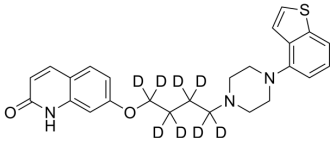
Brexpiprazole-d_8-1

Cat. No.:	HY-15780S1
CAS No.:	1427049-19-1
Molecular Formula:	$C_{25}H_{19}D_8N_3O_2S$
Molecular Weight:	441.62
Target:	Dopamine Receptor; Adrenergic Receptor; 5-HT Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Brexpiprazole-d_8-1 is the deuterium labeled Brexpiprazole[1]. Brexpiprazole (OPC-34712), an atypical orally active antipsychotic agent, is a partial agonist of human 5-HT1A and dopamine D2L receptor with Kis of 0.12 nM and 0.3 nM, respectively. Brexpiprazole is also a 5-HT2A receptor antagonist with a Ki of 0.47 nM. Brexpiprazole also shows potent antagonist activity at human noradrenergic α1B (Ki=0.17 nM) and α2C receptors (Ki=0.59 nM)[2][3].
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 Feb;53(2):211-216.

[2]. Ishima T, et al. Potentiation of neurite outgrowth by brexpiprazole, a novel serotonin-dopamine activity modulator: a role for serotonin 5-HT1A and 5-HT2A receptors. Eur Neuropsychopharmacol. 2015 Apr;25(4):505-11.

[3]. Yoshimi N, et al. Improvement of dizocilpine-induced social recognition deficits in mice by brexpiprazole, a novel serotonin-dopamine activity modulator. Eur Neuropsychopharmacol. 2015 Mar;25(3):356-64.

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