

**Supplementary Figure S1** Whole brain scan, sagittal sections 4G8 immunostaining. Control (a); Plasma exchange (b). Microglia marker Iba1 visualized by immunofluorescence staining, arrowhead shows clusters of Iba1 positive cells (c). Comparison of Iba1 burden ( $p = 0.0283$ ) (d). Astrocyte marker GFAP visualized by immunohistochemistry, arrowhead shows clusters of GFAP positive cells (e). Comparison of the GFAP burden ( $p=0.069$ ). Data were analyzed and plotted as a percentage of control. Graphs represent the mean  $\pm$  standard error of the mean (SEM).

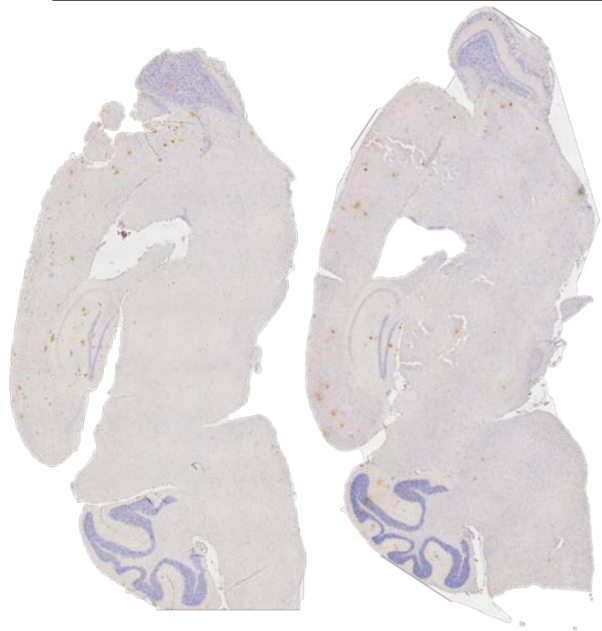
**Supplementary Figure S2** PE reduces the insoluble A $\beta$  fraction in brain ( $p = 0.039$ ) (a). No differences observed in soluble A $\beta$  fraction ( $p=0.234$ ) (b). Graphs represent the mean  $\pm$  standard error of the mean (SEM).

**Supplementary Figure S3** PE delays the progressive increase of A $\beta$  in plasma from 3mo. APP/PS1 throughout the treatment until 7 months old. No significant differences between the plasma collected at different time points. Graphs represent the mean  $\pm$  standard error of the mean (SEM).

# S1

## a

### 4G8 - Control



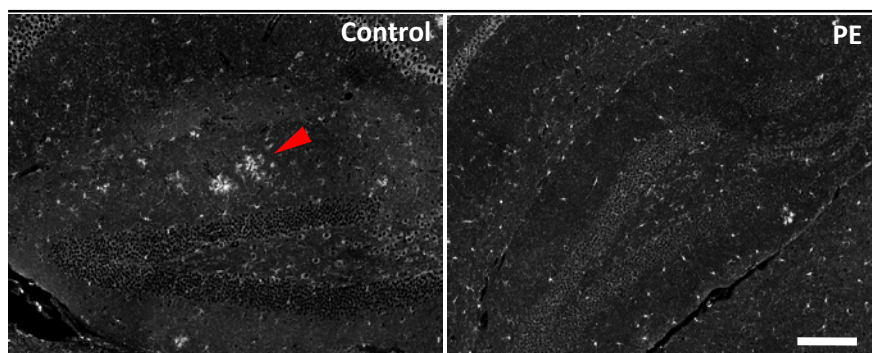
## b

### 4G8 - Plasma exchange

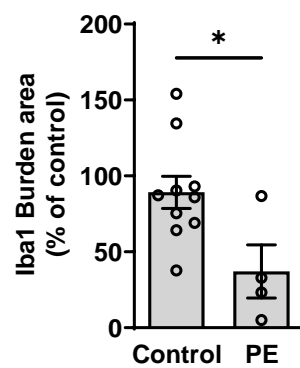


## c

### Iba-1

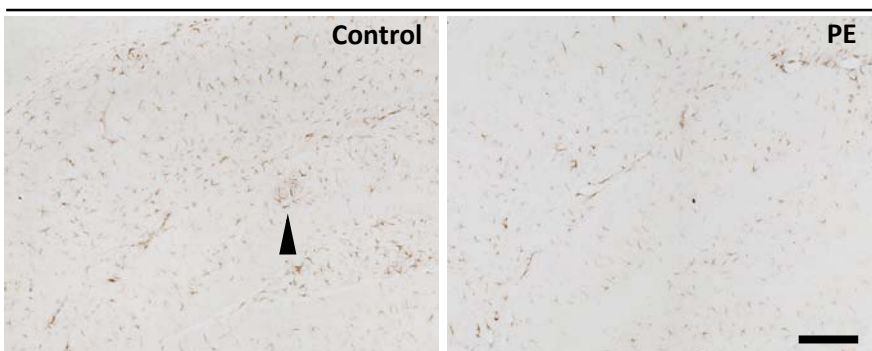


## d

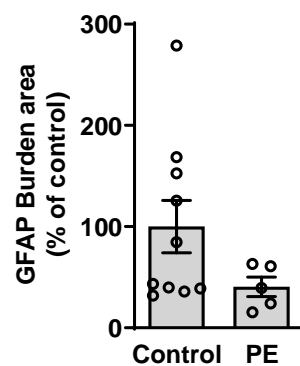


## e

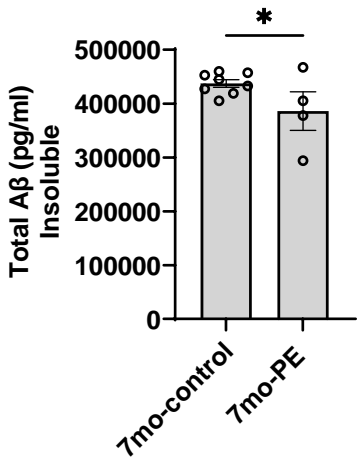
### GFAP



## f



**a**



**b**

