



Figure 3 — figure supplement 1. Weber-Fechner Law broadly observed across odor-receptor combinations. (a) Standard deviation vs. mean of ethyl acetate stimulus in Fig. 1. (b) ORN gain estimated by the ratio of standard deviation of firing rate to standard deviation of stimulus, vs. mean stimulus in each trial. This model-free estimate of ORN gain ignores kinetics of response, but returns similar estimates of the gain (cf. Fig. 3f). Note that the units of gain estimated this way are the same. (c-f) ORN gain as a function of mean stimulus for various odor-receptor combinations. In all plots, the red line is a power law with slope -1 (the Weber-Fechner Law). Data in panel a and b is the same as in Fig. 3. n = 121 trials from 16 ORNs in 6 flies.