

Product Data Sheet

Product Name: FP802
Cat. No.: GC79533

Chemical Properties

Cas. No. 61694-81-3

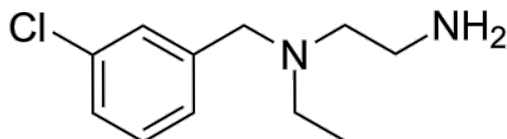
Formula $C_{11}H_{17}ClN_2$ M.Wt 212.72

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

FP802 is an orally active potent TwinF interface inhibitor that disrupts and detoxifies the NMDAR/TRPM4 death complex. FP802 exerts powerful neuroprotective effects in the 5xFAD mouse model of Alzheimer's disease (AD) by preventing cognitive decline, preserving neuronal structural integrity, reducing amyloid- β plaque formation, and mitigating mitochondrial pathology [1]. FP802 stops loss of motor neurons, reduces serum neurofilament light chain (NfL) levels, improves motor performance, and extends life in a mouse model of amyotrophic lateral sclerosis (ALS). FP802 can be used for AD and ALS research [1] [2].

Caution: Product has not been fully validated for medical applications. For research use only.

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In Vivo, FP802 (10 and 40 mg/kg, p.o., daily for 4 months) rescues cognitive function, prevents neuronal structure degeneration, and reduces amyloid pathology in 5xFAD mice^[1]. FP802 (40 mg/kg, s.c., daily from ~week 15 for 4 weeks) safely halts motor neuron degeneration and extends survival in ALS mice by targeting the NMDAR/TRPM4 complex^[2].

In Vitro, FP802 (8 μ M, 24-72 h) disrupts the NMDAR/TRPM4 complex and provides neuroprotection in cellular models, without directly affecting neurite outgrowth^[1]. FP802 (10 μ M, 30 min) exhibits potent neuroprotection against glutamate (20 μ M)-mediated toxicity (IC_{50} = 8.7 μ M) and restores NMDA-suppressed immediate-early gene expression to physiological levels^[2]. FP802 shows no antagonistic activity against NMDARs in HEK293 cells (IC_{50} > 250 μ M for both, GluN1/GluN2A and GluN1/GluN2B)^[2]. FP802 (30 min) dose-dependently blocks NMDA-induced death of post-mitotic neurons in forebrain organoids derived from sporadic ALS patient Induced Pluripotent Stem Cells (iPSCs)^[2].

References:

- [1]. Yan J, et al. The NMDAR/TRPM4 death complex is a major promoter of disease progression in the 5xFAD mouse model of Alzheimer's disease. *Mol Psychiatry*. 2025 Aug 26.
- [2]. Yan J, et al. TwinF interface inhibitor FP802 stops loss of motor neurons and mitigates disease progression in a mouse model of ALS. *Cell Rep Med*. 2024 Feb 20;5(2):101413.

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