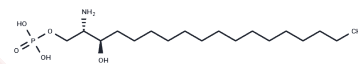


Sphinganine 1-phosphate

Chemical Properties

CAS No. :	19794-97-9
Formula:	C18H40NO5P
Molecular Weight:	381.49
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Sphinganine 1-phosphate is an intermediate in the sphingolipid metabolic pathway and is structurally similar to sphingosine. It has a protective effect on the kidney and liver through activation of the S1P1 receptor in mice. D-erythro-Dihydrosphingosine 1-phosphate acts as an agonist for S1P4 in Homo sapiens and may activate GPR63 (G protein-coupled receptor), mainly used in the study of Fabry disease, Gaucher disease, Krabbe disease and Leukodystrophy.
Targets(IC50)	Endogenous Metabolite,S1P Receptor
In vitro	Sphinganine 1-phosphate (S1P) (1 μ M) phosphorylates ERK MAPK, AKT and HSP27 and induces HSP27 in human renal endothelial cells. [2]
In vivo	Methods: Male C57BL/6 mice were treated with Sphinganine 1-phosphate (0.1mg/kg, 0.1 mg/kg intravenously immediately before reperfusion, 0.2 mg/kg subcutaneously 2 hours after reperfusion) and the changes in plasma levels of alanine aminotransferase (ALT) and creatinine (CR) were analyzed. Results: The plasma levels of alanine aminotransferase (ALT) and creatinine (CR) were 80 \pm 6 U/L and 0.46 \pm 0.05 mg/dl, respectively; in mice treated with Sphinganine 1-phosphate (0.1mg/kg), the increase in ALT (7474 \pm 557 U/L) and Cr (0.55 \pm 0.05 mg/dL) was significantly suppressed after 24 hours. [2]

Solubility Information

Solubility	0.3 M NaOH: 1 mg/mL (2.62 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	2.6213 mL	13.1065 mL	26.213 mL
5 mM	0.5243 mL	2.6213 mL	5.2426 mL
10 mM	0.2621 mL	1.3107 mL	2.6213 mL
50 mM	0.0524 mL	0.2621 mL	0.5243 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

Montserrat Serra, et al. Sphingosine 1-phosphate lyase, a key regulator of sphingosine 1-phosphate signaling and function. *Adv Enzyme Regul.* 2010;50(1):349-62.

Sang Won Park, et al. Sphinganine-1-phosphate protects kidney and liver after hepatic ischemia and reperfusion in mice through S1P1 receptor activation. *Lab Invest.* 2010 Aug;90(8):1209-24.

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