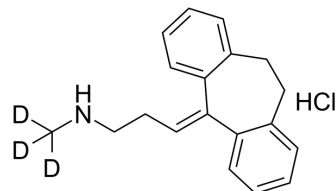


## Nortriptyline-d<sub>3</sub> hydrochloride

<b>Cat. No.:</b>	HY-B1417S
<b>CAS No.:</b>	203784-52-5
<b>Molecular Formula:</b>	C <sub>19</sub> H <sub>19</sub> D <sub>3</sub> ClN
<b>Molecular Weight:</b>	302.86
<b>Target:</b>	Autophagy; Apoptosis; Drug Metabolite
<b>Pathway:</b>	Autophagy; Apoptosis; Metabolic Enzyme/Protease
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 50 mg/mL (165.09 mM; Need ultrasonic)  
H<sub>2</sub>O : 7.14 mg/mL (23.58 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.3019 mL	16.5093 mL	33.0186 mL
	5 mM	0.6604 mL	3.3019 mL	6.6037 mL
	10 mM	0.3302 mL	1.6509 mL	3.3019 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 1.25 mg/mL (4.13 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 1.25 mg/mL (4.13 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 1.25 mg/mL (4.13 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Nortriptyline-d<sub>3</sub> (hydrochloride) is the deuterium labeled Nortriptyline hydrochloride. Nortriptyline hydrochloride (Desmethylamitriptyline hydrochloride) is a tricyclic antidepressant and the main active metabolite of Amitriptyline, and used to relieve the symptoms of depression<sup>[1]</sup>.

#### 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<sup>[1]</sup>.

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MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

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- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.
- [2]. Dean L. Amitriptyline Therapy and CYP2D6 and CYP2C19 Genotype. *Biotechnology Information (US)*; 2012-2017 Mar 23.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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