

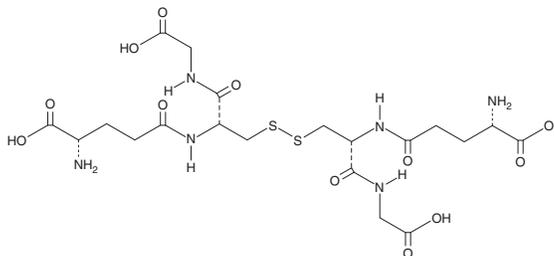
PRODUCT INFORMATION



L-Glutathione, oxidized

Item No. 35825

CAS Registry No.: 27025-41-8
Formal Name: L-γ-glutamyl-L-cysteinyl-glycine, bimol. (2→2')-disulfide
Synonyms: Glutathione Disulfide, GSSG
MF: C₂₀H₃₂N₆O₁₂S₂
FW: 612.6
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

L-Glutathione, oxidized (GSSG) is supplied as a solid. Aqueous solutions of GSSG can be prepared by directly dissolving the solid in aqueous buffers. The solubility of GSSG in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

GSSG is an oxidized form of the antioxidant L-glutathione (GSH; Item No. 10007461).¹ It is produced upon reduction of hydroperoxide by glutathione peroxidases (GPXs) and can be reduced back to GSH through the NADPH-dependent enzyme glutathionereductase (GR).^{2,3} The reduced glutathione-to-oxidized glutathione (GSH/GSSG) ratio has been used as an indicator of oxidative stress.²

References

1. Pompella, A., Visvikis, A., Paolicchi, A., *et al.* The changing faces of glutathione, a cellular protagonist. *Biochem. Pharmacol.* **66(8)**, 1499-1503 (2003).
2. Johnson, F.D., Ferrarone, J., Liu, A., *et al.* Characterization of a small molecule inhibitor of disulfide reductases that induces oxidative stress and lethality in lung cancer cells. *Cell Rep.* **38(6)**, 110343 (2022).
3. Imai, H. and Nakagawa, Y. Biological significance of phospholipid hydroperoxide glutathione peroxidase (PHGPx, GPx4) in mammalian cells. *Free Radic. Biol. Med.* **34(2)**, 145-169 (2003).

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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