# *Supplementary Material*

## 1.1 Figures S1

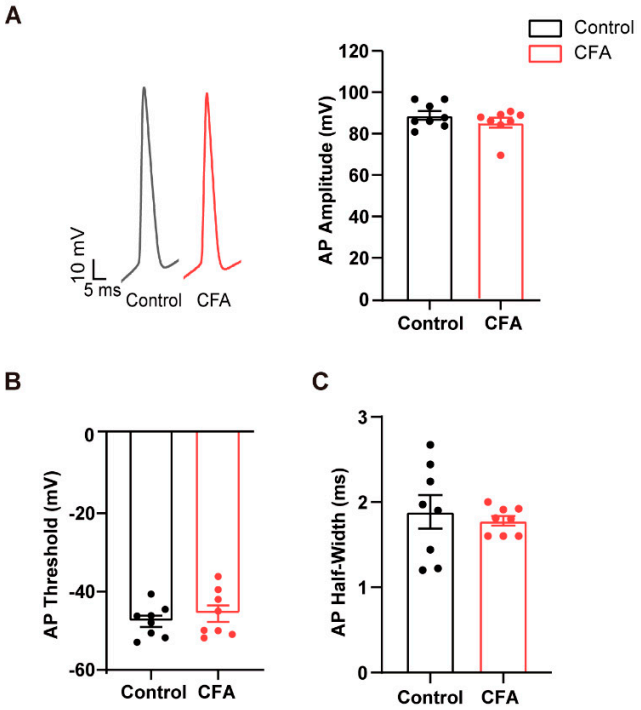



**Figure S1.** Associated data for Figure 1. The amplitude (A), threshold (B) and half-width (C) did not change in vCA1 pyramidal neurons of mice with CFA-injection, unpaired two-tailed Student's t-test.

## 1.2 Figures S2

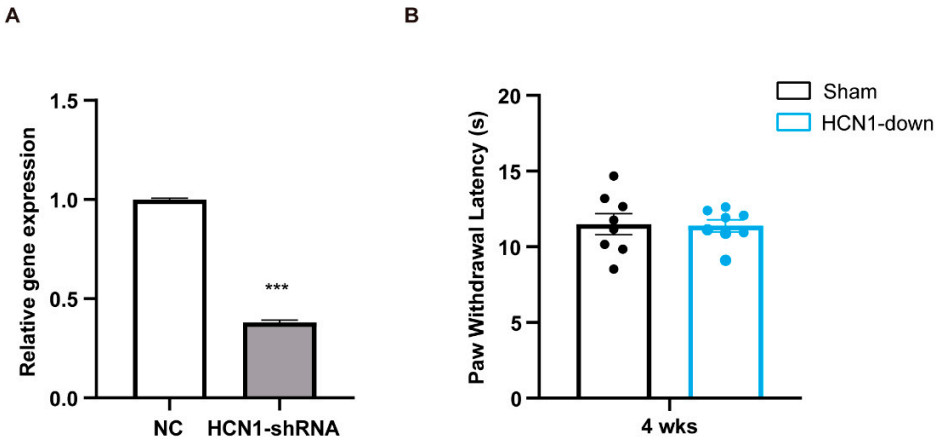



**Figure S2.** HCN1 knock-down in the vCA1 did not affect physical thermal pain thresholds. A. Relative levels of HCN1 determined by real-time RT-PCR in vitro, expressed as a fold change relative to NC (negative control). n = 3 in each group. *** $p < 0.001$ vs NC, unpaired two-tailed Student's t-test. B. Knock-down of HCN1 in vCA1 did not affect the physical thermal pain thresholds in mice. two-way ANOVA with Sidak's multiple comparisons tests.

## 1.3 Figures S3

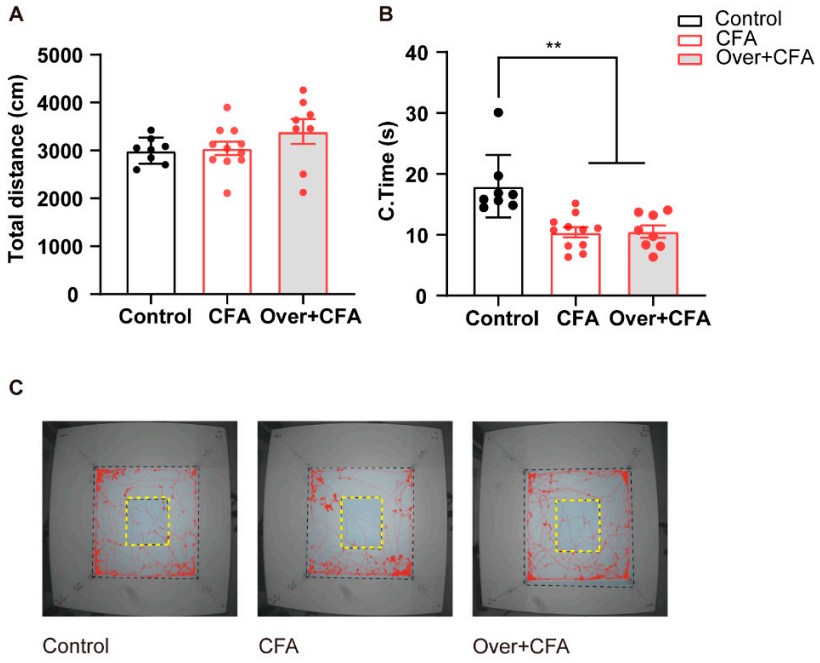



**Figure S3.** Up-regulation of HCN2 in vCA1 shows limited effects on locomotion in CFA-injected mice. (A) Up-regulation of HCN2 in vCA1 had limited effects on total distance traveled in the field in CFA-injected mice. $n = 8$ in each group. One-way ANOVA with Sidak's multiple comparisons tests. (B) Up-regulation of HCN2 in vCA1 had limited effect on time spent in the center area of the field in CFA-injected mice. (C) Representative exploratory tracks (red polylines) in the open field. Yellow dash lines indicate open arms.