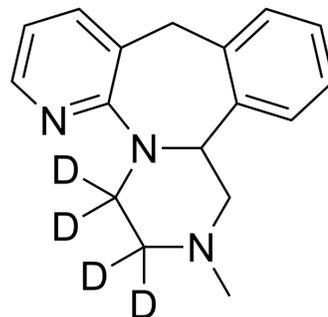


## Mirtazapine-d<sub>4</sub>

<b>Cat. No.:</b>	HY-B0352S2
<b>CAS No.:</b>	1215898-55-7
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>15</sub> D <sub>4</sub> N <sub>3</sub>
<b>Molecular Weight:</b>	269.38
<b>Target:</b>	Histamine Receptor; Adrenergic Receptor; 5-HT Receptor; Isotope-Labeled Compounds
<b>Pathway:</b>	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling; Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Mirtazapine-d <sub>4</sub> is deuterium labeled Mirtazapine. Mirtazapine (Org3770) is a potent and orally active noradrenergic and specific serotonergic antidepressant (NaSSA) agent. Mirtazapine is also a 5-HT <sub>2</sub> , 5-HT <sub>3</sub> , histamine H <sub>1</sub> receptor and α <sub>2</sub> -adrenoceptor antagonist with pKi values of 8.05, 8.1, 9.3 and 6.95, respectively[1][2].
<b>IC<sub>50</sub> &amp; Target</b>	H <sub>1</sub> Receptor
<b>In Vitro</b>	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 <sup>[1]</sup> . 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]. S A Anttila, et al. A review of the pharmacological and clinical profile of mirtazapine. *CNS Drug Rev.* Fall 2001;7(3):249-64.
- [3]. T H de Boer, et al. Neurochemical and autonomic pharmacological profiles of the 6-aza-analogue of mianserin, Org 3770 and its enantiomers. *Neuropharmacology.* 1988 Apr;27(4):399-408.
- [4]. Wagdi Almishri, et al. The Antidepressant Mirtazapine Inhibits Hepatic Innate Immune Networks to Attenuate Immune-Mediated Liver Injury in Mice. *Front Immunol.* 2019 Apr 12;10:803.

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

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