Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Neu2000

Catalog No: tcsc0025740

Available Sizes

Size: 1mg

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
640290-67-1

Formula:
$C_{15}H_8F_7NO_3$

Pathway:
Membrane Transporter/Ion Channel;Neuronal Signaling

Target:
iGluR;iGluR

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 112.5 mg/mL (293.57 mM)

Observed Molecular Weight:
383.22

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Product Description

Neu2000 is an uncompetitive **N-methyl-D-aspartate** (**NMDA**) receptor antagonist.

IC50 & Target: NMDA receptor[1]

In Vitro: Neu2000 shows apparent neuroprotection against 300 μM N-methyl-D-aspartate (NMDA) at doses as low as 30 μM. Neu2000 does not protect cortical neurons against α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid- or kainate-mediates excitotoxicity. Neu2000 inhibits the electrophysiologic response of cultured cortical neurons to 300 μM NMDA in a concentration-dependent manner, indicating that the effect is mediated by a specific action at NMDA receptors. The Neu2000 dose-response has an IC_{50} of 35.38±5.94 μM and Hill\'s coefficient of 0.91 (n=8). Neu2000 (100 μM) significantly reduces the maximal NMDA response by 58.31±2.72% (n=5) and the EC_{50} values of NMDA from 18.88±1.85 to 9.92±0.17 μM (n=5, P[1].

In Vivo: Pharmacokinetic analysis reveals that the half-life of Neu2000 is 1.42, 2.14, and 1.79 h following intraperitoneal administration of 10, 25, and 50 mg/kg, respectively. In addition, the C_{max} (maximum plasma concentration) is calculated as 3.86, 18.73, and 52.83 μg/mL and the AUC (area under the curve) is determined to be 7.37, 55.15, and 96.77 μg/h/mL at the same respective doses. The levels of basal mitochondrial ROS are significantly elevated at 24 h post-surgery in both the vehicle-treated (4.1-fold, p[2].