Supplementary Material
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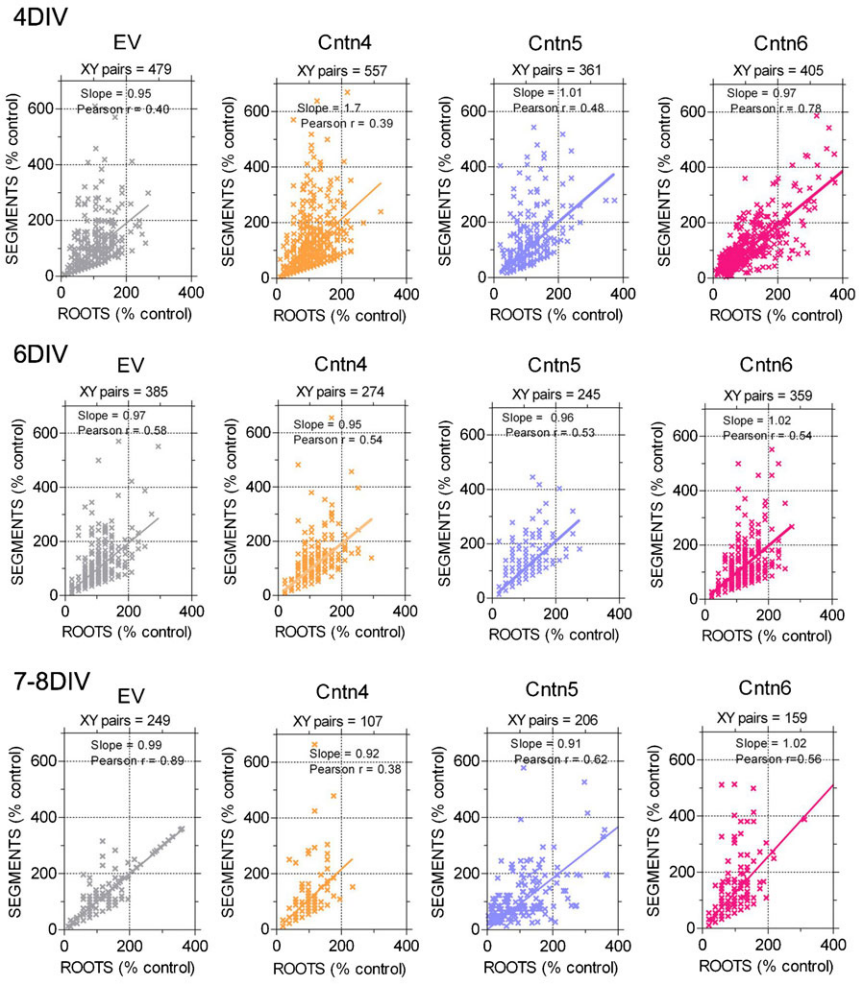
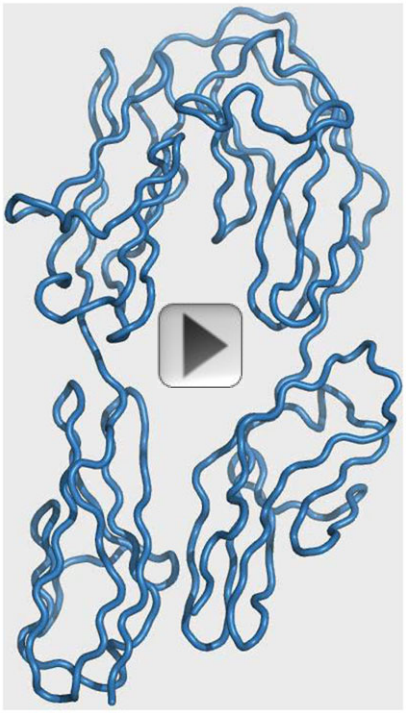


Fig. S1. Comparative effects of secreted Cntn4, -5, and -6 on arborization in rat cortical neurons in culture, at different time intervals. Cultures of rat cortical neurons were established from newborn rats (P0–P1) as described in Materials and Methods. Neurons were kept for up to 8 days in culture (DIV). The same densities of HEK293 cells were added 48–72 hours before the end of culture, in all conditions (see Materials and Methods). The length of the longest neurite per neuron, the total number of roots, and the segments were followed over time in all conditions. At the end of culture, neurons were fixed and immunostained with an anti-MAP2 antibody. Quantification was performed using Acapella software. Numbers of neurons analyzed are indicated in each graph. A two-dimensional representation showing the number of roots *versus* number of segments illustrates the evolution of neuronal trees over the different co-culture periods. Data are expressed as percent of control mean obtained in the absence of Cntn. Slope values and the Pearson's correlation coefficients are directly indicated in the graphs.



Movie 1. Flexible Ω loop in human CNTN5$^{Ig1–4}$. Three-dimensional structure of human CNTN5$^{Ig1–4}$ after homology modeling using the mouse Cntn4$^{Ig1–4}$ as a template (Bouyain and Watkins, 2010a). The flexible Ω loop in human CNTN5$^{Ig1–4}$ is located within Ig2 and Ig3 domains and can adopt distinct positions.