# Fingolimod-$d_4$

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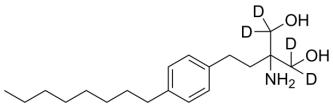
| **Cat. No.:** | HY-11063S |
| **CAS No.:** | 1346747-38-3 |
| **Molecular Formula:** | $C_{19}H_{29}D_4NO_2$ |
| **Molecular Weight:** | 311.5 |
| **Target:** | LPL Receptor; PAK |
| **Pathway:** | GPCR/G Protein; Cell Cycle/DNA Damage; Cytoskeleton |
| **Storage:** | 4°C, sealed storage, away from moisture<br>* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture) |




## BIOLOGICAL ACTIVITY

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| **Description** | Fingolimod-$d_4$ is the deuterium labeled Fingolimod. Fingolimod (FTY720 free base) is a sphingosine 1-phosphate (S1P) antagonist with an IC50 of 0.033 nM in K562 and NK cells. Fingolimod also is a pak1 activator, a immunosuppressant[1]. |
| **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].<br>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]. Rolin J, et al. FTY720 and SEW2871 reverse the inhibitory effect of S1P on natural killer cell mediated lysis of K562 tumor cells and dendritic cells but not on cytokine release. Cancer Immunol Immunother. 2010, 59(4), 575-586.

[3]. Szepanowski F, et al. Fingolimod promotes peripheral nerve regeneration via modulation of lysophospholipid signaling. J Neuroinflammation. 2016 Jun 10;13(1):143.

[4]. Airas L, et al. In vivo PET imaging demonstrates diminished microglial activation after fingolimod treatment in an animal model of multiple sclerosis. J Nucl Med. 2015 Feb;56(2):305-10.

[5]. Shirakabe K, et al. Modification of lymphocyte migration to Peyer's patches by inhibition of sphingosine-1-phosphate lyase ameliorates murine colitis. J Gastroenterol Hepatol. 2018 Jan 15.



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