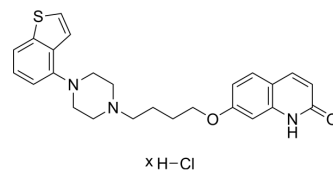


Brexiprazole hydrochloride

Cat. No.:	HY-15780A
CAS No.:	913612-38-1
Molecular Formula:	C ₂₅ H ₂₈ ClN ₃ O ₂ S
Target:	5-HT Receptor; Dopamine Receptor; Adrenergic Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Brexiprazole (OPC-34712) hydrochloride, an atypical orally active antipsychotic agent, is a partial agonist of human 5-HT _{1A} and dopamine D _{2L} receptor with K _i s of 0.12 nM and 0.3 nM, respectively. Brexiprazole hydrochloride is also a 5-HT _{2A} receptor antagonist with a K _i of 0.47 nM. Brexiprazole hydrochloride also shows potent antagonist activity at human noradrenergic α _{1B} (K _i =0.17 nM) and α _{2C} receptors (K _i =0.59 nM) ^{[1][2]} .			
IC₅₀ & Target	5-HT _{1A} Receptor 0.12 nM (K _i)	5-HT _{2A} Receptor 0.47 nM (K _i)	D _{2L} Receptor 0.3 nM (K _i)	human noradrenergic α _{1B} 0.17 nM (K _i)
	human noradrenergic α _{2C} 0.59 nM (K _i)			
In Vitro	Brexiprazole (0-1.0 μM, 4 days) potentiates NGF-induced neurite outgrowth in a dose-dependent manner in PC12 cells ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
In Vivo	Brexiprazole (0-0.1 mg/kg; p.o.; once) improves social recognition deficits in mice ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
	Animal Model:	Male C57BL/6NcrSlc mice, Dizocilpine (0.1 mg/kg) (HY-15084B) induced social recognition deficits ^[2]		
	Dosage:	0.01, 0.03 and 0.1 mg/kg		
	Administration:	Oral administration, once		
	Result:	Significantly ameliorated Dizocilpine-induced social recognition deficits, without sedation or a reduction of exploratory behavior.		

CUSTOMER VALIDATION

- Acta Pharmacol Sin. 2021 May 11.

- Eur J Pharmacol. 2021 Oct 6;174557.
- Pharmacol Rep. 2023 Jan 13.

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REFERENCES

- [1]. Ishima T, et al. Potentiation of neurite outgrowth by brexpiprazole, a novel serotonin-dopamine activity modulator: a role for serotonin 5-HT_{1A} and 5-HT_{2A} receptors. Eur Neuropsychopharmacol. 2015 Apr;25(4):505-11.
- [2]. 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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Caution: Product has not been fully validated for medical applications. For research use only.

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