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Ex vivo Services Histology



Spine Density Analysis

Golgi-Cox staining is well established at Scantox Neuro, preferentially using the Super Golgi Kit (Bioenno Lifesciences). Exemplary data are shown in Figure 1 and 2.

Brain tissue was impregnated, then sectioned with a vibratome, mounted, stained, and embedded. Z-stacks of images were captured from dendrites using 40x or 63x Oil lenses, the spines were identified and quantified using automated unbiased image analysis.

Figure 1: Quantification of spine density in the hippocampus (A) and cortex (B) of mutated and wild type animals. Data derived from 10 dendrites per case and per brain region; n =6 per group. Parametric two-tailed unpaired t-test; normal distribution was verified by Kolmogorov-Smirnov test. Mean + SEM. *p<0.05.

Figure 2:

Examples of Golgi-Coxstained dendritic spines in hippocampus (A) and cortex (B).

Figure 1 **Spine Density** В Hippocampus Cortex 1.2-1.2 Wild type * 1.0 1.0 Mutated density [n/µm] density [n/µm] 0.8 0.8 0.6 0.6 0.4 0.4 0.2 0.2 0.0 0.0

Figure 2

Hippocampus CA1



Frontal Cortex



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Discovery

Important note:

Representative data are shown throughout this document. However, biological variability might cause deviations from shown data.

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