

SPR inhibitor 3

Chemical Properties

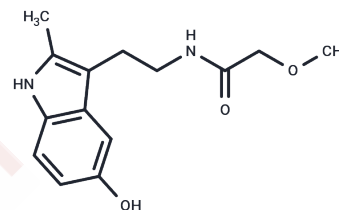
CAS No. : 1292285-54-1

Formula: C₁₄H₁₈N₂O₃

Molecular Weight: 262.3

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	SPR inhibitor 3 is a class of small-molecule compounds used to inhibit the activity of sepiapterin reductase; it blocks the biosynthetic pathway of tetrahydrobiopterin (BH ₄), thereby affecting the production of nitric oxide synthase and monoamine neurotransmitters.
Targets(IC ₅₀)	Reductase
In vitro	SPR inhibitor 3 (SPRi3) also significantly reduced the activity of SPR in the primary culture of mouse sensory neurons (IC ₅₀ =0.45 μM), but did not affect the activity of GTP cyclohydroxylase 1 (GCH1) [1].

Solubility Information

Solubility	DMSO: 100 mg/mL (381.24 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	3.8124 mL	19.0621 mL	38.1243 mL
5 mM	0.7625 mL	3.8124 mL	7.6249 mL
10 mM	0.3812 mL	1.9062 mL	3.8124 mL
50 mM	0.0762 mL	0.3812 mL	0.7625 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

Latremoliere A, et al. Reduction of Neuropathic and Inflammatory Pain through Inhibition of the Tetrahydrobiopterin Pathway. *Neuron*. 2015 Jun 17;86(6):1393-406.

Cronin SJF, et al. The metabolite BH4 controls T cell proliferation in autoimmunity and cancer. *Nature*. 2018 Nov; 563(7732):564-568.

Haruki H, et al. Tetrahydrobiopterin Biosynthesis as a Potential Target of the Kynurenine Pathway Metabolite Xanthurenic Acid. *J Biol Chem*. 2016 Jan 8;291(2):652-7.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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