



S1 Fig. Example of the recorded EMG and EEG profiles without FUS sonication. (A) EMG signal (low-pass filtered using threshold of 200 Hz) obtained from the gastrocnemius of the right hind limb showed three signal bursts (marked by red arrows; indicating the first negative peak) elicited by superficial mechanical stimulation of the corresponding leg nerve. The blue dashed line indicates the timing of stimulation onset. (B) EMG signal (low-pass filter of 30 Hz high cut-off) from the time segment marked by the bracket in (A). (C) EEG SEP signal (bandpass filtered at 0.5–200 Hz) induced by electrical stimulation of the contralateral hind leg. A negative peak (N_{40}) and positive peak (P_{50}) were detected at ~40 ms and ~50 ms, respectively.