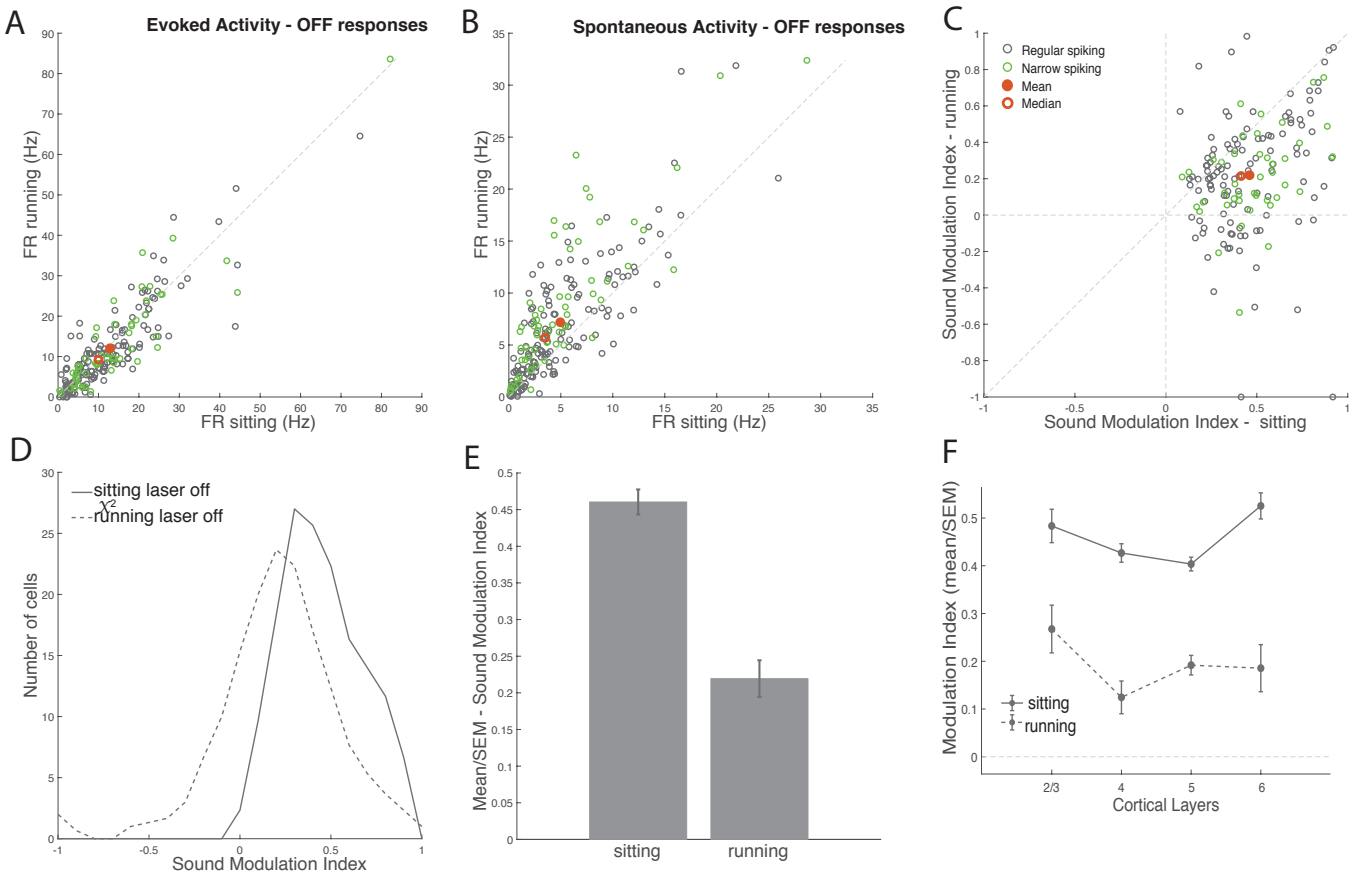

Supplemental Figure 2. Offset responses showed similar modulation by running as onset responses, suggesting running has general effects across multiple aspects of sound processing. Offset responses showed a modest but significant decrease during running.

A. Offset response firing rate evoked by white noise stimulus (100 ms window following stimulus offset) during sitting and running trials (without baseline subtraction). Red filled circle: population mean, red unfilled circle: median. Dashed line is unity. Mean evoked offset responses: running 12.06 ± 0.78 Hz, sitting 12.85 ± 0.78 Hz, signed-rank p = 0.0102, N = 206 cells, effect size r = 0.13.

B. Spontaneous firing rate during sitting and running trials. Running increased spontaneous firing rates. Green: narrow-spiking neurons, grey: regular-spiking neurons. These data are similar to those in Fig. 2A, but not identical, because these are the subset of cells with significant offset responses (whereas the cells in Fig. 2A were those with significant onset responses).

C. Offset response sound modulation index during sitting trials plotted against sound modulation index during running trials. Modulation index was strongly suppressed by running (p = 0.0102, effect size r = 0.13), because evoked firing rates were reduced while spontaneous firing rates were increased.

D. Distributions of offset response sound modulation indices during sitting (solid line) and running (dashed line).

E. Mean offset response sound modulation indices during sitting and running.

F. Mean and SEM of offset response sound modulation indices across cortical layers in sitting and running conditions (L2/3 sitting = 00.48 ± 0.03, running = 0.27 ± 0.05, n = 12; L4 sitting = 0.43 ± 0.02, running = 0.12 ± 0.03, n = 27; L5 sitting = 0.40 ± 0.01, running = 0.19 ± 0.02, = 62; L6 sitting = 0.53 ± 0.03, running = 0.19 ± 0.05, n = 14; χ^2 (3, 111) = 4.5, p = 0.21)