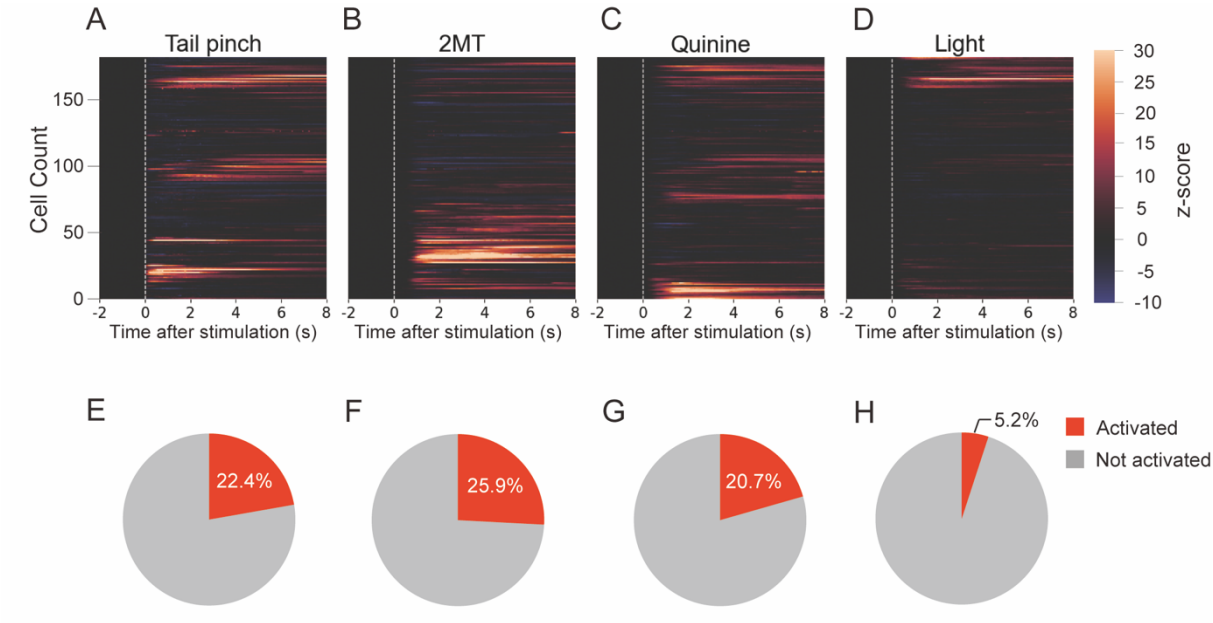

Supplementary Fig. S1. Aversive sensory stimuli activated CeA neurons. (**A-D**) The time courses of the z-scores before and after pain (tail pinch), olfactory (2MT), gustatory (quinine), and visual (bright light) stimulation, averaged over 10 trials, are shown in the heat map. The z-score of the fluorescence intensity from 2 s before to 8 s after the application of each sensory stimulus was calculated, using the average fluorescence intensity over a 2-s period immediately before stimulus application as a baseline. (**E-H**) To determine whether each neuron was activated by each stimulus, we used a permutation test to compare the ΔF values during the periods 0–2 s before (pre) and 1–3 s after (post) the start of stimulus application. The original data set of pre and post ΔF values were obtained from the 10 trials, and the pre and post values were systematically shuffled to obtain approximately 1,000 shuffled data sets. The null distribution was obtained by calculating the mean of differences between pre and post values of each shuffled data set and compared with the mean of differences between pre and post values of the original data set to determine whether the neuron was significantly ($P < 0.05$) activated. In total, 22.4%, 25.9%, 20.7%, and 5.2% of CeA neurons were activated by aversive pain, olfactory, gustatory, and visual stimuli, respectively.