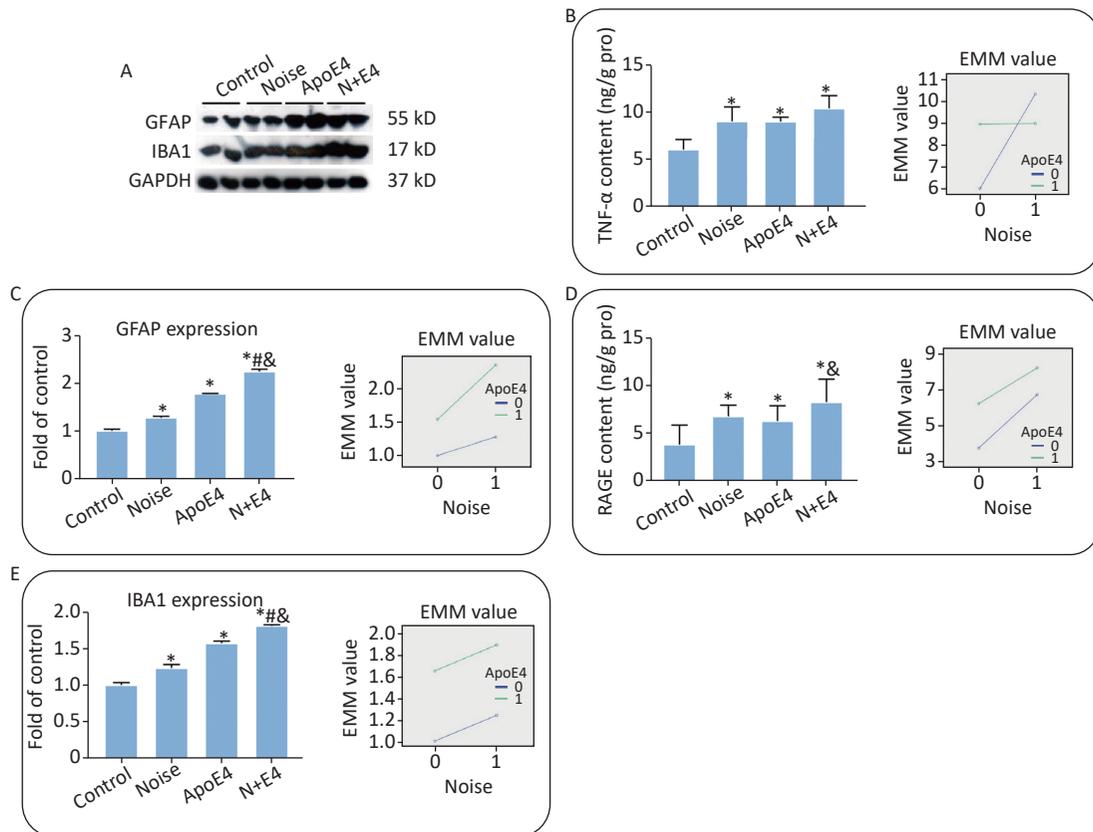


**Supplementary Figure S1.** Effects of chronic noise and ApoE4 exposure on cognitive performance in the Morris water maze task. (A) Representative traces and effects of noise and ApoE4 exposure on escape latency in the training phase in rats. (B) Representative traces and effects of noise and ApoE4 exposure on performance in the probe trial. Data are shown as the mean  $\pm$  standard deviation ( $n = 15$  per condition). Two-way ANOVA with Fisher's LSD post-test shows no significant effects on cognitive performance.



**Supplementary Figure S2.** Chronic noise and ApoE4 exposure induce neuroinflammation in the hippocampus. (A) Western blot analysis of GFAP and IBA1 expression in the hippocampus. GAPDH was used as a loading control. (B, C) The density of the immunoreactive bands was quantified and is presented as the percentage change relative to the control. (D, E) TNF-α and RAGE levels in the hippocampus after exposure, as determined by ELISA. \* $P < 0.01$  versus the control group, # $P < 0.01$  versus the noise group, and <sup>&</sup> $P < 0.01$  versus the ApoE4 group. Data are presented as the mean  $\pm$  standard deviation ( $n = 8$  per condition).