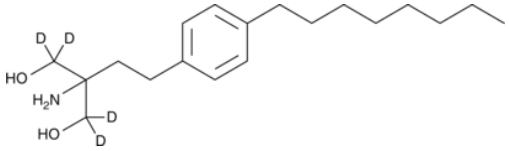
Product Data Sheet

Product Name: Fingolimod-d4
Cat. No.: GC47351

Chemical Properties

Cas. No.	1346747-38-3		
SMILES	OC([2H])([2H])C(N)(C([2H])([2H])O)CCC1=CC=C(CCCCCCCC)C=C1		
Formula	$C_{19}H_{29}D_4NO_2$	M.Wt	311.5
Solubility	DMF: 20 mg/ml,DMSO: 10 mg/ml,Ethanol: 5 mg/ml	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Fingolimod-d_4 is intended for use as an internal standard for the quantification of fingolimod by GC- or LC-MS. Fingolimod is a derivative of ISP-1 (myriocin), a fungal metabolite of the Chinese herb *I. sinclarii* as well as a structural analog of sphingosine. It is a novel immune modulator that prolongs allograft transplant survival in numerous models by inhibiting lymphocyte emigration from lymphoid organs.[1] Fingolimod is phosphorylated by sphingosine kinase, which then acts as a potent agonist at four of the sphingosine-1-phosphate (S1P) receptors ($S1P_1$, $S1P_3$, $S1P_4$, and $S1P_5$).[2] Down-regulation of $S1P_1$ receptors on T and B lymphocytes by fingolimod results in defective egress of these cells from spleen, lymph nodes, and Peyer's patch.[3] Fingolimod also enhances the activity of the sphingosine transporter Abcb1 and the leukotriene C_4 transporter Abcc1 and inhibits cytosolic phospholipase A_2 activity.[4,5]

Caution: Product has not been fully validated for medical applications. For research use only.
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1.Brinkmann, V., Pinschewer, D.D., Feng, L., et al.FTY720: Altered lymphocyte traffic results in allograft protectionTransplantation72(5)764-769(2001) 2.Brinkmann, V., Davis, M.D., Heise, C.E., et al.The immune modulator FTY720 targets sphingosine 1-phosphate receptorsJ. Biol. Chem.277(24)21453-21457(2002) 3.Matloubian, M., Lo, C.G., Cinamon, G., et al.Lymphocyte egress from thymus and peripheral lymphoid organs is dependent on S1P receptor 1Nature427(6972)355-360(2004) 4.Honig, S.M., Fu, S., Mao, X., et al.FTY720 stimulates multidrug transporter- and cysteinyl leukotriene-dependent T cell chemotaxis to lymph nodesJ. Clin. Invest.111(5)627-637(2003) 5.Payne, S.G., Oskeritizian, C.A., Griffiths, R., et al.The immunosuppressant drug FTY720 inhibits cytosolic phospholipase A2 independently of sphingosine-1-phosphate receptorsBlood109(3)1077-1085(2007)

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