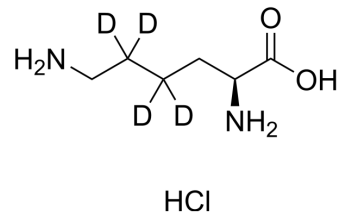


## L-Lysine-d<sub>4</sub> hydrochloride

<b>Cat. No.:</b>	HY-N0470S6
<b>CAS No.:</b>	284664-96-6
<b>Molecular Formula:</b>	C <sub>6</sub> H <sub>11</sub> D <sub>4</sub> ClN <sub>2</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	186.67
<b>Target:</b>	Endogenous Metabolite; Virus Protease
<b>Pathway:</b>	Metabolic Enzyme/Protease; Anti-infection
<b>Storage:</b>	4°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 : ≥ 50 mg/mL (267.85 mM)  
\* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
	1 mM		5.3570 mL	26.7852 mL	53.5705 mL
	5 mM		1.0714 mL	5.3570 mL	10.7141 mL
	10 mM		0.5357 mL	2.6785 mL	5.3570 mL

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

### BIOLOGICAL ACTIVITY

#### Description

L-Lysine-d<sub>4</sub> (hydrochloride) is the deuterium labeled L-Lysine. L-lysine hydrochloride is an essential amino acid for humans with various benefits including treating herpes, increasing calcium absorption, reducing diabetes-related illnesses and improving gut health.

#### 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]. Al-Malki AL, et al. Suppression of acute pancreatitis by L-lysine in mice. BMC Complement Altern Med. 2015 Jun 23;15:193.
- [2]. Baruffol C, et al. L-lysine dose dependently delays gastric emptying and increases intestinal fluid volume in humans and rats. Neurogastroenterol Motil. 2014 Jul;26(7):999-1009.

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[3]. Shimomura A, et al. Dietary L-lysine prevents arterial calcification in adenine-induced uremic rats. J Am Soc Nephrol. 2014 Sep;25(9):1954-65.

[4]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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

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