



Supplementary Figure 1. Changes in the behavior and protein expression in maternal separation and socially isolated mice. **A:** Description of the mouse behavior experiment method. Mouse behavioral experiments were conducted at week 7, and behavioral experiments were conducted again at week 9 after social isolation. **B-E:** There was no difference in the OFT between the CTL and the MS, and the two groups that underwent social isolation (social isolation after control [CTL+SS] and social isolation after maternal separation [MS+SS]) decreased when compared to CTL and MS, respectively. Anxiety-like behavior (EPM) showed that the time spent in the open arm increased in the MS compared to CTL, and the time spent in the open arm significantly decreased in the CTL+SS and MS+SS compared to the CTL and MS. Considering fear-related behavior, the MS+SS showed a decrease in freezing in the contextual fear test compared to the MS, and an increase in freezing in the cued fear test in the CTL+SS compared to the CTL. The MS showed increased freezing in the contextual fear test compared to the CTL in the t-test (N=11 mice [CTL], 11 [CTL+SS], 8 [MS], 8 [MS+SS], one-way analysis of variance, * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$, post-hoc Tukey; Student's t-test, $†p < 0.05$). OFT, locomotion; CTL, control group; MS, maternal separation group; SS, social isolation after maternal separation group; EPM, elevated-plus maze.