Glutarylcarnitine

Cat. No.: HY-113005

CAS No.: 102636-82-8

Molecular Formula: $C_{12}H_{21}NO_6$

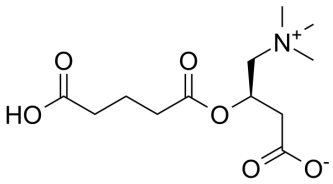
Molecular Weight: 275.3

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

Ethanol : 100 mg/mL (363.24 mM; Need ultrasonic)

DMSO : 2 mg/mL (7.26 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.6324 mL	18.1620 mL	36.3240 mL
5 mM	0.7265 mL	3.6324 mL	7.2648 mL
10 mM	0.3632 mL	1.8162 mL	3.6324 mL

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

In Vivo

1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.67 mg/mL (6.07 mM); Clear solution
2. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.67 mg/mL (6.07 mM); Clear solution
3. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 1.67 mg/mL (6.07 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Glutarylcarnitine is the diagnostic metabolite for malonic aciduria and glutaric aciduria type I monitored in most tandem mass spectrometry newborn screening programmes.

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

Malonylcarnitine and Glutarylcarnitine are important diagnostic metabolites in the screening of dried blood spots by

tandem mass spectrometry[1].

The urinary excretion of glutarylcarnitine is a specific biochemical marker of glutaric acidemia type I (GA-1). The urinary excretion of glutarylcarnitine is an informative tool in the biochemical diagnosis of glutaric acidemia type I[2].

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

REFERENCES

[1]. Johnson DW, et al. Stability of malonylcarnitine and Glutarylcarnitine in stored blood spots. J Inherit Metab Dis. 2004;27(6):789-90.

[2]. S Tortorelli, et al. The urinary excretion of glutarylcarnitine is an informative tool in the biochemical diagnosis of glutaric acidemia type I. Mol Genet Metab. 2005 Feb;84(2):137-43.

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