

Isocitric acid

Chemical Properties

CAS No. : 320-77-4

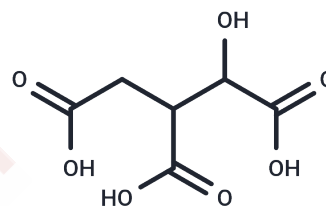
Formula: C₆H₈O₇

Molecular Weight: 192.12

Store at low temperature

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Isocitric acid (Isocitrate), an isomer of citric acid, is a substrate for citric acid cycle and an endogenous metabolite, which has potential for the treatment of Parkinson's disease, Fe-deficiency anemia, and metabolic myopathies associated with a shortage of succinate dehydrogenase and aconitate hydratase, as well as the mutation of the gene of NADP-dependent isocitrate dehydrogenase 1 (IDH1).
Targets(IC50)	Endogenous Metabolite
In vivo	The researchers used rats as experimental subjects and administered high-purity monopotassium salt of Isocitric acid (99.9% purity) to rats with lead- and molybdenum-induced neurotoxicity for 14 consecutive days. The results showed that the compound significantly alleviated neurotoxic symptoms and improved the rats' learning and memory abilities. [1]

Solubility Information

Solubility	H ₂ O: 80 mg/mL (416.41 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.2051 mL	26.0254 mL	52.0508 mL
5 mM	1.041 mL	5.2051 mL	10.4102 mL
10 mM	0.5205 mL	2.6025 mL	5.2051 mL
50 mM	0.1041 mL	0.5205 mL	1.041 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Morgunov IG, Kamzolova SV, Karpukhina OV, Bokieva SB, Inozemtsev AN. Biosynthesis of Isocitric acid in repeated-batch culture and testing of its stress-protective activity. Appl Microbiol Biotechnol. 2019 Apr;103(8):3549-3558.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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