Ro 25-6981 Maleate

Cat. No.: HY-13993A

CAS No.: 1312991-76-6

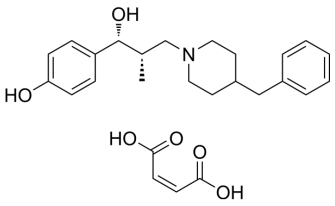
Molecular Formula: $C_{26}H_{33}NO_6$

Molecular Weight: 455.54

Target: iGluR

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (219.52 mM; Need ultrasonic)
H_2O : 8.33 mg/mL (18.29 mM; ultrasonic and warming and heat to 45°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1952 mL	10.9760 mL	21.9520 mL
5 mM	0.4390 mL	2.1952 mL	4.3904 mL
10 mM	0.2195 mL	1.0976 mL	2.1952 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 5 mg/mL (10.98 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5 mg/mL (10.98 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5 mg/mL (10.98 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ro 25-6981 Maleate is a potent, selective and activity-dependent NR2B subunit specific NMDA receptor antagonist. Ro 25-6981 Maleat shows anticonvulsant and anti-parkinsonian activity. Ro 25-6981 Maleate has the potential for the research of parkinson's disease (PD)[1][2][3].

IC_{50} & Target

NMDA Receptor

In Vivo

Ro 25-6981 Maleate (0.39-12.5 mg/kg; i.p.) induces contraversive rotations in 6-hydroxydopamine (6-OHDA)-lesioned rats without stimulating locomotion in normal rats[1].

?Ro 25-6981 Maleate (1,3 mg/kg; i.p.) exhibits age- and activation-dependent anticonvulsant action at early postnatal development in rats[2].

?Ro 25-6981 Maleate (800 μg; intrathecal injection) shows significant analgesic effects on incision pain in rats and effectively attenuated postoperative hyperalgesia induced by remifentanil[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	6-OHDA-lesioned rats[1]
Dosage:	0.39-12.5 mg/kg
Administration:	I.p.
Result:	Dose-dependently induced contraversive tight nose-to-tail rotations, and induced a weak ipsiversive circling response indicating a mild unspecific stimulatory action of the compound.

Animal Model:	Male albino rats of Wistar strain[2]
Dosage:	1, 3 mg/kg
Administration:	I.p.
Result:	Caused a significant decrease of N1–P2 amplitude at higher stimulation intensities AT 3 mg/kg, and exhibited age- and activation-dependent anticonvulsant action at early postnatal development.

CUSTOMER VALIDATION

- Cell Death Differ. 2023 May 4.
- CNS Neurosci Ther. 2023 Jan 24.
- Neuropharmacology. 2022 Jan 10;108947.
- Sci Rep. 2022 Oct 12;12(1):17114.
- Neurochem Int. 2020 Dec 16;104942.

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REFERENCES

[1]. Löschmann PA, et al. Antiparkinsonian activity of Ro 25-6981, a NR2B subunit specific NMDA receptor antagonist, in animal models of Parkinson's disease. Exp Neurol. 2004 May;187(1):86-93.

[2]. Szczurowska E,et al. Different action of a specific NR2B/NMDA antagonist Ro 25-6981 on cortical evoked potentials and epileptic afterdischarges in immature rats. Brain Res Bull. 2015 Feb;111:1-8.

[3]. Jiang M, et al. Antinociception and prevention of hyperalgesia by intrathecal administration of Ro 25-6981, a highly selective antagonist of the 2B subunit of N-methyl-D-aspartate receptor. Pharmacol Biochem Behav. 2013 Nov;112:56-63.

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

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