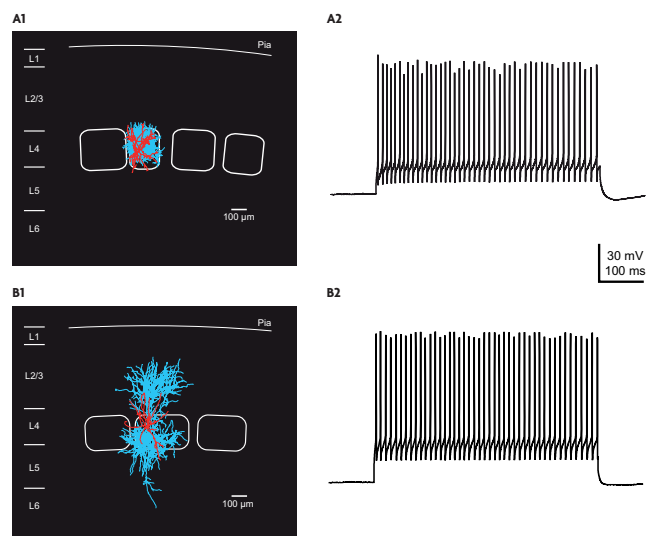


Supplementary information | S7



Combining morphological and functional criteria. Anatomical reconstruction of two different layer 4 interneurons (A1, B1) in rat somatosensory cortex with similar intrinsic firing patterns (A2, B2) in response to a 500 ms stimulus (in vitro recordings from barrel cortex slices). Soma and dendrites, red; axons, blue; cortical barrels, white outlines. A1, layer 4 interneuron with highly local axonal arborization, B1, layer 4 interneuron with columnar axonal projection pattern mainly into layers 2/3 and 5. Resting potential, adaptation ratio, action potential half width and maximum firing frequency are very similar for both neurons and cannot be used as distinguishing criteria (unpublished observations from Christian Kölbl, D.F and M.H.).