

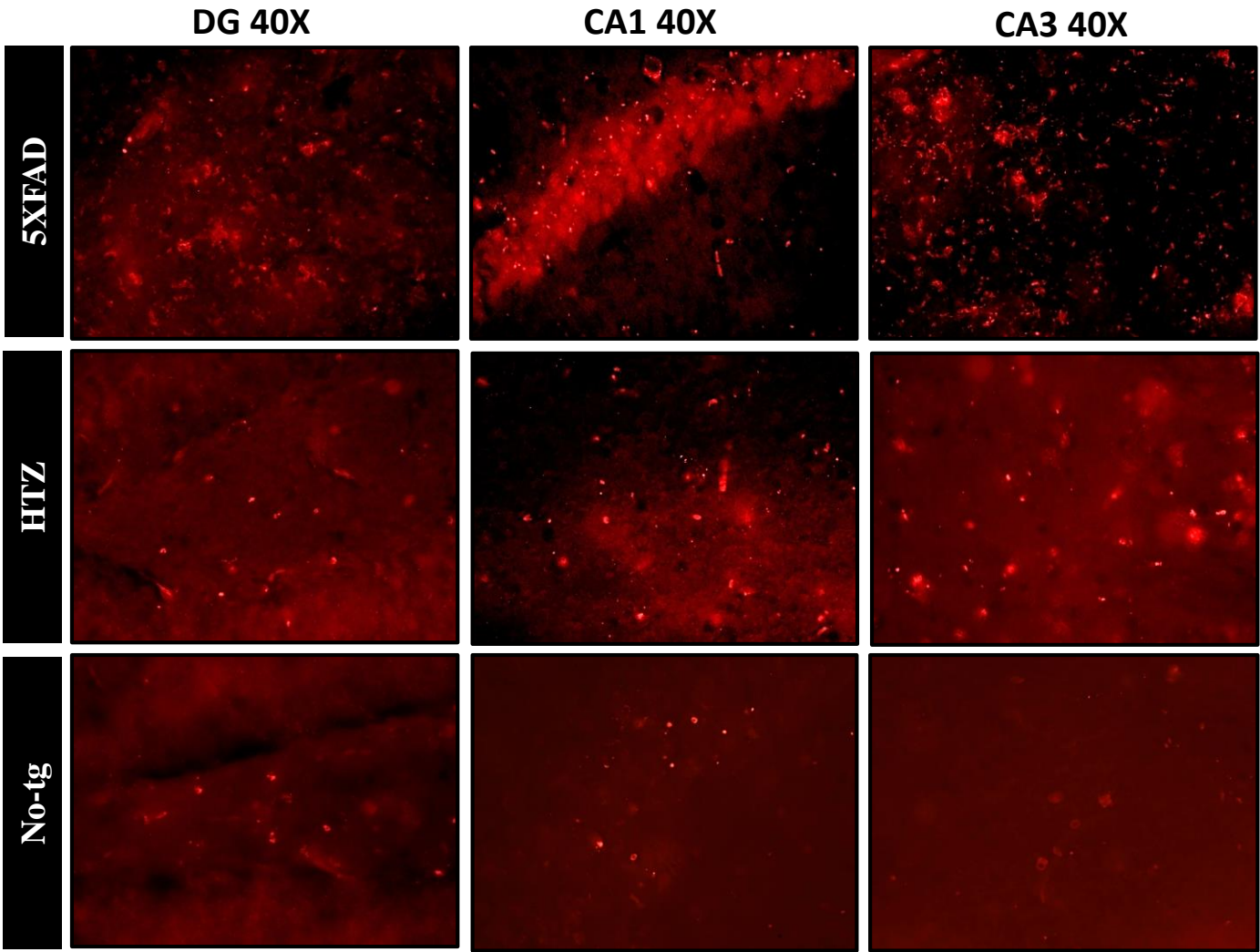
# **Supplementary material**

**Table S1.** Primary antibodies used for Western blotting and IHC

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

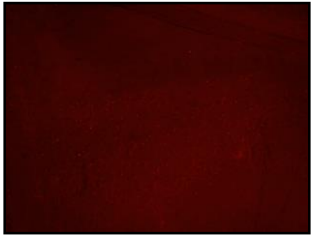
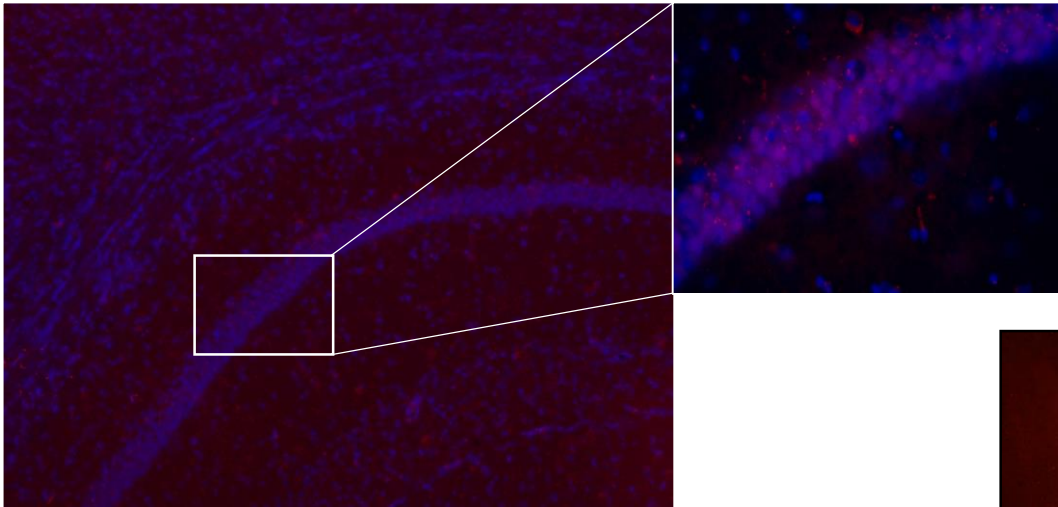
Abbreviations: Iba1, Ionized calcium binding adaptor molecule 1; MAGL: Monoacylglycerol lipase; GPR55: G protein-coupled receptor 55; CB2: Cannabinoid receptor type 2; NAPE-PLD: N-acyl phosphatidylethanolamine-specific phospholipase D; GFAP, glial fibrillary acidic Protein; CB1: Cannabinoid receptor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

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



**5XFAD - CA1 10X GPR55-DAPI**

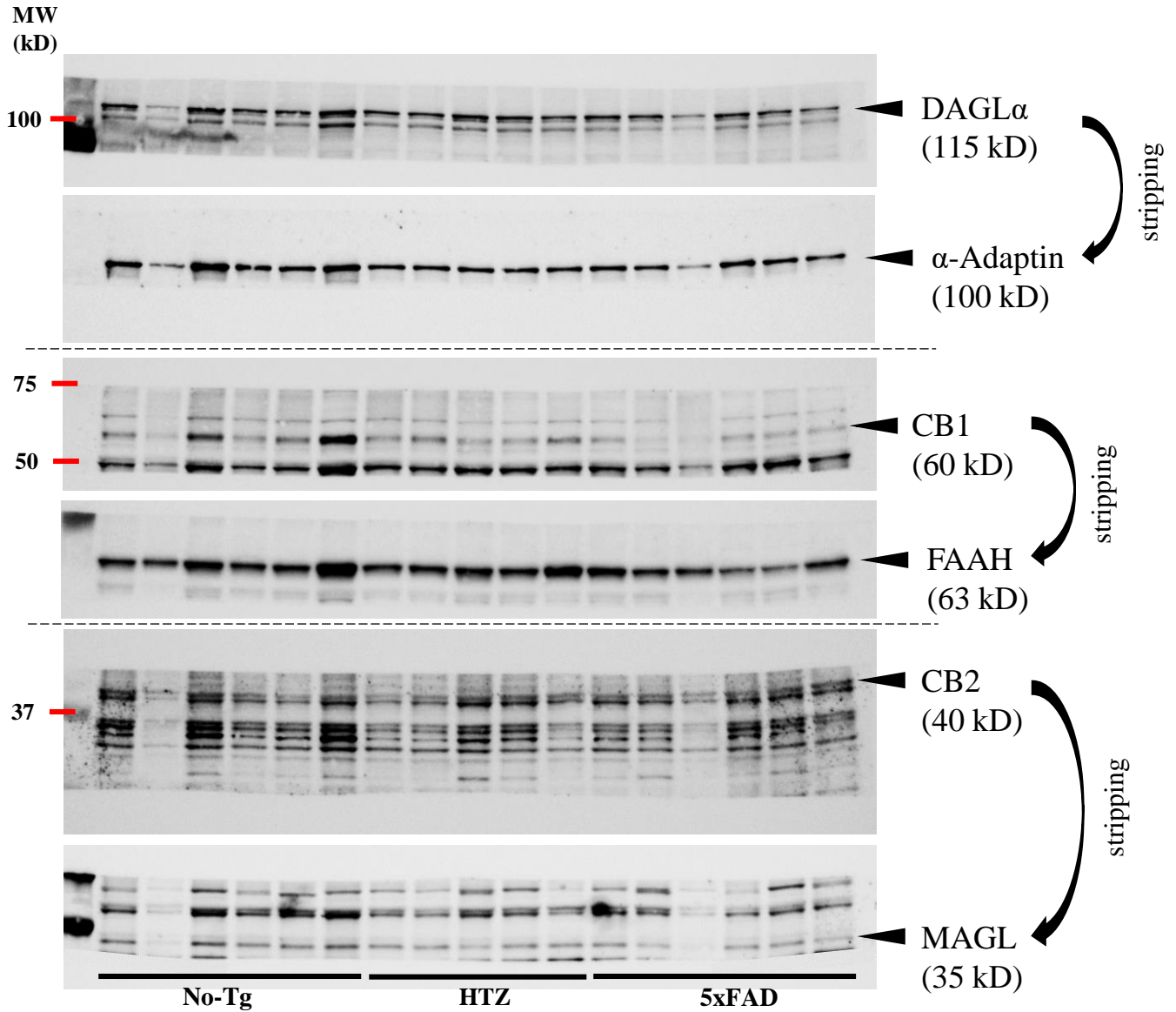
**CA1 40X GPR55-DAPI**



**Negative control**

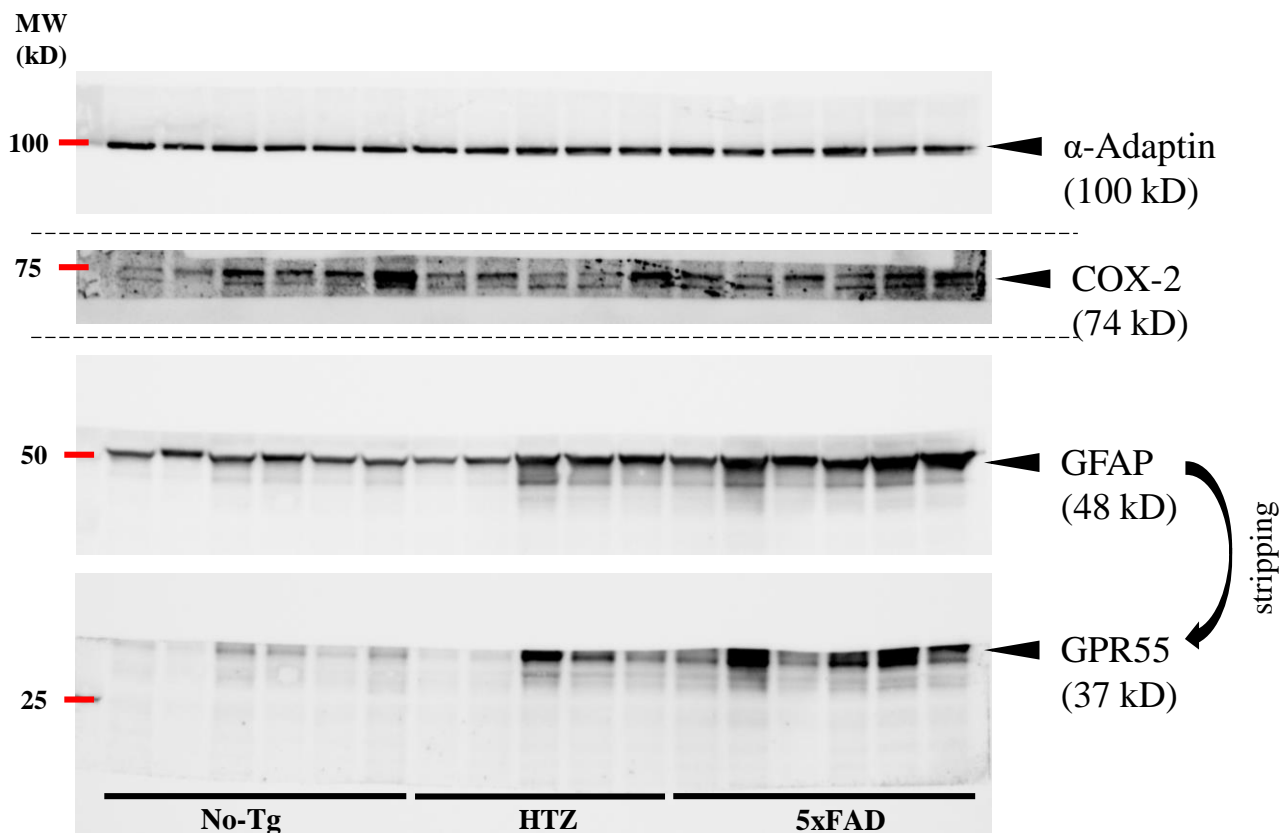
**Figure S2 (unedited blots):** One whole membrane was used for DAGL $\alpha$ ,  $\alpha$ -Adaptin, CB1, FAAH, CB2 and MAGL immunoblottings on 5xFAD mice hippocampus (Figure 3&4)

**Whole membranes from Gel 1.** Individual membranes are shown below. **CB1** and **CB2** are represented in Figure 3a&b; **DAGL $\alpha$**  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  $\alpha$ -Adaptin.



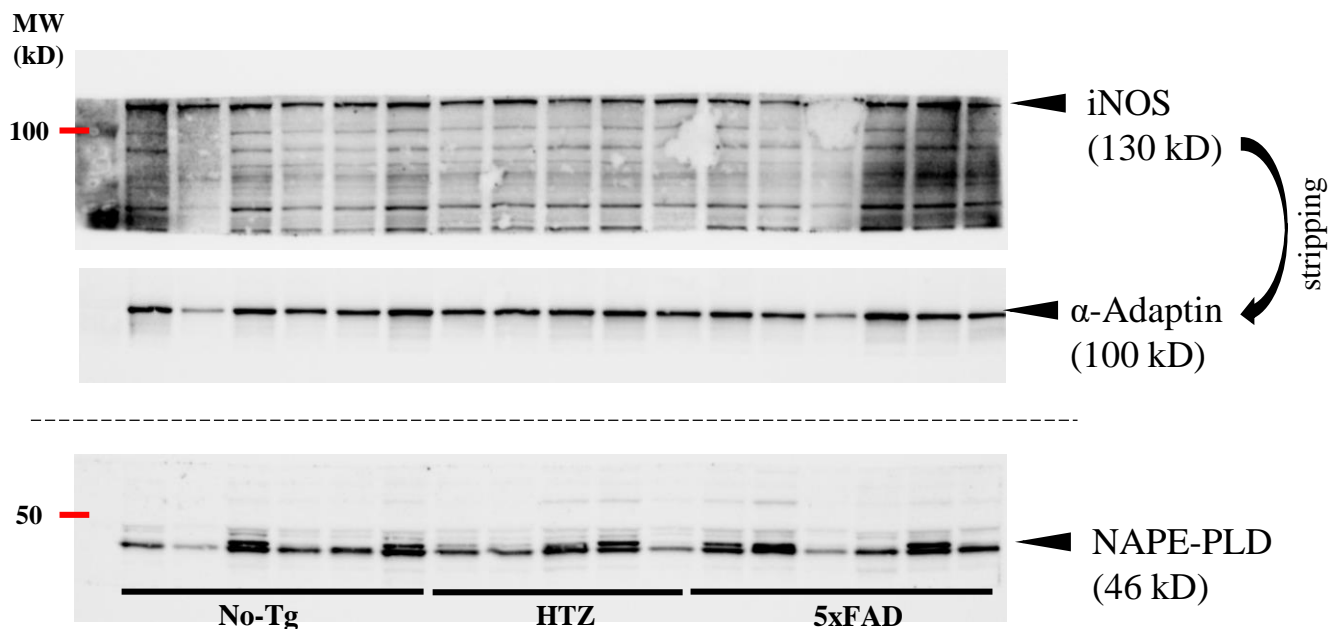
**Figure S3 (unedited blots) :** One whole membrane was used for COX-2,  $\alpha$ -Adaptin, GFAP and GPR55 immunoblottings on 5xFAD mice hippocampus (Figure 3&5)

**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  $\alpha$ -Adaptin.



**Figure S4 (unedited blots) :** One whole membrane was used for iNOS,  $\alpha$ -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  $\alpha$ -Adaptin.



**Figure S5 (unedited blots) :** One whole membrane was used for Iba1 and  $\alpha$ -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  $\alpha$ -Adaptin.

