Data Sheet (Cat.No.TSH-00076)

TargetMol

Sodium citrate monobasic

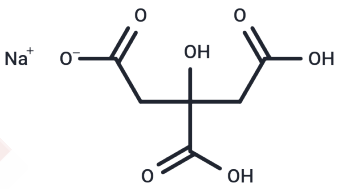
Chemical Properties

CAS No. : 18996-35-5

Formula: C6H7NaO7

Molecular Weight: 214.11

Storage: Store at RT
Actual storage temperature shall be subject to the COA.



Biological Description

Description	Sodium citrate monobasic (Citric acid monosodium salt) is a biochemical reagent serving as a preservative, emulsifier, chelating agent, and buffer. Monobasic sodium citrate induces apoptosis in HaCaT cells and causes cell cycle arrest at the G2/M and S phases. It also induces hepatic oxidative damage by reducing antioxidant enzyme activity.
Targets(IC50)	Apoptosis,Cell Cycle Arrest
In vitro	Sodium citrate monobasic (0-12.5 mM; 24 h) exhibited dose-dependent antiproliferative activity [1]. Sodium citrate monobasic (12.5 mM; 48/72 h) induced apoptosis, cell cycle arrest at G2/M and S phases, increased expression of FAS, BAX, BID, AIF, EndoG, cytochrome C, PARP, GADD153, GRP78, and Caspase-3, -8, -9 expression, while decreasing BCL-2 and BCL-Xl expression [1].
In vivo	Sodium citrate monobasic (120, 240, and 480 mg/kg; intraperitoneal injection) significantly reduced GSH-Px activity in mouse liver, induced elevated MDA (malondialdehyde) levels, and induced apoptosis in mouse hepatocytes in a dose-dependent manner by increasing caspase-3 activity [2].

Solubility Information

Solubility	H2O: 40.00 mg/mL (186.82 mM),Sonication is recommended. DMSO: 1.50 mg/mL (7.01 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.6705 mL	23.3525 mL	46.705 mL
5 mM	0.9341 mL	4.6705 mL	9.341 mL
10 mM	0.467 mL	2.3352 mL	4.6705 mL
50 mM	0.0934 mL	0.467 mL	0.9341 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

Ying TH, et al. Citric acid induces cell-cycle arrest and apoptosis of human immortalized keratinocyte cell line (HaCaT) via caspase- and mitochondrial-dependent signaling pathways. Anticancer Res. 2013;33(10):4411-4420.
Chen X, et al. Study on injury effect of food additive citric acid on liver tissue in mice. Cytotechnology. 2014;66(2): 275-282.