

CHRONIC CIGUATOXIN TREATMENT INDUCES SYNAPTIC SCALING THROUGH VOLTAGE GATED SODIUM CHANNELS IN CORTICAL NEURONS

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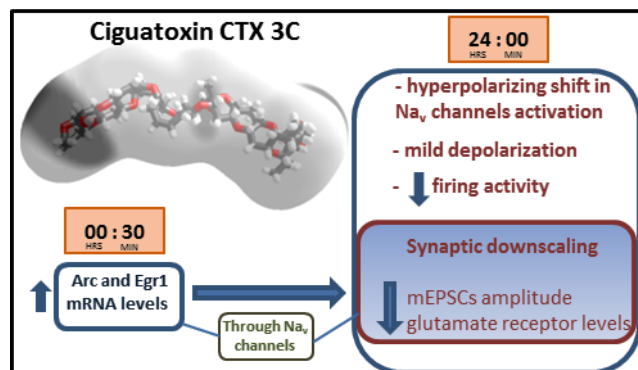
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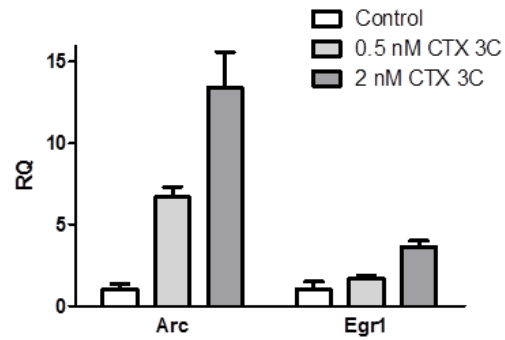


Figure S1. Effect of 24 hours exposure of cortical neurons to 0.5 nM or 2 nM CTX 3C on Arc and Egr1 mRNA levels. Relative quantification of the effect of 0.5 and 2 nM CTX 3C on Arc, and Egr1 mRNAs by real time PCR. RQ: relative quantification using the ribosomal protein coding mRNA RPL13A as housekeeper. Relative fold expression (RQ) was determined by $2^{-\Delta\Delta CT}$. The error bars display the calculated maximum (RQ Max) and minimum (RQ Min) expression levels that represent standard deviation of the mean expression level (RQ value) with a confidence < 0.05 . Each treatment was analysed in triplicate.

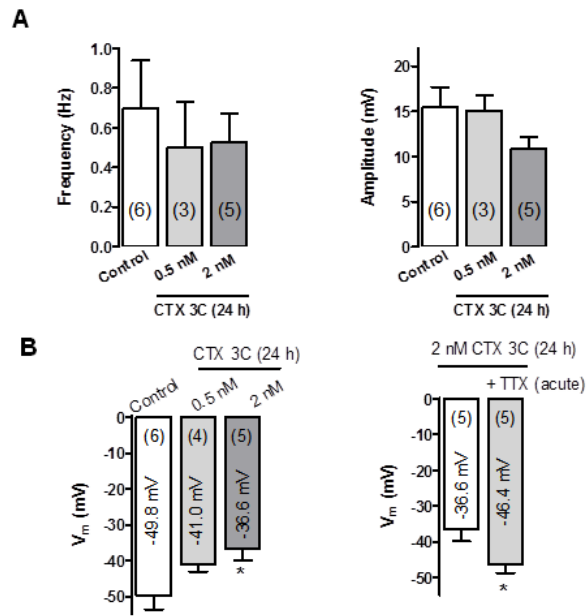


Figure S2. Effect of 24 h exposure of cortical neurons to 0.5 nM or 2 nM CTX 3C on neuronal spiking and resting membrane potential. **A**, Average results for the effect of a chronic exposure of cortical neurons to 0.5 nM and 2 nM CTX 3C on the frequency (left panel) and amplitude (right panel) of spontaneous neuronal spikes when V_m was permitted to fluctuate freely. **B**, Average results showing the effect of a 24 hours exposure of cortical neurons to 0.5 nM or 2 nM CTX 3C on membrane potential (left panels). The depolarizing effect of 2 nM CTX 3C on membrane potential was reversed by bath application of 0.5 μ M TTX during the recording (right panel). The number of cells tested is indicated in parentheses. * $p < 0.05$.

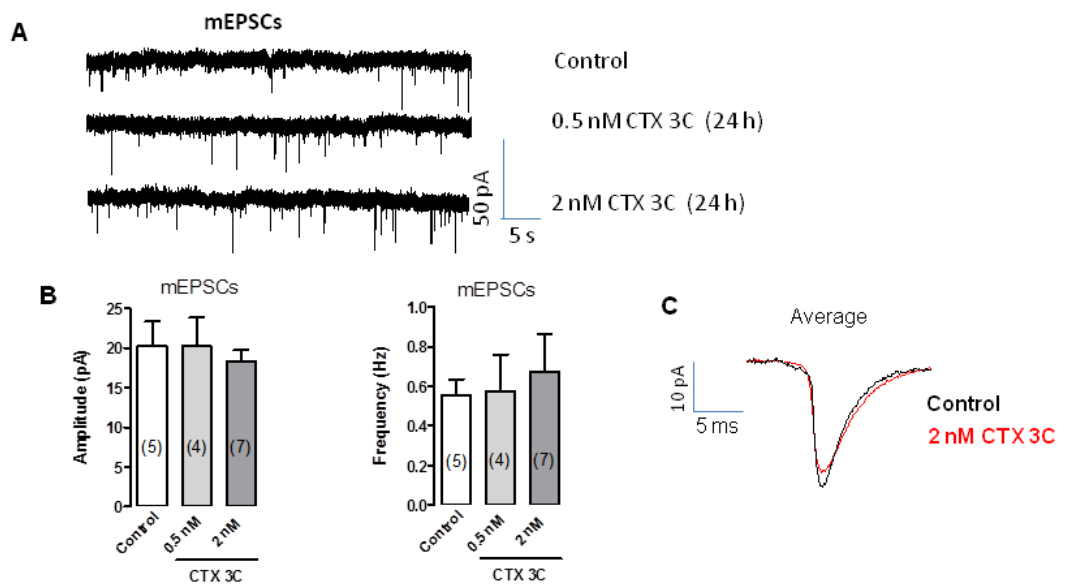


Figure S3. A 24 hours exposure of cortical neurons to 0.5 nM or 2 nM CTX 3C did not affect the frequency nor the amplitude of mEPSCs. **A**, representative traces of mEPSCs recorded in control neurons (upper panel) and in neurons treated for 24 h with 0.5 nM CTX 3C (middle panel) or 2 nM CTX 3C (lower panel). **B**, Average results for the effect of a 24 hours exposure of cortical neurons to 0.5 nM or 2 nM CTX 3C on the frequency (left panel) and amplitude (right panel) of mEPSCs. The number of cells tested is indicated in parentheses. **C**, averaged traces of mEPSCs in control neurons and in neurons treated for 24 h with 2 nM CTX 3C obtained from 5 different cells in each condition. * $p < 0.05$.