1. Attentional modulation is similar during responses to the previous and changed stimuli. **A.** Difference in mean firing rate between trials when the stimulus in the neuron’s receptive field was attended and unattended as a function of stimulus modulation (rate during stimulus period – interstimulus period) during responses to the previous stimulus (solid line) and the changed stimulus (dashed line). Error bars represent SEM. **B.** Same, for Fano factor. **C.** Same, for noise correlation for pairs of neurons in the same hemisphere.
2. Attentional modulation of correlation is associated with modulation of firing rate. Correlation change (attended-unattended) is plotted as a function of the mean rate change of the two neurons in the pair (attended-unattended). Error bars represent SEM.
Supplementary Results

Comparison of attentional effects in single and multiunits and in individual monkeys

All of our analyses combine single neurons and multiunit clusters because we found no differences between the two groups in attentional modulation of firing rates, Fano factor, or noise correlation. For each of the three measures, we computed a standard attentional modulation index (MI) for rates computed over a 200 ms period beginning 60 ms after the onset of the stimulus preceding the orientation change on each trial. The modulation index, MI, was defined as \((r_{\text{attended}} - r_{\text{unattended}}) / (r_{\text{attended}} + r_{\text{unattended}})\), where \(r\) is the mean firing rate, Fano factor, or noise correlation for a given neuron (or neuron pair in the case of noise correlation) and attentional condition. The mean rate modulation index, MI\(_{\text{rates}}\), was 0.043 overall, and MI\(_{\text{rates}}\) was indistinguishable for single and multiunits (mean MI\(_{\text{rates}}\) was 0.049 for single units and 0.042 for multiunits; t-test, \(p=0.19\)). For Fano factor, mean MI\(_{\text{FF}}\) was -0.016 overall, and also was indistinguishable for single units (MI\(_{\text{FF}}\)=-0.011) and multiunits (MI\(_{\text{FF}}\)=-0.017; t-test, \(p=0.31\)). For noise correlation, mean MI\(_{\text{cor}}\) was -0.32 overall, and also indistinguishable for single units (MI\(_{\text{cor}}\)=-0.35) and multiunits (MI\(_{\text{cor}}\)=-0.29; t-test, \(p=0.23\)). Because we suspected that we sometimes observed the same single unit on multiple recording sessions, analyses of single units were performed only on a subset 178 single units for which there were no single units on the same electrode on consecutive days.

The results for the two monkeys were also very similar. Monkey 1 had somewhat lower MI\(_{\text{rates}}\) than Monkey 2 (mean=0.036 for Monkey 1 and 0.051 for Monkey 2; t-test, \(p<0.001\)). The two monkeys had statistically indistinguishable MI\(_{\text{FF}}\) (mean=-0.018 for Monkey 1 and -0.014 for Monkey 2; t-test, \(p=0.39\)) and MI\(_{\text{cor}}\) (mean=-0.33 for Monkey 1 and -0.31 for Monkey 2; t-test, \(p=0.69\)). For both single and multiunits and for each monkey, MI was positive for rate and negative for Fano factor and noise correlation (t-
tests, \( p<0.01 \) for each comparison), indicating that attention increases firing rates and decreases Fano factor and noise correlation.