



SUPPLEMENTARY FIG. S4. Twenty-one DIV spheroids contained mature neurons with functional synapses. Neurons in 21 DIV 8k spheroids fired both evoked and spontaneous action potentials. Both sEPSCs and sIPSCs were detected. **(a)** Trace of evoked action potentials. *Lower panel:* current injection protocol. **(b)** Example of evoked action potentials followed by a spontaneous action potential. **(c)** *Left panel:* sEPSCs were isolated by the addition of GABA_A receptor antagonist bicuculline and glycine receptor antagonist strychnine (holding potential, -70 mV). *Right panel:* after addition of TTX, remaining miniature sEPSCs are apparent. **(d)** *Left panel:* sIPSCs were isolated using DNQX. *Right panel:* miniature sIPSCs remaining in the presence of sodium channel blocker TTX. DNQX, 6,7-dinitroquinoxaline-2,3-dione; sEPSCs, spontaneous excitatory postsynaptic currents; sIPSCs, spontaneous inhibitory postsynaptic currents; TTX, tetrodotoxin.