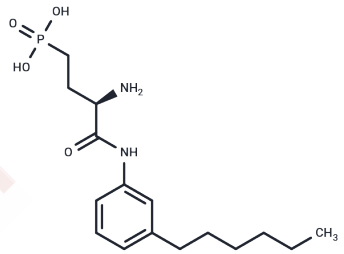
Data Sheet (Cat.No.T13327)

TargetMol

W146

Chemical Properties



CAS No. : 909725-61-7

Formula: C16H27N2O4P

Molecular Weight: 342.37

Storage: Keep away from moisture,Store at low temperature
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	W146 is a selective and potent Sphingosine 1-phosphate receptor subtype 1 (S1PR1) antagonist that induces significant but transient hematolymphopenia in mice.W146 induces significant but transient hematolymphopenia in mice, inducing pulmonary edema.
Targets(IC50)	Apoptosis,LPL Receptor
In vitro	W146 is an antagonist of S1PR1 (Ki: 70-80 nM). [1] W146 pretreatment significantly increased the TUNEL labeling index of endothelial progenitor cells (EPCs) compared with the S1P-treated group. W146 pretreatment significantly increased the level of activated cleaved caspase-3. S1P was able to reduce apoptosis in EPCs, but this protective effect was completely lost after W146 treatment.
In vivo	In mice, Injections of W146, W140, JTE013, or Cay10444 do not alter the basal WBC count. when mice are pretreated with W146, it is found that a significant increase in KSL-HSPC mobilization, compared to that in mice pretreated with dextran followed by AMD3100 administration. Moreover, pre-treatment of W146 shows an approximately 8-fold increase of KSL-HSPC mobilization, measured by the CFU-G/M colony-forming assays, compared to that in mice treated with AMD3100 alone. [3]

Solubility Information

Solubility	0.1M NaOH: 11 mg/mL (32.13 mM),Sonication and heating are recommended. DMSO: < 1 mg/mL (insoluble) Ethanol: < 1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.84 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9208 mL	14.6041 mL	29.2082 mL
5 mM	0.5842 mL	2.9208 mL	5.8416 mL
10 mM	0.2921 mL	1.4604 mL	2.9208 mL
50 mM	0.0584 mL	0.2921 mL	0.5842 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

M Germana Sanna, et al. Enhancement of capillary leakage and restoration of lymphocyte egress by a chiral S1P1 antagonist in vivo. Nat Chem Biol. 2006 Aug;2(8):434-4Epub 2006 Jul 9.
Hang Wang, et al. Sphingosine-1-phosphate promotes the proliferation and attenuates apoptosis of Endothelial progenitor cells via S1PR1/S1PR3/PI3K/Akt pathway. Cell Biol Int. 2018 May 23.
Jingjing Liu, et al. 3-amino-4-(3-hexylphenylamino)-4-oxobutyl phosphonic acid (W146), a Selective Antagonist of Sphingosine-1-phospahte Receptor Subtype 1, Enhances AMD3100-stimulated Mobilization of Hematopoietic Stem Progenitor Cells in Animals. J Biochem Pharmacol Res. 2013 Dec; 1(4): 197-203.