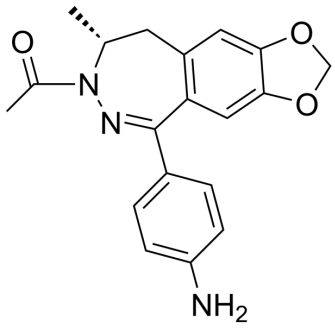
Talampanel



Cat. No.:	HY-15079
CAS No.:	161832-65-1
Molecular Formula:	$C_{19}H_{19}N_3O_3$
Molecular Weight:	337.37
Target:	iGluR; Apoptosis
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year

SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (296.41 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9641 mL	14.8205 mL	29.6410 mL
	5 mM	0.5928 mL	2.9641 mL	5.9282 mL
	10 mM	0.2964 mL	1.4821 mL	2.9641 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: ≥ 2.5 mg/mL (7.41 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.41 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Talampanel (LY300164) is an orally and selective α-amino-3-hydroxy-5-methyl-4-isoxazolepropionate (AMPA) receptor antagonis with anti-seizure activity[1]. Talampanel (IVAX) has neuroprotective effects in rodent stroke models[2]. Talampanel attenuates caspase-3 dependent apoptosis in mouse brain[2].

In Vivo

Talampanel (orally administration; 5 mg/kg; once a day; 2 weeks) reduces motoneuronal calcium in a mouse model of ALS, but its efficacy declines as the disease progresses[1].

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

Animal Model:	Female mutant SOD1 Tg mice[1]
Dosage:	5 mg/kg
Administration:	Orally administration; 5 mg/kg; once a day; 2 weeks
Result:	Had a significant effect in reducing the calcium level only at the age of 12 weeks.

CUSTOMER VALIDATION

- Int J Mol Sci. 2021 Apr 21;22(9):4322.

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REFERENCES

[1]. Paizs M, et al. Talampanel reduces the level of motoneuronal calcium in transgenic mutant SOD1 mice only if applied presymptomatically. Amyotroph Lateral Scler. 2011 Sep;12(5):340-4.

[2]. Denes L, et al. Talampanel a non-competitive AMPA-antagonist attenuates caspase-3 dependent apoptosis in mouse brain after transient focal cerebral ischemia. Brain Res Bull. 2006 Jul 31;70(3):260-2. Epub 2006 Mar 31.

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