

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

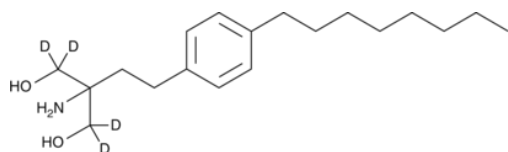
Formula $C_{19}H_{29}D_4NO_2$ M.Wt 311.5

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-d₄ 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. sinclairii* 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 (S1P₁, S1P₃, S1P₄, and S1P₅).² Down-regulation of S1P₁ 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 C₄ transporter Abcc1 and inhibits cytosolic phospholipase A₂ 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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