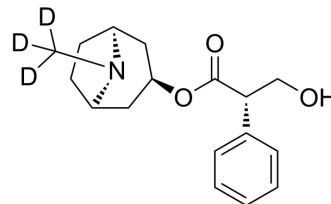


## L-Hyoscyamine-d<sub>3</sub>

<b>Cat. No.:</b>	HY-N0471S		
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>20</sub> D <sub>3</sub> NO <sub>3</sub>		
<b>Molecular Weight:</b>	292.39		
<b>Target:</b>	mAChR		
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling		
<b>Storage:</b>	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 (342.01 mM; Need ultrasonic)

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Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.4201 mL	17.1004 mL	34.2009 mL
	5 mM	0.6840 mL	3.4201 mL	6.8402 mL
	10 mM	0.3420 mL	1.7100 mL	3.4201 mL

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

### BIOLOGICAL ACTIVITY

#### Description

L-Hyoscyamine-d<sub>3</sub> is the deuterium labeled L-Hyoscyamine. L-Hyoscyamine (Daturine), a natural plant tropane alkaloid, is a potent and competitive muscarinic receptor (MR) antagonist. L-Hyoscyamine is a levo-isomer to Atropine (HY-B1205)[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<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]. Harald John, et al. Application of an enantioselective LC-ESI MS/MS procedure to determine R- and S-hyoscyamine following intravenous atropine administration in swine. *Drug Test Anal.* Mar-Apr 2012;4(3-4):194-8.

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[3]. Lars Göran Axelsson, et al. Regulatory role of 5-HT and muscarinic receptor antagonists on the migrating myoelectric complex in rats. Eur J Pharmacol. 2003 Apr 25;467(1-3):211-8.

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

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