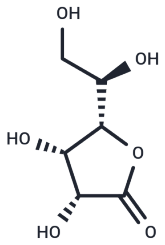
Data Sheet (Cat.No.T4719)

TargetMol

1,4-D-Gulonolactone

Chemical Properties



CAS No. : 6322-07-2

Formula: C6H10O6

Molecular Weight: 178.14

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	1,4-D-Gulonolactone (D-Gulonic acid γ-lactone) (also known as reduced ascorbic acid, RAA) is the substrate of the enzyme L-gulono-1,4-lactone oxidoreductase (EC 1.1.3.8), which catalyzes the last step of the biosynthesis of L-ascorbic acid (vitamin C) in plants and animals. The enzyme L-Gulono-1,4-lactone oxidase is missing in scurvy-prone, vitamin C-deficient animals, such as humans. 1,4-D-Gulonolactone is present in human blood and has been used as one of the markers to compare changes in exercise-induced oxidative stress.
Targets(IC50)	Endogenous Metabolite

Solubility Information

Solubility	DMSO: 45 mg/mL (252.61 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.6136 mL	28.0678 mL	56.1356 mL
5 mM	1.1227 mL	5.6136 mL	11.2271 mL
10 mM	0.5614 mL	2.8068 mL	5.6136 mL
50 mM	0.1123 mL	0.5614 mL	1.1227 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

Wolucka B A , Communi D . Mycobacterium tuberculosis possesses a functional enzyme for the synthesis of vitamin C, L-gulono-1,4-lactone dehydrogenase[J]. Febs Journal, 2006, 273(19):4435-4445.

Steinberg J G , Delliaux, Stéphane, Jammes Y . Reliability of different blood indices to explore the oxidative stress in response to maximal cycling and static exercises.[J]. Clinical Physiology & Functional Imaging, 2010, 26(2):106-112.

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