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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

L-Cystathionine

Cat. No.: HY-W009749

CAS No.: 56-88-2

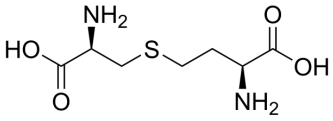
Molecular Formula: $C_7H_{14}N_2O_4S$

Molecular Weight: 222

Target: Endogenous Metabolite; Apoptosis

Pathway: Metabolic Enzyme/Protease; Apoptosis

Storage: -20°C, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

1M HCl : 50 mg/mL (225.23 mM; ultrasonic and adjust pH to 1 with HCl)
H_2O : 25 mg/mL (112.61 mM; ultrasonic and warming and adjust pH to 11 with NaOH and heat to 80°C)
DMSO : < 1 mg/mL (insoluble or slightly soluble)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.5045 mL	22.5225 mL	45.0450 mL
	5 mM	0.9009 mL	4.5045 mL	9.0090 mL
	10 mM	0.4505 mL	2.2523 mL	4.5045 mL

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

In Vivo

1. Add each solvent one by one: PBS
Solubility: 3.33 mg/mL (15.00 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

L-Cystathionine is a nonprotein thioether and is a key amino acid associated with the metabolic state of sulfur-containing amino acids. L-Cystathionine protects against Homocysteine-induced mitochondria-dependent apoptosis of vascular endothelial cells (HUVECs). L-Cystathionine plays an important role in cardiovascular protection[1][2].

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

Homocysteine obviously induces the apoptosis of HUVECs, and this effect is significantly attenuated by the pretreatment with L-cystathionine. Furthermore, L-cystathionine decreases the production of mitochondrial superoxide anion and the expression of Bax and restrained its translocation to mitochondria, increases mitochondrial membrane potential, inhibits mitochondrial permeability transition pore (MPTP) opening, suppresses the leakage of cytochrome c from mitochondria into the cytoplasm, and downregulated activities of caspase-9 and caspase-3[1].
L-Cystathionine is an important metabolic intermediate in the L-cysteine transsulfuration pathway from L-methionine via L-

homocysteine in mammalian tissues[2].

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

REFERENCES

[1]. Amino Y, et al. Synthesis and evaluation of L-cystathionine as a standard for amino acid analysis. Biosci Biotechnol Biochem. 2017 Jan;81(1):95-101.

[2]. Xiuli Wang, et al. L-Cystathionine Protects against Homocysteine-Induced Mitochondria-Dependent Apoptosis of Vascular Endothelial Cells. Oxid Med Cell Longev. 2019 Nov 25;2019:1253289.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA