MCE MedChemExpress

Product Data Sheet

Vortioxetine-d₈ hydrobromide

Cat. No.: HY-15414AS

Molecular Formula: C, H, D, BrN, S

Molecular Weight: 387.41

Target: Serotonin Transporter; 5-HT Receptor; Isotope-Labeled Compounds

Pathway: Neuronal Signaling; GPCR/G Protein; Others

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

Analysis.

BIOLOGICAL ACTIVITY

Description	Vortioxetine-d ₈ (hydrobromide) is the deuterium labeled Vortioxetine hydrobromide. Vortioxetine hydrobromide is a multimodal serotonergic agent, inhibits 5-HT1A, 5-HT1B, 5-HT3A, 5-HT7 receptor and SERT with K _i values of 15 nM, 33 nM, 3.7 nM, 19 nM and 1.6 nM, respectively[1][2].
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]. Bang-Andersen B, et al. Discovery of 1-[2-(2,4-dimethylphenylsulfanyl)phenyl]piperazine (Lu AA21004): a novel multimodal compound for the treatment of major depressive disorder. J Med Chem. 2011 May 12;54(9):3206-21.
- [3]. Guilloux JP, et al. Antidepressant and anxiolytic potential of the multimodal antidepressant vortioxetine (Lu AA21004) assessed by behavioural and neurogenesis outcomes in mice. Neuropharmacology. 2013 May 28;73C:147-159.
- [4]. Theunissen EL, et al. A randomized trial on the acute and steady-state effects of a new antidepressant, vortioxetine (Lu AA21004), on actual driving and cognition. Clin Pharmacol Ther. 2013 Jun;93(6):493-501.
- [5]. Rothschild AJ, Mahableshwarkar AR, Jacobsen P, Vortioxetine (Lu AA21004) 5mg in generalized anxiety disorder: results of an 8-week randomized, double-blind, placebo-controlled clinical trial in the United States. Eur Neuropsychopharmacol. 2012 Dec;22(12):858-66.
- [6]. Mork A, et al. Pharmacological effects of Lu AA21004: a novel multimodal compound for the treatment of major depressive disorder. J Pharmacol Exp Ther. 2012 Mar;340(3):666-75.

Caution: Product has not been fully validated for medical applications. For research use only.

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