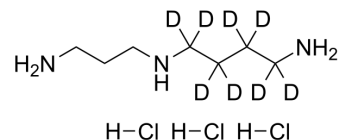


## Spermidine-d<sub>8</sub> hydrochloride

<b>Cat. No.:</b>	HY-B1776AS
<b>CAS No.:</b>	1173019-26-5
<b>Molecular Formula:</b>	C <sub>7</sub> H <sub>14</sub> D <sub>8</sub> Cl <sub>3</sub> N <sub>3</sub>
<b>Molecular Weight:</b>	262.68
<b>Target:</b>	Endogenous Metabolite
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Storage:</b>	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 250 mg/mL (951.73 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.8069 mL	19.0346 mL	38.0691 mL
	5 mM	0.7614 mL	3.8069 mL	7.6138 mL
	10 mM	0.3807 mL	1.9035 mL	3.8069 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Spermidine-d<sub>8</sub> (hydrochloride) is the deuterium labeled Spermidine trihydrochloride. Spermidine hydrochloride maintains cell membrane stability, increases antioxidant enzymes activities, improving photosystem II (PSII), and relevant gene expression. Spermidine hydrochloride significantly decreases the H<sub>2</sub>O<sub>2</sub> and O<sub>2</sub><sup>-</sup> contents[1].

#### 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]. Zhang L, et al. The Alleviation of Heat Damage to Photosystem II and Enzymatic Antioxidants by Exogenous Spermidine in Tall Fescue. *Front Plant Sci*. 2017 Oct 12;8:1747.

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

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