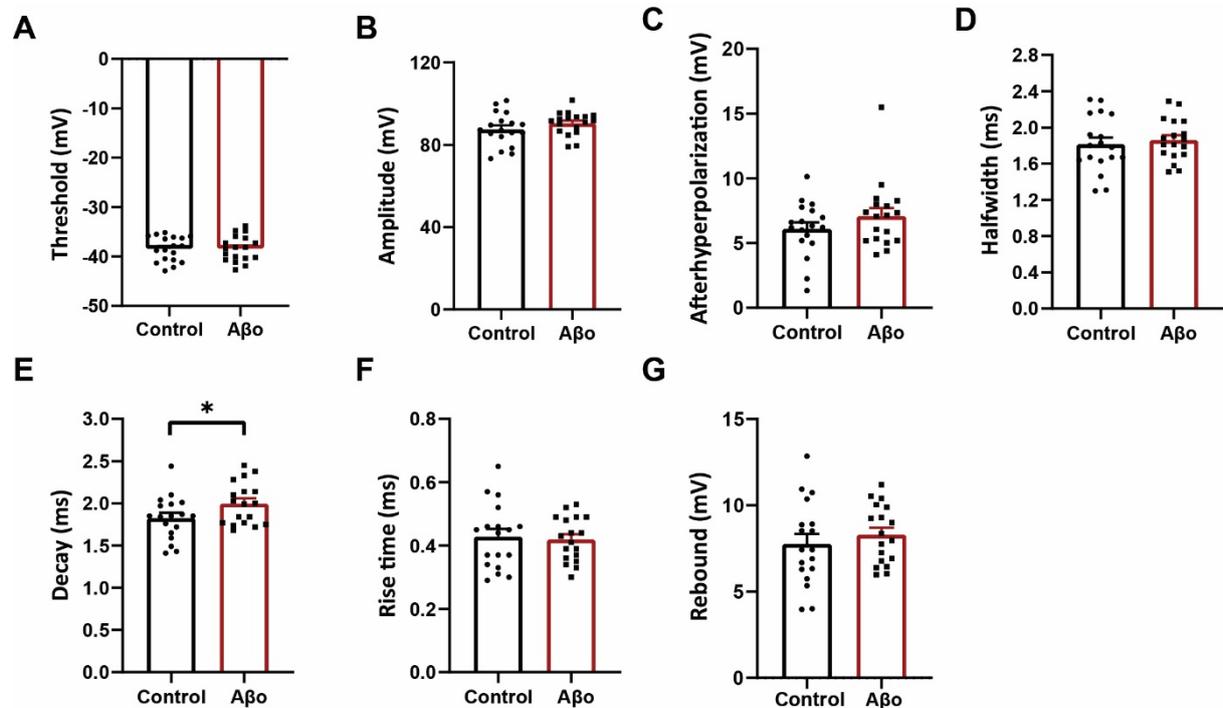# Supplementary Material

Reduction of Dendritic Inhibition in CA1 Pyramidal Neurons in Amyloidosis Models of Early Alzheimer's Disease

Supplementary Figure 1. Action potential parameters of Aβ-treated organotypic slices of Figure 1. A) Action potential threshold (p=0.95, t). B) Action potential amplitude, measured from the threshold (p=0.21, t). C) Action potential afterhyperpolarization (p=0.44, MW). D) Action potential halfwidth (p=0.62, t). E) Action potential decay (p=0.049, t). F) Action potential rise time (p=0.78, t). G) Rebound amplitude after AP train (p=0.44, t). (Data: control n=20, N=6; APP-KI n=18, N=6).
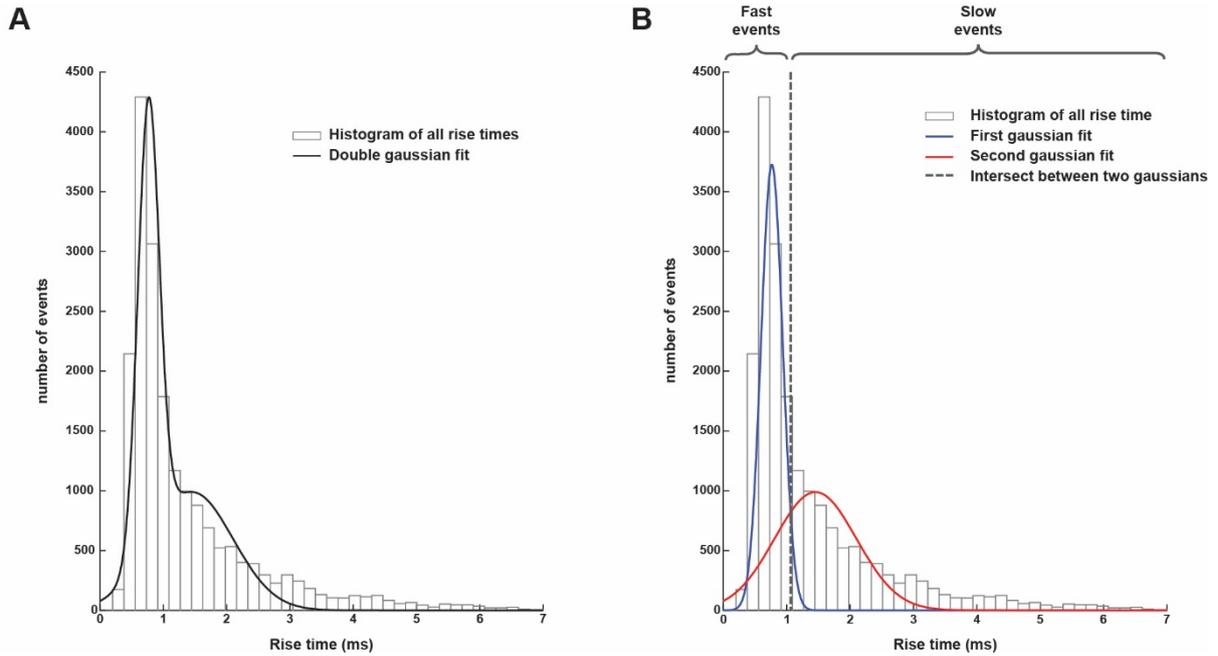
Supplementary Figure 2. Separating sIPSC based on rise time. A) The histogram of the rise times of individual events of all cells was fitted with a double Gaussian fit. B) Same histogram showing the two Gaussian fits Y_1 and Y_2 (see Eq 2 and 3 in methods). The intersect between the two Gaussian fits (indicated with the dotted line) was used as cutoff value to separate fast and slow rise time events.
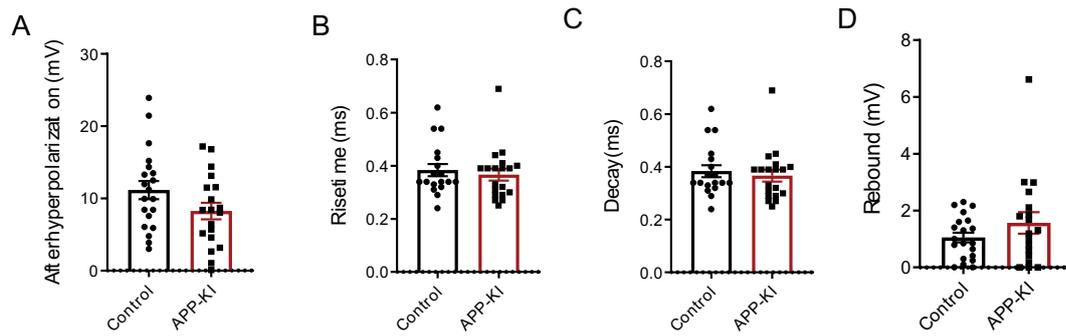
Supplementary Figure 3. Action potential parameters of APP-KI slices of Figure 3. A) Action potential afterhyperpolarization (p=0.09, t). B) Action potential rise time (p=0.54, MW). C) Action potential decay (p=0.54, MW). D) Rebound amplitude after AP train (p=0.20, t) (Data: control n=20, N=9; APP-KI n=18, N=7).

	Control: Mean ± SEM	APP-KI or Aβ: Mean ± SEM	Two-tailed t-test p
Acute brain slices – pyramidal recordings	24.7 ± 1.5 MΩ n=20	22.0 ± 1.4 MΩ n=20	0.21
Acute brain slices – interneuron recordings	28.5 ± 1.4 MΩ n=23	27.1 ± 1.6 MΩ n=25	0.53
Organotypic brain slices – sIPSC dataset	19.3 ± 1.2 MΩ n=21	19.2 ± 1.1 MΩ n=21	0.96
Organotypic brain slices – mIPSC dataset	18.0 ± 1.0 MΩ n=12	18.3 ± 0.7 MΩ n=14	0.80

Supplementary Table 1. Mean series resistance of the different datasets. A two-tailed independent t-test indicated no differences between the groups.