



Figure 4 - Figure Supplement 2. Calcium responses of MBON-m1 for each individual.

Calcium activity of MBON-m1 was imaged in vivo (using *SS02163-GAL4 > UAS-GCamp6f*) in first instar larvae immobilised in a microfluidic device [68] and exposed to the odor EA (**a,b,d**) and/or to optogenetic activation of CsChrimson-expressing KCs (**c,d**). Each curve shows fluorescence normalized to baseline (before odor presentation) for each repeat (2 to 4) per animal (mean \pm s.e.m.). Each color corresponds to one individual, thicker curve is averaged response for this individual. In **b-c** responses in the same animal to different kinds of stimulations (odor or KC activation) are shown in the same color. Smoothed averaged individual responses are also shown in Fig. 4c-d and Fig. 5a.

a. Response of MBON-m1 to EA in larvae with silenced MB (using *14H06-LexA > LexAop-TNTE*). **b.** Response of MBON-m1 to EA in larvae with intact MB (in *14H06-LexA > LexAop-CsChrimson*). **c.** Response of MBON-m1 to activation of MB (using *14H06-LexA > LexAop-CsChrimson*). **d.** Response of MBON-m1 to two odors, CS+ and CS-, before (*in black*) and after (*in color*) the CS+ was paired with optogenetic activation of the nociceptive neurons Basins (olfactory aversive training).