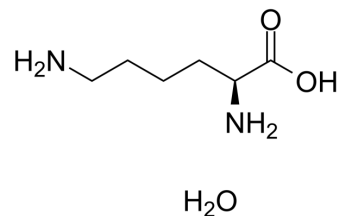


L-Lysine hydrate

Cat. No.:	HY-W015370		
CAS No.:	39665-12-8		
Molecular Formula:	C ₆ H ₁₆ N ₂ O ₃		
Molecular Weight:	164		
Target:	Endogenous Metabolite		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (609.76 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	6.0976 mL	30.4878 mL	60.9756 mL
	5 mM	1.2195 mL	6.0976 mL	12.1951 mL
	10 mM	0.6098 mL	3.0488 mL	6.0976 mL

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

BIOLOGICAL ACTIVITY

Description

L-Lysine hydrate is an essential amino acid. L-Lysine hydrate can be research for vascular calcification (VC) and acute pancreatitis^{[1][2]}.

IC₅₀ & Target

Microbial Metabolite

Human Endogenous Metabolite

In Vitro

L-Lysine hydrate (VSMCs) suppresses plasma iPTH and elevates plasma alanine, proline, plasma arginine, and homo arginine, thereby inhibiting apoptosis of VSMCs and mineral precipitation^[1].

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

In Vivo

L-Lysine hydrate (40 µg/kg; p.o.) ameliorates arterial calcification in adenine rats and protects the femora from osteoporotic changes in adenine rats^[1].

L-Lysine hydrate (10 and 400 mg/kg; i.g. and p.o.; Male mice) inhibits pancreatic tissue damage^[2].

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

Animal Model:	Male mice ^[2]
Dosage:	10 and 400 mg/kg
Administration:	Intraperitoneal injection and oral administration; for 15 days
Result:	Inhibited the release of the inflammatory cytokine IL-6 and enhance antioxidant activity.

CUSTOMER VALIDATION

- Microbiome. 2019 Mar 20;7(1):43.
- J Anim Physiol Anim Nutr. 2022 Aug 3.
- Laurea Magistrale in Biomedical Engineering, Politecnico di Milano. 2019 Jun.

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REFERENCES

- [1]. 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.
- [2]. Al-Malki AL. Suppression of acute pancreatitis by L-lysine in mice. BMC Complement Altern Med. 2015 Jun 23;15:193.

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

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