

# 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 :  $\geq$  160 mg/mL (411.47 mM)

**Observed Molecular Weight:**

388.85

## Product Description

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

IC<sub>50</sub> & Target: AMPA<sup>[1]</sup>

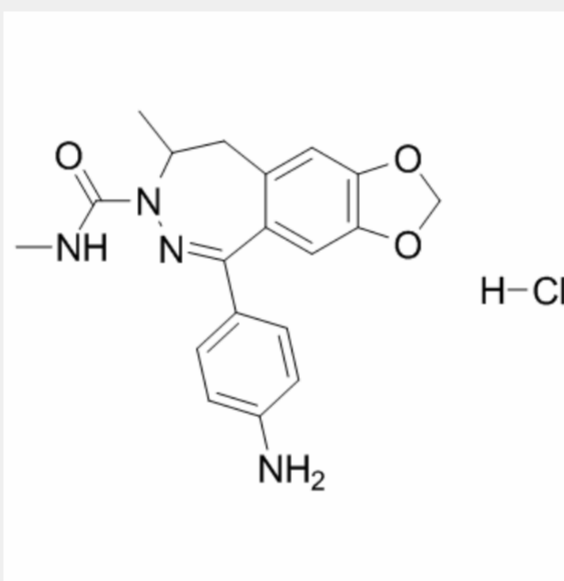
**In Vitro:** GYKI53655 hydrochloride (LY300168) inhibits  $\alpha$ -amino-3-hydroxy-5-methylisoxazole-4-propionic acid (AMPA) (10  $\mu$ M)-induced responses with IC<sub>50</sub> value of 5.9 $\pm$ 0.1  $\mu$ M. GYKI53655 hydrochloride inhibits AMPA (10  $\mu$ M) responses in

recombinant GluR4 expressing HEK293 cells with IC<sub>50</sub> value of 4.6 $\pm$ 0.4  $\mu$ M. Using 3  $\mu$ M cyclothiazide the inhibition produced by GYKI53655 hydrochloride is 79 $\pm$ 2% (n=4 cells). GYKI53655 hydrochloride produces only small inhibitions of kainate-induced currents at 30  $\mu$ M and inhibits kainate-induced currents at a concentration of 100  $\mu$ M by 12 $\pm$ 2 (n=4) and 18 $\pm$ 4 (n=4), respectively. GYKI53655 hydrochloride inhibits AMPA receptor-mediated responses in cerebella Purkinje neurons with an IC<sub>50</sub> value of 1.5 $\pm$ 0.1  $\mu$ M<sup>[1]</sup>.

**In Vivo:** GYKI53655 hydrochloride (4 mg/kg) is found to have a short-lasting depressant effect on neuronal responses to iontophoretic

$\alpha$ -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<sup>[2]</sup>. Tonic fit and death are completely prevented by GYKI53655 hydrochloride at dose over 5.0 mg/kg. The ED<sub>50</sub> 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<sup>[3]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!