

NNC 05-711

Chemical Properties

CAS No. : 145645-62-1

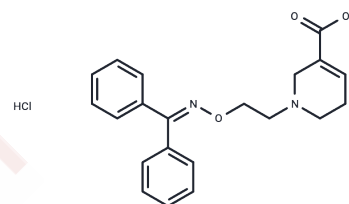
Formula: C₂₁H₂₃ClN₂O₃

Molecular Weight: 386.87

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	NNC 05-711 (NO-711 hydrochloride) is a potent and selective inhibitor of GAT-1 (GABA transporter 1), which inhibits GABA reuptake and thereby increases GABA levels in the synaptic gap, exerting anticonvulsant and analgesic effects.
Targets(IC50)	GABA Receptor
In vitro	Treatment of microglia with NNC 05-711 (1 μM, 0-15 minutes) significantly reduced Na+-dependent GABA uptake in microglia. [1]
In vivo	Methods: NNC 05-711 (50, 100, 200 μg/10 μL, intrathecal injection, once a day) was used to treat rats with chronic sciatic nerve constriction injury (CCI) and its analgesic effect was observed. Results: NNC 05-711 exerted an effective analgesic effect in the CCI rat model. Compared with the CCI + saline group, the paw withdrawal threshold (WT) and paw withdrawal latency (WL) values increased after 1 day. [3]

Solubility Information

Solubility	H ₂ O: 2 mg/mL (5.17 mM), Sonication is recommended. DMSO: 80 mg/mL (206.79 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5848 mL	12.9242 mL	25.8485 mL
5 mM	0.517 mL	2.5848 mL	5.1697 mL
10 mM	0.2585 mL	1.2924 mL	2.5848 mL
50 mM	0.0517 mL	0.2585 mL	0.517 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Fattorini G, et al. Microglial expression of GAT-1 in the cerebral cortex. *Glia*. 2020 Mar;68(3):646-655.

Suzdak PD, et al. NNC-711, a novel potent and selective gamma-aminobutyric acid uptake inhibitor: pharmacological characterization. *Eur J Pharmacol*. 1992 Dec 2;224(2-3):189-98.

Li Y, et al. Analgesic effect of intrathecally γ -aminobutyric acid transporter-1 inhibitor NO-711 administrating on neuropathic pain in rats. *Neurosci Lett*. 2011 Apr 20;494(1):6-9.

O'Connell AW, et al. Anti-ischemic and cognition-enhancing properties of NNC-711, a gamma-aminobutyric acid reuptake inhibitor. *Eur J Pharmacol*. 2001 Jul 13;424(1):37-44.

Borden LA, et al. Tiagabine, SK&F 89976-A, CI-966, and NNC-711 are selective for the cloned GABA transporter GAT-1. *Eur J Pharmacol*. 1994 Oct 14;269(2):219-24.

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