## Supplementary Information

## A Non-immunosuppressive FK506 Analogue with Neuroregenerative Activity Produced from a Genetically Engineered *Streptomyces* Strain

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**Figure S1.** ESI-MS/MS analysis of 9-deoxo-prolyl-FK506 (1). (A) ESI-MS/MS fragmentation pattern. (B) MS/MS spectrum.





Figure S2. <sup>1</sup>H NMR spectrum of 9-deoxo-prolyl-FK506 (1) in CDCl<sub>3</sub>.





S5



Figure S4. HSQC spectrum of 9-deoxo-prolyl-FK506 (1) in CDCl<sub>3</sub>.







Figure S7. Cytotoxicity test of 9-deoxo-prolyl-FK506 (1) on primary cortical neurons.

(A) No significant cell death nor change of cell morphology was detected. Pictures of the cells were taken at 9h, 12h, 24h, and 48h time points after treating neurons with compound 1. Scale bar, 100  $\mu$ m. (B) Cell counting of live cells (distinguished by trypan blue staining) and MTT assay were performed 48h after treatment. Data was presented as mean  $\pm$  s.e.m. NS, non-significant, n is noted on each bar.