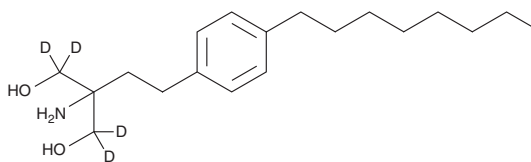


PRODUCT INFORMATION



Fingolimod-d₄ Item No. 25037

CAS Registry No.: 1346747-38-3
Formal Name: 2-amino-2-(4-octylphenethyl)propane-1,1,3,3-d₄-1,3-diol
MF: C₁₉H₂₉D₄NO₂
FW: 311.5
Chemical Purity: ≥98% (Fingolimod)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Fingolimod-d₄ is intended for use as an internal standard for the quantification of fingolimod (Item Nos. 11975 | 10006292) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Fingolimod-d₄ is supplied as a solid. A stock solution may be made by dissolving the fingolimod-d₄ in the solvent of choice. Fingolimod-d₄ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of fingolimod-d₄ in these solvents is approximately 5, 10, and 20 mg/ml, respectively.

Description

Fingolimod is an immune modulator, a prodrug form of the sphingosine-1-phosphate (S1P) receptor agonist FTY720 phosphate (Item No. 10008639), and a derivative of myriocin (Item No. 63150).¹ It is converted by sphingosine kinase (SPHK) to FTY720 phosphate, which then acts as an agonist of S1P receptor 1 (S1P₁), S1P₃, S1P₄, and S1P₅, subsequently acting as a functional antagonist by inducing receptor internalization.¹⁻³ Fingolimod (1 mg/kg) decreases the number of circulating lymphocytes in mice.⁴ It increases skin allograft survival in rats when administered at doses ranging from 0.3 to 3 mg/kg.⁵ Fingolimod (0.3 mg/kg) prevents disease development in a rat model of experimental autoimmune encephalomyelitis (EAE).¹ It also inhibits S1P lyase when used at concentrations ranging from 0.3 to 30 μM.⁴ Formulations containing fingolimod have been used in the treatment of multiple sclerosis.

References

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2. Forrest, M., Sun, S.Y., Hajdu, R., et al. *J. Pharmacol. Exp. Ther.* **309**(2), 758-768 (2004).
3. Brinkmann, V., Billich, A., Baumruker, T., et al. *Nat. Rev. Drug Discov.* **9**(11), 883-897 (2010).
4. Bandhuvula, P., Tam, Y.Y., Oskouian, B., et al. *J. Biol. Chem.* **280**(40), 33697-33700 (2005).
5. Shimizu, H., Takahashi, M., Kaneko, T., et al. *Circulation* **111**(2), 222-229 (2005).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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