(Rac)-Rotigotine-d_7 hydrochloride

Cat. No.: HY-15394S

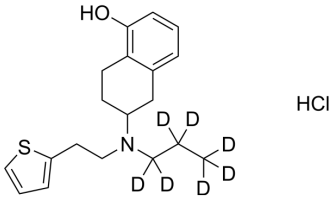
Molecular Formula: $C_{19}H_{19}D_7ClNOS$

Molecular Weight: 358.98

Target: Dopamine Receptor; Adrenergic Receptor; 5-HT Receptor; Isotope-Labeled Compounds

Pathway: GPCR/G Protein; Neuronal Signaling; Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	(Rac)-Rotigotine-d_7 (hydrochloride) is deuterium labeled (Rac)-Rotigotine (hydrochloride). (Rac)-Rotigotine hydrochloride is a racemate of Rotigotine. Rotigotine is a full agonist of dopamine receptor, a partial agonist of the 5-HT1A receptor, and an antagonist of the α2B-adrenergic receptor, with Kis of 0.71 nM, 4-15 nM, and 83 nM for the dopamine D3 receptor and D2, D5, D4 receptors, and dopamine D1 receptor.		
IC_{50} & Target	D_1 Receptor	D_3 Receptor	D_4 Receptor
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]. Fenu S, et al. In vivo dopamine agonist properties of rotigotine: Role of D1 and D2 receptors. Eur J Pharmacol. 2016 Oct 5;788:183-91.

[3]. Radad K, et al. Neuroprotective effect of rotigotine against complex I inhibitors, MPP+ and rotenone, in primary mesencephalic cell culture. Folia Neuropathol. 2014;52(2):179-86.

[4]. Scheller D, et al. The in vitro receptor profile of rotigotine: a new agent for the treatment of Parkinson's disease. Naunyn Schmiedebergs Arch Pharmacol. 2009 Jan;379(1):73-86.

[5]. Wood M, et al. Rotigotine is a potent agonist at dopamine D1 receptors as well as at dopamine D2 and D3 receptors. Br J Pharmacol. 2015 Feb;172(4):1124-35.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA