Supplementary Figure 3. Behavioral responses to odorant presentation.

a. Sniff frequency histograms relative to trial time from two groups of rats. Left: Frequency histogram from two rats presented with odorant without any preceding cues (4 sessions each, 949 trials). Right: Same data from two rats in which a 1 sec tone preceded odorant presentation (right; 4 sessions each, 660 trials). Sniff frequency shows small (<1 Hz) increases upon odorant presentation. Note an increase in sniff frequency 4 sec pre odor in A (left), corresponding to the time of shutter opening for imaging. This does not occur for the animals in which a pre-odor tone was presented, possibly because the tone itself served as the anticipatory cue. Time bins are 100 msec. Values indicate mean instantaneous sniff frequency during each bin. Error bars are s.e.m. Mean number of sniffs/bin was 133 ± 24 (s.d.).

b. Cumulative lick probability for two rats (RCR20 and RCR21) relative to the first sniff after odorant onset for both CS+ and CS- odorants. Cumulative probability distributions are calculated separately for CS+ and CS- trials, as a fraction of all trials (not all licks). Rats licked for ~ 97% of all CS+ trials and ~ 14% of CS- trials.