

## NV-5138 hydrochloride

## Chemical Properties

CAS No. :

Formula: C7H14ClF2NO2

Molecular Weight: 217.64

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	NV-5138 hydrochloride is a leucine analog and is the first selective and orally active brain mTORC1 activator, binding to Sestrin2. NV-5138 hydrochloride can be used in the research of antidepressants [1] [2].
Targets(IC50)	Others,mTOR
In vivo	NV-5138 demonstrates nearly complete (100%) oral bioavailability and an elimination half-life of approximately 3 hours in plasma, observed after both intravenous and oral administration in male Sprague-Dawley rats weighing 250-400 g. At a dosage of 160 mg/kg, administered orally in a single dose, it significantly enhances the levels of phospho-mTOR and its downstream targets, phospho-p70S6K1 and phospho-4EB-P1, in synaptosomal preparations of the prefrontal cortex (PFC), indicating rapid biological activity [1][2]. Furthermore, chronic administration of NV-5138 (80 mg/kg, orally, daily for 7 days) has been found to exert antidepressant effects. Experimental dosages ranged from 40 to 160 mg/kg, with modes of administration including both single and daily doses for a period up to 7 days, underscoring its therapeutic potential [2]. Pharmacokinetic assessments were conducted at 1 mg/kg for intravenous and 5 mg/kg for oral dosages, establishing its pharmacokinetic profile [1].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.5947 mL	22.9737 mL	45.9474 mL
5 mM	0.9189 mL	4.5947 mL	9.1895 mL
10 mM	0.4595 mL	2.2974 mL	4.5947 mL
50 mM	0.0919 mL	0.4595 mL	0.9189 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.

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