

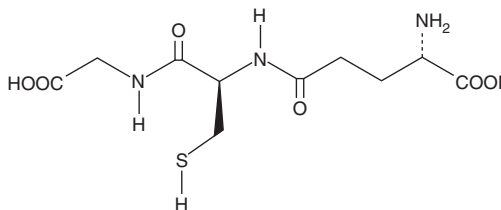
PRODUCT INFORMATION



L-Glutathione, reduced

Item No. 10007461

CAS Registry No.: 70-18-8
Formal Name: L-γ-glutamyl-L-cysteinyl-glycine
Synonym: GSH
MF: $C_{10}H_{17}N_3O_6S$
FW: 307.3
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

L-Glutathione, reduced (GSH) is supplied as a crystalline solid. A stock solution may be made by dissolving the GSH in the solvent of choice. GSH is soluble in water at a concentration of approximately 20 mg/ml.

For biological experiments, we suggest that organic solvent-free aqueous solutions of GSH be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of GSH ethyl ester in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

GSH is a tripeptide (γ-glutamylcysteinylglycine) widely distributed in both plants and animals.^{1,2} GSH serves as a nucleophilic co-substrate to glutathione transferases in the detoxification of xenobiotics and is an essential electron donor to glutathione peroxidases in the reduction of hydroperoxides.^{2,3} GSH is also involved in amino acid transport and maintenance of protein sulfhydryl reduction status.^{4,5} The concentration of GSH ranges from a few micromolar in plasma to several millimolar in tissues such as liver.

References

1. Foyer, C.H., Lelandais, M., and Kunert, K.J. Photooxidative stress in plants. *Physiol. Plant.* **92**, 696-717 (1994).
2. Glutathione: Metabolism and function, Arias, I.M. and Jakoby, W.B., editors, Raven Press, New York, (1976).
3. Baillie, T.A. and Slatter, J.G. Glutathione: A vehicle for the transport of chemically reactive metabolites *in vivo*. *Acc. Chem. Res.* **24**, 264-270 (1991).
4. Inoue, M., Saito, Y., Hirata, E., *et al.* Regulation of redox states of plasma proteins by metabolism and transport of glutathione and related compounds. *Journal of Protein Chemistry* **6**, 207-225 (1987).
5. Inoue, M. Interorgan metabolism and membrane transport of glutathione and related compounds, Chapter 6, *in Renal biochemistry*. Kinne, R.K.H., editor, Elsevier Science Publishers B.V., London, 225-269 (1985).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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