(S)-FTY720-phosphonate

Cat. No.: HY-15382A

CAS No.: 1142015-10-8

Molecular Formula: $C_{20}H_{36}NO_4P$

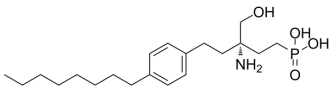
Molecular Weight: 385.48

Target: LPL Receptor

Pathway: GPCR/G Protein

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (64.85 mM; ultrasonic and adjust pH to 2 with 1M HCl)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5942 mL	12.9708 mL	25.9417 mL
	5 mM	0.5188 mL	2.5942 mL	5.1883 mL
	10 mM	0.2594 mL	1.2971 mL	2.5942 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.49 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

FTY720 (S)-Phosphate is an agonist of S1P receptor 1 (S1PR1), used in the research of acute inflammatory diseases such as acute lung injury.

IC_{50} & Target

S1PR1[1]

In Vitro

FTY720 (S)-Phosphate is an agonist of S1PR1. FTY720 (S)-Phosphate (Tys, 1 μM) maintains S1PR1 protein expression, enhances the human pulmonary artery endothelial cells barrier via S1PR1, but shows no effect on inducing ubiquitination of S1PR1. FTY720 (S)-Phosphate (0.01-50 μM) also reduces β-arrestin recruitment to S1PR1[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

FTY720 (S)-Phosphate (0.5 mg/kg, i.p.) preserves S1PR1 expression in mouse lungs, is protective in bleomycin-induced acute lung injury (ALI) and attenuates lung tissue leukocyte infiltration in bleomycin-injured mice[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Wang L, et al. FTY720 (s)-phosphonate preserves sphingosine 1-phosphate receptor 1 expression and exhibits superior barrier protection to FTY720 in acute lung injury. Crit Care Med. 2014 Mar;42(3):e189-99.

[2]. Lingling Jia, et al. Clostridium butyricum CGMCC0313.1 Protects against Autoimmune Diabetes by Modulating Intestinal Immune Homeostasis and Inducing Pancreatic Regulatory T Cells. Front Immunol. 2017 Oct 19;8:1345.

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