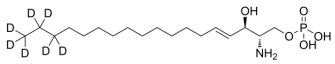
Sphingosine-1-phosphate-d_7

Cat. No.:	HY-108496S
CAS No.:	2260670-15-1
Molecular Formula:	$C_{18}H_{31}D_7NO_5P$
Molecular Weight:	386.51
Target:	Endogenous Metabolite; LPL Receptor
Pathway:	Metabolic Enzyme/Protease; GPCR/G Protein
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Sphingosine-1-phosphate-d_7 is the deuterium labeled Sphingosine-1-phosphate. Sphingosine-1-phosphate (S1P) is an agonist of S1P1-5 receptors and a ligand of GPR3, GPR6 and GPR12. Sphingosine-1-phosphate is an intracellular second messenger and mobilizes Ca2+ as an extracellular ligand for G protein-coupled receptors[1]. Sphingosine-1-phosphate is an important lipid mediator generated from Sphingomyelin (HY-113498) or other membrane phospholipids[2].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Teresa Sanchez, et al. Structural and Functional Characteristics of S1P Receptors. J Cell Biochem. 2004 Aug 1;92(5):913-22.

[3]. Kirsten Uhlenbrock, et al. Sphingosine 1-phosphate Is a Ligand of the Human gpr3, gpr6 and gpr12 Family of Constitutively Active G Protein-Coupled Receptors. Cell Signal. 2002 Nov;14(11):941-53.

[4]. S An, et al. Transduction of Intracellular Calcium Signals Through G Protein-Mediated Activation of Phospholipase C by Recombinant Sphingosine 1-phosphate Receptors. Mol Pharmacol. 1999 May;55(5):787-94

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