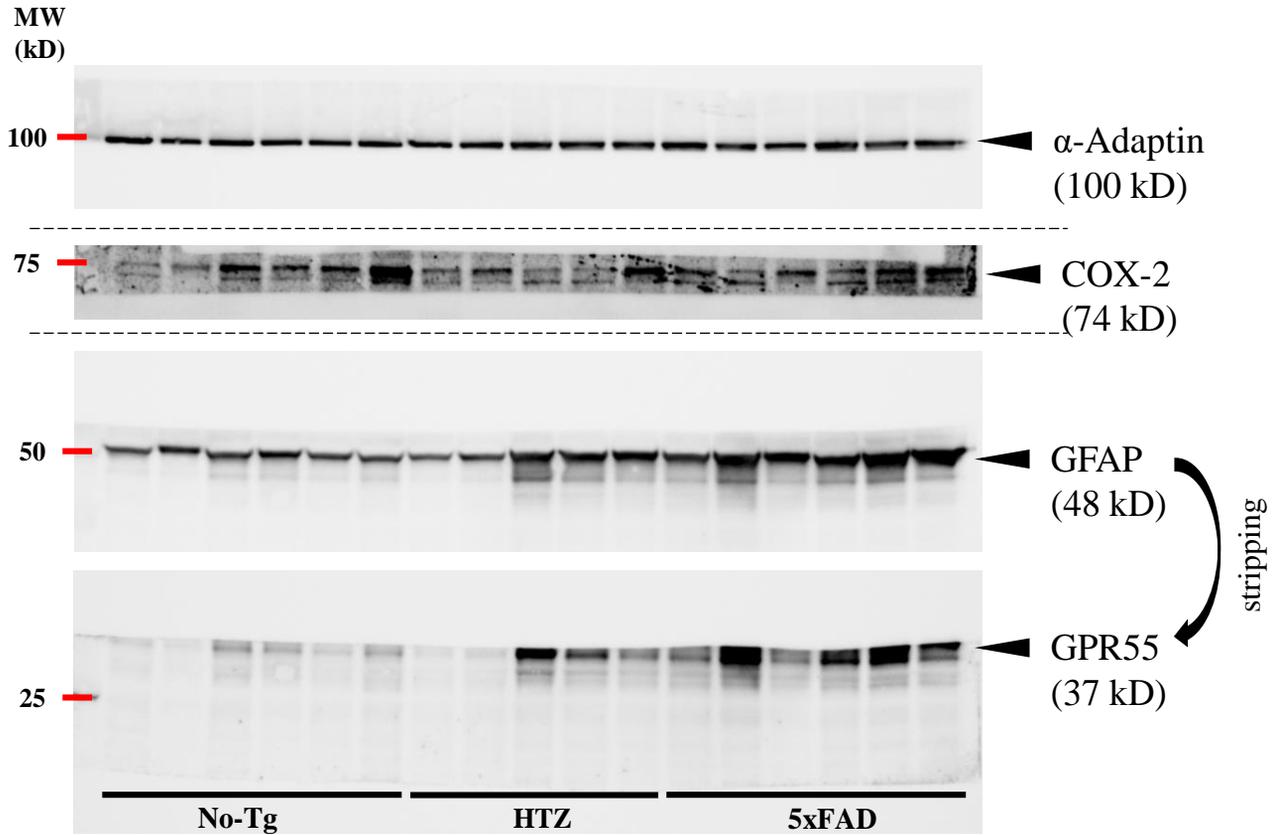


Figure S4 (unedited blots) : One whole membrane was used for iNOS, α -Adaptin, and NAPE-PLD immunoblottings on 5xFAD mice hippocampus (Figure 4&5)

Whole membranes from Gel 3. Red Ponceau Staining and individual membranes are shown below. **NAPE-PLD** is represented in Figure 4a&d; **iNOS** is represented in Figure 5f&g. All bands were quantified for histograms charts and statistical analysis. Proteins were normalized with α -Adaptin.

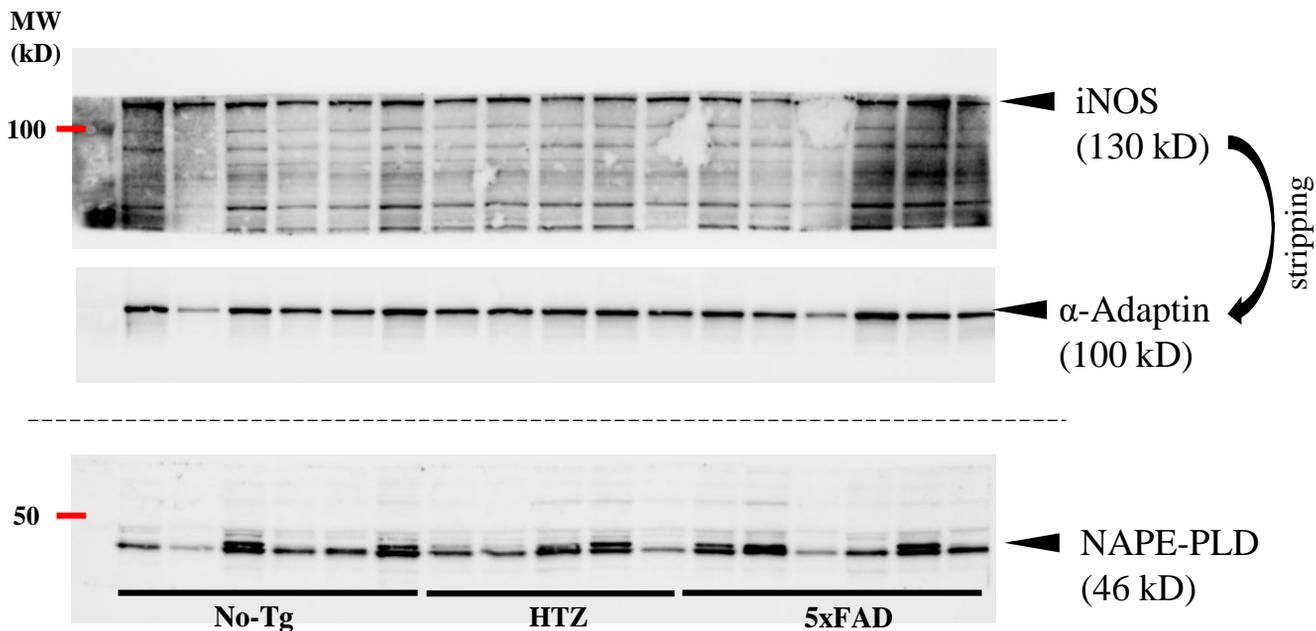


Figure S5 (unedited blots) : One whole membrane was used for Iba1 and α -Adaptin immunoblotting on 5xFAD mice hippocampus (Figure 5)

Whole membranes from Gel 4. Red Ponceau Staining and individual membranes are shown below. **Iba1** is represented in Figure 5a&b. All bands were quantified for histograms charts and statistical analysis. Proteins were normalized with α -Adaptin.

