

Glutathione ethyl ester

Chemical Properties

CAS No. : 92614-59-0

Formula: C₁₂H₂₁N₃O₆S

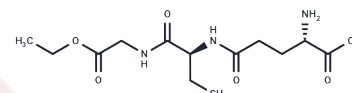
Molecular Weight: 335.38

Keep away from direct sunlight, Keep away from moisture

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	Glutathione ethyl ester is a cell-permeable, modified form of glutathione (GSH) that undergoes rapid hydrolysis by esterases in vivo to restore GSH levels. It inhibits progression in the early stages of diabetes-associated cataract formation and reduces reactive oxygen species (ROS) content, thereby protecting in vitro mature bovine oocytes from oxidative stress.
Targets(IC50)	Reactive Oxygen Species,Lipid,ROS
In vitro	Methods: Glutathione ethyl ester (5 mM) was used to treat bovine oocytes, and the morphology of spindles and chromosomes was observed through immunofluorescence staining. Results: Glutathione ethyl ester did not significantly improve the normal morphology of spindles, but it significantly reduced the proportion of oocytes with abnormal microtubule configurations after vitrification/warming. [1]

Solubility Information

Solubility	DMSO: 80 mg/mL (238.54 mM),Sonication is recommended. H2O: 80 mg/mL (238.54 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 5 mg/mL (14.91 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9817 mL	14.9085 mL	29.8169 mL
5 mM	0.5963 mL	2.9817 mL	5.9634 mL
10 mM	0.2982 mL	1.4908 mL	2.9817 mL
50 mM	0.0596 mL	0.2982 mL	0.5963 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

García-Martínez T, et al. Glutathione Ethyl Ester Protects In Vitro-Maturing Bovine Oocytes against Oxidative Stress Induced by Subsequent Vitrification/Warming. *Int J Mol Sci.* 2020 Oct 13;21(20):7547.

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