Dehydroascorbic acid

Cat. No.: HY-110281

CAS No.: 490-83-5

Molecular Formula: $C_6H_6O_6$

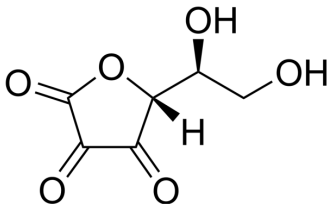
Molecular Weight: 174.11

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (287.17 mM; Need ultrasonic)

H_2O : 5 mg/mL (28.72 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.7435 mL	28.7175 mL	57.4350 mL
5 mM	1.1487 mL	5.7435 mL	11.4870 mL
10 mM	0.5743 mL	2.8717 mL	5.7435 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 12.5 mg/mL (71.79 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (14.36 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (14.36 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (14.36 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Dehydroascorbic acid, a blood-brain barrier transportable form of vitamin C, mediates potent cerebroprotection in experimental stroke.

IC_{50} & Target

Human Endogenous Metabolite

In Vitro	Neuronal injury in ischemic stroke is partly mediated by cytotoxic reactive oxygen species. Although the antioxidant ascorbic acid (AA) or vitamin C does not penetrate the blood-brain barrier (BBB), its oxidized form, dehydroascorbic acid (DHA), enters the brain by means of facilitative transport[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Huang J, et al. Dehydroascorbic acid, a blood-brain barrier transportable form of vitamin C, mediates potentcerebroprotection in experimental stroke. Proc Natl Acad Sci U S A. 2001 Sep 25;98(20):11720-4.

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