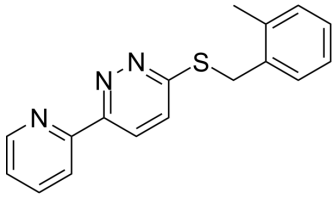
LDN-212320

Cat. No.:	HY-12741
CAS No.:	894002-50-7
Molecular Formula:	$C_{17}H_{15}N_3S$
Molecular Weight:	293.39
Target:	EAAT
Pathway:	Membrane Transporter/Ion Channel
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 : 50 mg/mL (170.42 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.4084 mL	17.0422 mL	34.0843 mL
	5 mM	0.6817 mL	3.4084 mL	6.8169 mL
	10 mM	0.3408 mL	1.7042 mL	3.4084 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 (8.52 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.52 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

LDN-212320 (LDN-0212320) is a glutamate transporter (GLT-1)/excitatory amino acid transporter 2 (EAAT2) activator (at translational level). LDN-212320 (LDN-0212320) prevents nociceptive pain by upregulating astroglial GLT-1 expression in the hippocampus and ACC[1][2].

IC_{50} & Target

EAAT2

In Vivo

LDN-212320 (10 or 20 mg/kg, i.p) significantly attenuates formalin-evoked nociceptive behavior[1].
LDN-212320 (10 or 20 mg/kg, i.p) significantly reverses formalin-induced impaired hippocampal-dependent behavior. In addition, LDN-212320 (10 or 20 mg/kg, i.p) increases GLT-1 expressions in the hippocampus and ACC[1].
LDN-212320 (20 mg/kg, i.p) significantly reduced formalin induced-ERK phosphorylation, a marker of nociception, in the

hippocampus and ACC[1].

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

Animal Model:	Mice[1].
Dosage:	10 or 20 mg/kg.
Administration:	IP 24 h before the injection of formalin.
Result:	Significantly attenuated licking and biting behavior during both phases 1 and 2 in a dose-dependent manner compared to formalin-injected mice. Significantly ($P < 0.01$ or $P < 0.001$) reduced the licking and biting behavior. Significantly increased preference for the displaced object ($F_{3, 13} = 28.03$, $P < 0.01$) compared to formalin-injected mice. Significantly ($P < 0.001$) increased interaction time with the displaced object compared to formalin-injected mice.

CUSTOMER VALIDATION

- Glia. 2023 Jan 8.
- Neurobiol Dis. 2022 Nov 9;105922.
- Eur J Pain. 2019 Apr;23(4):765-783.

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REFERENCES

[1]. Ghallab Alotaibi, et al. Effects of glial glutamate transporter activator in formalin-induced pain behaviour in mice. Eur J Pain. 2019 Apr;23(4):765-783.

[2]. Xuechao Xing, et al. Structure-activity relationship study of pyridazine derivatives as glutamate transporter EAAT2 activators. Bioorg Med Chem Lett. 2011 Oct 1;21(19):5774-7.

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