Brexpiprazole S-oxide

Cat. No.: HY-133152

CAS No.: 1191900-51-2

Molecular Formula: $C_{25}H_{27}N_3O_3S$

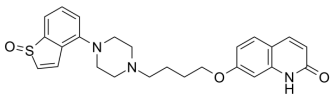
Molecular Weight: 449.57

Target: 5-HT Receptor; Dopamine Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (55.61 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2243 mL	11.1217 mL	22.2435 mL
	5 mM	0.4449 mL	2.2243 mL	4.4487 mL
	10 mM	0.2224 mL	1.1122 mL	2.2243 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Brexpiprazole S-oxide (DM-3411) is a main metabolite of Brexpiprazole and is metabolized by cytochrome P450 3A4 (CYP3A4). Brexpiprazole is an atypical antipsychotic agent and a partial agonist of human 5-HT_{1A} and dopamine receptor with K_is of 0.12 nM and 0.3 nM, respectively. Brexpiprazole is also a 5-HT_{2A} receptor antagonist with a K_i of 0.47 nM[1][2][3].

IC_{50} & Target			
	5-HT_{1A} Receptor 0.12 nM (Ki)	5-HT_{2A} Receptor 0.47 nM (Ki)	D_2 Receptor 0.3 nM (Ki)

REFERENCES

[1]. Chen B, et al. Effects of 26 Recombinant CYP3A4 Variants on Brexpiprazole Metabolism. Chem Res Toxicol. 2019 Oct 17.

[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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