## **Supporting Information**

## Adelsberger et al. 10.1073/pnas.1321612111

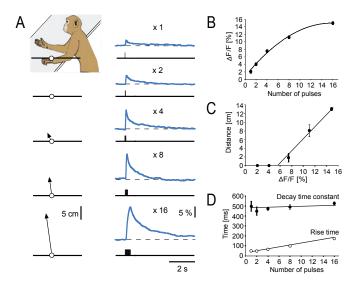


Fig. S1. Relation between distance of arm movement, magnitude of local cortical activity, and the number of stimuli within stimulation burst. (A) Movement responses and corresponding cortical  $Ca^{2+}$  signals during microstimulation with increasing number of stimuli as indicated (100 Hz, 25  $\mu$ A). (B) Stimulation strength versus amplitudes of the  $Ca^{2+}$  signals. (C)  $Ca^{2+}$  signal amplitudes versus distance of arm movements. (D) Rise times and decay time constants versus number of stimulation pulses within burst. In B-D, each data point represents the average of five experimental sessions. Note that for some points the error bars are smaller than the symbols.