

NV-5138

Chemical Properties

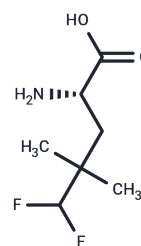
CAS No. : 2095886-80-7

Formula: C₇H₁₃F₂NO₂

Molecular Weight: 181.18

Storage: Store at low temperature, Keep away from moisture
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	NV-5138 is a selective, orally active intracerebral mTORC1 agonist that binds to Sestrin2. It is a leucine analog. It can be used in biological studies of antidepressants.
Targets(IC50)	mTOR
In vivo	<p>METHODS: Rats were orally administered NV-5138 (40, 80 or 160 mg/kg), and behavioral tests were started 24 hours later, including behavioral despair test (forced swimming test FST) and anxiety test (novelty suppression feeding test NSFT). In FST and NSFT, analyzes were performed 1 or 3 days after dosing.</p> <p>RESULTS NV-5138 significantly reduced immobility time and feeding latency, respectively, at 160 mg/kg but not at 40 or 80 mg/kg. [1]</p> <p>METHODS: To test the duration of the antidepressant effect of NV-5138, rats were orally administered NV-5138 (160 mg/kg) and behavioral tests were started after 3 and 7 days or daily administration for 7 days (starting on day 0) of lower doses of NV-5138 (40 or 80 mg/kg, oral)</p> <p>RESULTS NV-5138 significantly reduced immobility time at both 3 and 7 days after FST administration; NV-5138 produced antidepressant effects at repeated low doses of NV-5138 (80mg/kg). [1]</p>

Solubility Information

Solubility	DMSO: 10.7 mg/mL (59.06 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	5.5194 mL	27.5969 mL	55.1937 mL
5 mM	1.1039 mL	5.5194 mL	11.0387 mL
10 mM	0.5519 mL	2.7597 mL	5.5194 mL
50 mM	0.1104 mL	0.5519 mL	1.1039 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

Kato T, et al. Sestrin modulator NV-5138 produces rapid antidepressant effects via direct mTORC1 activation. J Clin Invest. 2019 Apr 16;129(6):2542-2554.

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