

Fingolimod

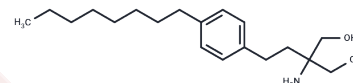
Chemical Properties

CAS No. : 162359-55-9

Formula: C₁₉H₃₃NO₂

Molecular Weight: 307.47

Storage: Keep away from direct sunlight, Store at low temperature, Store under nitrogen
 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	Fingolimod (FTY-720A) is an antagonist of sphingosine 1-phosphate (S1P) (IC ₅₀ of 0.033 nM in K562 and NK cells).
Targets(IC ₅₀)	LPL Receptor,PAK,S1P Receptor
In vitro	Fingolimod has been reported to reduce LPA synthesis via inhibition of the lysophospholipase autotaxin. Fingolimod treatment correlates with a significant elevation of axonal cAMP, a crucial factor for axonal outgrowth. Additionally, Fingolimod significantly reduces LPA levels in the injured nerve. PF-8380 treatment correlates with improved myelin thickness[1]
Cell Research	Sciatic nerve crush was performed in wildtype C57BL/6, in immunodeficient Rag1 (-/-) and Foxn1 (-/-) mice. Analyses were based on walking track analysis and electrophysiology, histology, and cAMP formation. Quantification of different LPA species was performed by liquid chromatography coupled to tandem mass spectrometry. Furthermore, functional consequences of autotaxin inhibition by the specific inhibitor PF-8380 and the impact of fingolimod on early cytokine release in the injured sciatic nerve were investigated[1].

Solubility Information

Solubility	Methanol: 30 mg/mL (97.57 mM), Sonication is recommended. Ethanol: 7.69 mg/mL (25.01 mM), Sonication is recommended. DMSO: 1 mg/mL (3.25 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	3.2523 mL	16.2617 mL	32.5235 mL
5 mM	0.6505 mL	3.2523 mL	6.5047 mL
10 mM	0.3252 mL	1.6262 mL	3.2523 mL
50 mM	0.065 mL	0.3252 mL	0.6505 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

- Szepanowski, Fabian, Derksen, Angelika, Steiner, Irina, et al. Fingolimod promotes peripheral nerve regeneration via modulation of lysophospholipid signaling[J]. *Journal of Neuroinflammation*, 13(1):143.
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- Zhang T, Wang Y, Li Q, et al. Mesenchymal stromal cells equipped by IFN α empower T cells with potent anti-tumor immunity. *Oncogene*. 2022: 1-16.
- Amelioration of colitis through blocking lymphocytes entry to Peyer's patches by sphingosine-1-phosphate lyase inhibitor[J]. *Journal of Gastroenterology & Hepatology*, 2018, 33(9).
- Zhang J, Wang Z, Wei X, et al. The suppression of the SPHK1/S1P/S1PR3 signaling pathway diminishes EGFR activation and increases the sensitivity of non-small cell lung cancer to gefitinib. *Current Research in Pharmacology and Drug Discovery*. 2025: 100212.

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