

## Glutathione ethyl ester acetate

## Chemical Properties

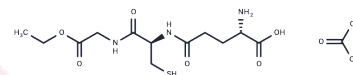
CAS No. :

Formula: C<sub>14</sub>H<sub>25</sub>N<sub>3</sub>O<sub>8</sub>S

Molecular Weight: 395.43

Storage: 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	Glutathione ethyl ester acetate is the salt form of Glutathione ethyl ester. Glutathione ethyl ester is an antioxidant and cell-permeable Glutathione (GSH) donor that provides high efficiency of GSH to oocytes and is capable of restoring glutamate-induced oxidative stress and TGase up-regulation and prevent ethanol-induced oxidative stress and apoptosis in cells.
Targets(IC50)	ROS
In vitro	<b>Methods:</b> Glutathione ethyl ester acetate (5 mM) was used to treat aged dairy cow oocytes. The effects of cell-permeable glutathione (GSH) donor Glutathione ethyl ester acetate (GSH-OEt) on the developmental capacity of aged dairy cow oocytes were studied. <b>Results:</b> Glutathione ethyl ester acetate can reduce the content of intracellular reactive oxygen species (ROS), promote meiotic progression, increase the proportion of oocytes with mature cytoplasm (cortical granules evenly dispersed), and improve the normal fertilization rate, blastocyst development rate and diploid blastocyst ratio. [1]
In vivo	<b>Methods:</b> Glutathione ethyl ester acetate (6 mmol/kg, intraperitoneal injection) was used to treat mice starved for 24 hours, and their internal metabolism was analyzed. <b>Results:</b> Glutathione ethyl ester acetate can improve the swimming endurance of mice and reduce exercise-induced muscle lipid peroxidation, but it has certain metabolic and oxidative stress side effects on the kidneys. [2]

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.5289 mL	12.6445 mL	25.2889 mL
5 mM	0.5058 mL	2.5289 mL	5.0578 mL
10 mM	0.2529 mL	1.2644 mL	2.5289 mL
50 mM	0.0506 mL	0.2529 mL	0.5058 mL

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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

F Magata, et al. Glutathione ethyl ester improved the age-induced decline in the developmental competence of bovine oocytes. *Theriogenology*. 2021 Jun;167:37-43.

Leeuwenburgh C, et al. Glutathione and glutathione ethyl ester supplementation of mice alter glutathione homeostasis during exercise. *J Nutr*. 1998 Dec;128(12):2420-6.

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