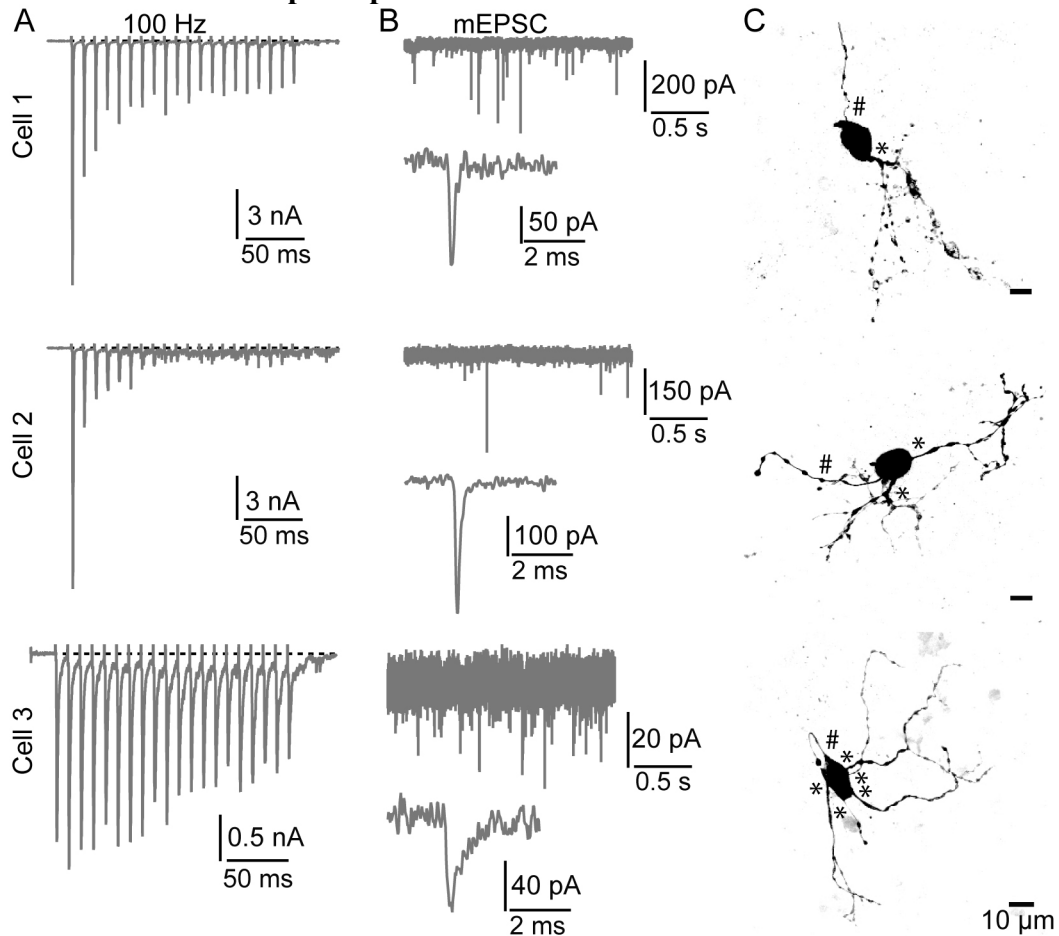


Figure S4: Characteristics of synaptic currents can be correlated to morphological features of $Bsn^{\Delta Ex4/5}$ principal cells



Short-term plasticity in response to train stimulation (Column **A**) and mEPSCs (column **B**) recorded from three principal cells in the AVCN of $Bsn^{\Delta Ex4/5}$ animals. The insets show a single mEPSC illustrating the kinetics of the events. Cells were infused with Alexa-488 during recordings and displayed in column **C** as projections from confocal image stacks (scale bars: 10 μ m). **Cell 1** exhibits typical bushy cell characteristics, with depressing EPSCs during train stimulation, fast mEPSCs with large amplitudes, one axon (#) and a single dendrite (*). **Cell 2** exhibits bushy cell-typical mEPSCs and morphology (two primary dendrites that branch extensively in close proximity to the soma and oval shaped soma) as well, but unusually strong depression. In contrast, **cell 3** represents a typical example of a stellate cell with facilitating EPSC amplitudes at the beginning of high frequency stimulation, slower kinetics of both, evoked and spontaneous currents, more numerous (~5) primary dendrites (*) and a sharp cornered, polygon-like soma.