

Title

The IGF-II/S1P₁ receptor transactivation axis: a novel neuroprotective mechanism in Parkinson's disease models

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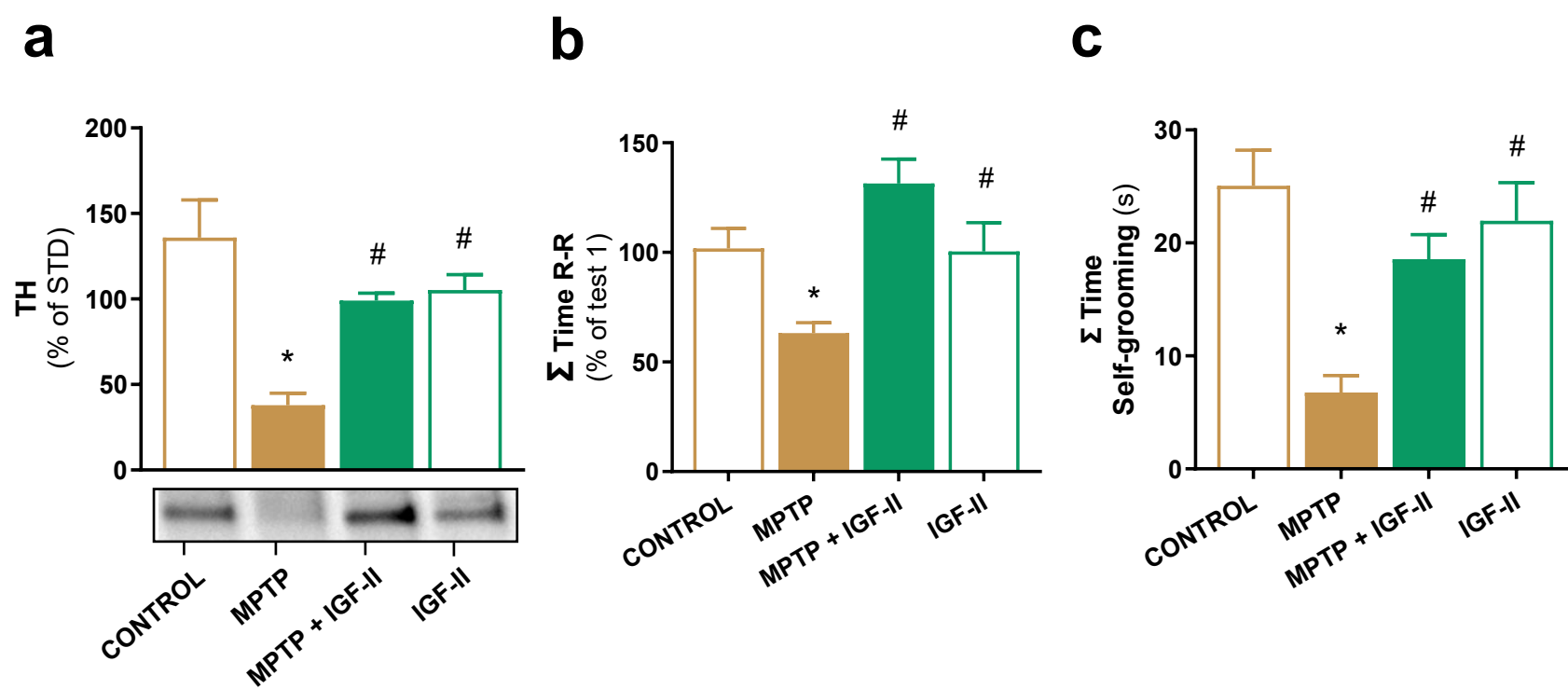


Figure S1. Impact of IGF-II on dopaminergic integrity and motor coordination in the chronic MPTP model.

a) Quantitative analysis of Tyrosine Hydroxylase (TH) protein expression in the substantia nigra. MPTP administration induced a significant depletion of the dopaminergic marker, while Insulin-like Growth Factor II treatment effectively attenuated this loss, preserving the nigrostriatal phenotype. Values are expressed as a percentage of a standardized protein pool (STD), obtained from the substantia nigra of four untreated, age-matched mice, which was loaded onto every gel to ensure accurate inter-blot normalization. Data are presented as mean $\pm$ SEM, with each data point representing one independent experiment using randomly pooled samples from 3–4 mice. **b)** Assessment of motor coordination and physical resistance through the Rota-rod test. The graph shows the latency to fall (seconds), highlighting the functional recovery in mice receiving the growth factor compared to the impaired performance of the MPTP group. **c)** Evaluation of self-grooming behavior as an indicator of motor sequences and pharmacological response. Data were combined from at least 4 independent experiments and are expressed as mean $\pm$ SEM. Statistical significance was determined by one-way ANOVA followed by Tukey's post-hoc test. Symbols indicate $p < 0.05$ for the following comparisons: * vs. CONTROL; # vs. MPTP.