Supplementary Figure 4  Pairing-evoked LTP evoked in the presence of picrotoxin to block GABAA receptors has no effect on the temporal fidelity of coincidence detection.

(a) Time-course of pairing-evoked LTP of EPSPs recorded in pyramidal neurons (n = 6 pathways in 3 cells). (b) Traces (averages of 15) obtained from one experiment showing EPSPs obtained by stimulating either of two pathways (S1 and S2) during a baseline period (BL) and following pairing-induced LTP. (c) Traces obtained from one experiment, showing individual trials obtained by stimulating both pathways with different inter-stimulus intervals (cycle: -12 ms to +12 ms, 2 ms step) before (BL) and after pairing-evoked LTP was elicited in both pathways, followed by stimulus reduction (LTP ↓ stim.). Bottom: frequency histogram showing the spike rate for different intervals between stimuli (in ms). The spike rate for asynchronous stimulation remained independent of interval before and after LTP. (d) The action potential probability for synchronous stimulation was stable both during the baseline period and after LTP and stimulus reduction (n = 3 cells). (e) Action potentials occurred with a decreasing probability with increasing interval between the two stimuli. The spike probability-interval slope was flat before (filled circles) and after LTP (open circles).