

6-Phosphogluconic acid trisodium

Chemical Properties

CAS No. : 53411-70-4

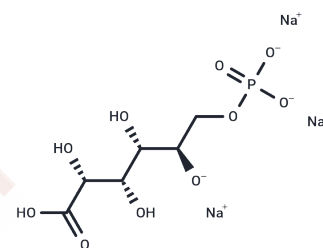
Formula: C₆H₁₀Na₃O₁₀P

Molecular Weight: 342.08

Storage: Keep away from moisture Keep away from direct sunlight

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	6-Phosphogluconic acid trisodium is a highly potent competitive phosphoglucose isomerase (PGI) inhibitor and an endogenous metabolite in the body. Its inhibition constants K_i for 6-phosphoglucose and 6-phosphofructose are 48 μ M and 42 μ M, respectively.
Targets(IC50)	Endogenous Metabolite
In vitro	When 6-Phosphogluconic acid trisodium is used at concentrations of 0.5–2.0 mM with 6-phosphoglucose (0.05–0.5 mM) as the reaction substrate, it completely inhibits the catalytic activity of phosphoglucose isomerase (PGI) [1].

Solubility Information

Solubility	H ₂ O: 100.00 mg/mL (292.33 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	2.9233 mL	14.6165 mL	29.2329 mL
5 mM	0.5847 mL	2.9233 mL	5.8466 mL
10 mM	0.2923 mL	1.4616 mL	2.9233 mL
50 mM	0.0585 mL	0.2923 mL	0.5847 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

Gaitonde MK, et al. Effect of 6-phosphogluconate on phosphoglucose isomerase in rat brain in vitro and in vivo. J Neurochem. 1989 May;52(5):1348-52.

Hitosugi T, et al. Phosphoglycerate mutase 1 coordinates glycolysis and biosynthesis to promote tumor growth. Cancer Cell. 2012 Nov 13;22(5):585-600.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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