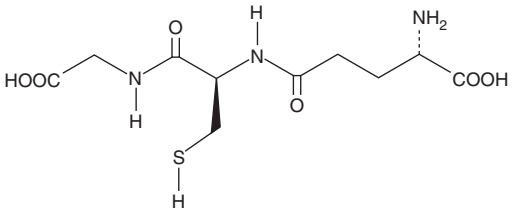
PRODUCT INFORMATION

L-Glutathione, reduced

Item No. 10007461

CAS Registry No.:	70-18-8
Formal Name:	L-γ-glutamyl-L-cysteinyl-glycine
Synonym:	GSH
MF:	$C_{10}H_{17}N_3O6_S$
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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM