Figure 3. H1 responses to varied stimuli.

H1 was continuously presented with each of the four stimuli seven times, in order to assess its tuning. Trial-averaged firing rates were computed for counter-clockwise (blue) and clockwise (orange) presentations. Instantaneous firing rates were computed by convolving a 200 ms boxcar function with the binarized spike trains. Error bars are 95% confidence intervals computed across 7 trials.

a. Responses to the constant spatial frequency strip, showing strong CCW response throughout the presentation.
b. Responses to the contrast gradient strip. CCW response shows weak ramping as the contrast increases.
c. Responses to the expanding bar length strip. Note the increase in firing rate locked to the appearance of the bar, which decays back after a couple of seconds.
d. Responses to the random stimulus strip. The random stimulus produces a strong but varied response for CCW rotation. Qualitatively, peaks in response seem to appear whenever there is a lower-frequency change in the statistics of the strip (such as when we go from a bulk darker region to a lighter region, or vice versa).