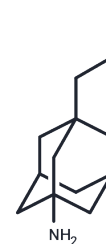


Fluoroethylnormemantine hydrochloride

Chemical Properties

CAS No. :	1639210-25-5
Formula:	C ₁₂ H ₂₁ ClFN
Molecular Weight:	233.76
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

HCl



Biological Description

Description	Fluoroethylnormemantine hydrochloride, a Memantine derivative, functions as an antagonist for the N-methyl-D-aspartate (NMDA) receptor. It can also serve as a positron emission tomography (PET) tracer, specifically as [18F]-Fluoroethylnormemantine hydrochloride. Notably, this compound displays a range of effects, including anti-amnesic, neuroprotective, antidepressant-like, and fear-attenuating properties.
Targets(IC50)	Others, iGluR
In vivo	Fluoroethylnormemantine, administered intraperitoneally (i.p.) at dosages ranging from 0.1 to 10 mg/kg, exhibits anti-amnesic properties by mitigating Aβ 25-35-induced learning impairments in mice. Notably, a single i.p. dose in this range shows immediate effects, while a regimen of one dose daily for seven days effectively counters Aβ 25-35-induced behavioral deficits, neuroinflammation, oxidative stress, apoptosis, and cell loss. Furthermore, at dosages between 1-20 mg/kg, fluoroethylnormemantine reduces behavioral despair in the forced swim test (FST) and fear behaviors in both the cued fear conditioning (FC) and extinction training in rats. In a specific study involving male Swiss CD-1 mice aged 7-9 weeks and injected with Aβ 25-35, varying dosages of fluoroethylnormemantine (0.1, 0.3, 1, 3, 10 mg/kg) administered 30 minutes before behavioral assessments significantly improved spontaneous alternation deficit, passive avoidance deficit, and novel object exploration deficit, showcasing its therapeutic potential in addressing neurodegenerative and psychological disorders.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.2779 mL	21.3895 mL	42.7789 mL
5 mM	0.8556 mL	4.2779 mL	8.5558 mL
10 mM	0.4278 mL	2.1389 mL	4.2779 mL
50 mM	0.0856 mL	0.4278 mL	0.8556 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

- Couly S, et, al. Anti-Amnesic and Neuroprotective Effects of Fluoroethylnormemantine in a Pharmacological Mouse Model of Alzheimer's Disease. *Int J Neuropsychopharmacol.* 2021 Feb 15;24(2):142-157.
- Chen BK, et, al. Fluoroethylnormemantine, a novel derivative of memantine, facilitates extinction learning without sensorimotor deficits. *Int J Neuropsychopharmacol.* 2021 Feb 25;pyab007.
- Chen BK, et, al. Fluoroethylnormemantine, a novel NMDA receptor antagonist, for the prevention and treatment of stress-induced maladaptive behavior. *Biological Psychiatry.* 2021 May 9.

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