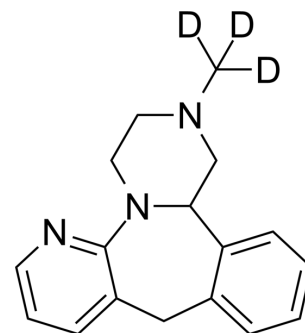


Mirtazapine D3

Cat. No.:	HY-B0352S	
CAS No.:	1216678-68-0	
Molecular Formula:	C ₁₇ H ₁₆ D ₃ N ₃	
Molecular Weight:	268.37	
Target:	5-HT 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 : 100 mg/mL (372.62 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.7262 mL	18.6310 mL	37.2620 mL
		5 mM	0.7452 mL	3.7262 mL	7.4524 mL
10 mM		0.3726 mL	1.8631 mL	3.7262 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (9.32 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (9.32 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (9.32 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Mirtazapine-d ₃ is a deuterium labeled Mirtazapine. Mirtazapine is a 5-HT receptor inhibitor. Mirtazapine is a potent and orally active noradrenergic and specific serotonergic antidepressant (NaSSA) agent by blocking 5-HT ₂ and 5-HT ₃ receptors[1].	
IC₅₀ & Target	5-HT ₂ Receptor	5-HT ₃ Receptor
In Vivo	Mirtazapine (intraperitoneal injection; 10–50 mg/Kg; 14 days) treatment normalizes heart rate, breath rate, anxiety levels	

and eliminates the hopping behavior observed in MeCP2-null mice, leading to improved phenotypic score^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	MeCP2 null mice ^[2]
Dosage:	10-50 mg/Kg
Administration:	Intraperitoneal injection; 10-50 mg/Kg; 14 days
Result:	Restored the thickness of MeCP2-null mice somatosensory cortex, especially of layers II-III and VI.

REFERENCES

[1]. Anttila, S.A. and E.V. Leinonen, A review of the pharmacological and clinical profile of mirtazapine. CNS Drug Rev, 2001. 7(3): p. 249-64.

[2]. Kooyman AR, et al. Interaction between enantiomers of mianserin and ORG3770 at 5-HT₃ receptors in cultured mouse neuroblastoma cells. Neuropharmacology. 1994 Mar-Apr;33(3-4):501-7.

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

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