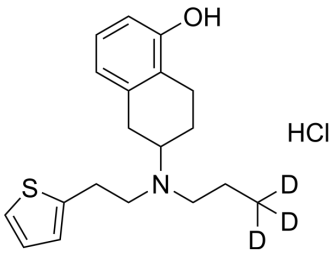
(Rac)-Rotigotine-d_3 hydrochloride

Cat. No.:	HY-15394S1
CAS No.:	1215846-20-0
Molecular Formula:	$C_{19}H_{23}D_3ClNOS$
Molecular Weight:	354.95
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	(Rac)-Rotigotine-d_3 hydrochloride is a deuterium labeled (Rac)-Rotigotine (hydrochloride) (HY-15394). (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?K_is of 0.71?nM, 4-15?nM, and 83?nM for the dopamine D3 receptor and D2, D5, D4 receptors, and dopamine D1 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]. 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.

[2]. 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.

[3]. 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.

[4]. 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.

[5]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-246.

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