Web: www.taiclone.com
Tel: +886-2-2735-9682
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GYKI53655 hydrochloride

Catalog No: tcsc0025621

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
143692-48-2

Formula:
$C_{19}H_{21}ClN_4O_3$

Pathway:
Membrane Transporter/Ion Channel;Neuronal Signaling

Target:
iGluR;iGluR

Purity / Grade:
>98%

Solubility:
H2O : 8 mg/mL (20.57 mM; Need ultrasonic and warming); DMSO : ≥ 160 mg/mL (411.47 mM)

Observed Molecular Weight:
388.85

Product Description

GYKI53655 hydrochloride is an α-amino-3-hydroxy-5-methylisoxazole-4-propionic acid (**AMPA**) antagonist.

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IC50 & Target: AMPA[1]

In Vitro: GYKI53655 hydrochloride (LY300168) inhibits α-amino-3-hydroxy-5-methylisoxazole-4-propionic acid (AMPA) (10 μM)-induced responses with IC_{50} value of 5.9±0.1 μM. GYKI53655 hydrochloride inhibits AMPA (10 μM) responses in recombinant G1uR4 expressing HEK293 cells with IC_{50} value of 4.6±0.4 μM. Using 3 μM cyclothiazide the inhibition produced by GYKI53655 hydrochloride is 79±2% (n=4 cells). GYKI53655 hydrochloride produces only small inhibitions of kainate-induced currents at 30 μM and inhibits kainate-induced currents at a concentration of 100 μM by 12±2 (n=4) and 18±4 (n=4), respectively. GYKI53655 hydrochloride inhibits AMPA receptor-mediated responses in cerebella Purkinje neurons with an IC_{50} value of 1.5±0.1 μM[1].

In Vivo: GYKI53655 hydrochloride (4 mg/kg) is found to have a short-lasting depressant effect on neuronal responses to iontophoretic α-amino-3-hydroxy-5-methylisoxazole-4-propionic acid (AMPA), with a half-recovery time of approximately 7 min. GYKI53655 hydrochloride (4 and 8 mg/kg) substantially depresses or completely abolishes AMPA responses. Results demonstrate the dose-dependence of GYKI53655 hydrochloride (2 to 8 mg/kg) in depressing responses to AMPA. At the highest doses tested, GYKI53655 hydrochloride reduces AMPA responses to a comparable degree [2]. Tonic fit and death are completely prevented by GYKI53655 hydrochloride at dose over 5.0 mg/kg. The ED_{50} value of GYKI53655 hydrochloride is 2.2 mg/kg i.p. The maximal effects of GYKI53655 hydrochloride lasts 3 h then the exit inhibition effect of GYKI53655 hydrochloride falls to 20% 1 h later[3].