D-Carnitine hydrochloride

Cat. No.: HY-B2246A

CAS No.: 10017-44-4

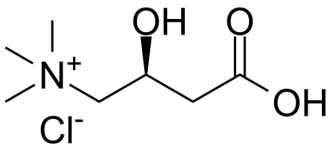
Molecular Formula: $C_7H_{16}ClNO_3$

Molecular Weight: 197.66

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro

H_2O : 125 mg/mL (632.40 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	5.0592 mL	25.2960 mL	50.5919 mL
	5 mM	1.0118 mL	5.0592 mL	10.1184 mL
	10 mM	0.5059 mL	2.5296 mL	5.0592 mL

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

BIOLOGICAL ACTIVITY

Description

D-Carnitine hydrochloride ((S)-Carnitine Hydrochloride) has been used to study sulfur factor transporter SLC22A4 and carnitine transporter SLC22A5 in ergot. D-Carnitine hydrochloride is also used to get palmitic acid into mitochondria[1][2].

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

When expressed in human embryonic kidney (HEK)293 cells, hOCTN2 (SLC22A5) shows low but significant stereospecific transport activity: D-carnitine is transported with lower affinity (K_m=10.9 μM) than the L-isomer (K_m=4.3 μM)[3].

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

REFERENCES

[1]. Horvath GA, et al. Newborn screening for MCAD deficiency: experience of the first three years in British Columbia, Canada. Can J Public Health. 2008 Jul-Aug;99(4):276-80.

[2]. Leenders JJ, et al. Regulation of cardiac gene expression by KLF15, a repressor of myocardin activity. J Biol Chem. 2010 Aug 27;285(35):27449-56.

[3]. Ohashi R, et al. Na(+)-dependent carnitine transport by organic cation transporter (OCTN2): its pharmacological and toxicological relevance. J Pharmacol Exp Ther. 1999 Nov;291(2):778-84.

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

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