

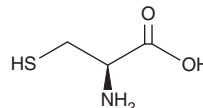
PRODUCT INFORMATION



L-Cysteine

Item No. 33309

CAS Registry No.: 52-90-4
Synonyms: L-Cys, L-(+)-Cysteine, (R)-Cysteine, NSC 8746
MF: C₃H₇NO₂S
FW: 121.2
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-Cysteine is supplied as a solid. Aqueous solutions of L-cysteine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of L-cysteine in PBS (pH 7.2) and water is approximately 20 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

L-Cysteine is a conditionally essential amino acid.^{1,2} It is produced from L-methionine through the transsulfuration pathway.¹ L-Cysteine can also be derived from dietary sources and protein turnover. It is a precursor in the biosynthesis of the intracellular antioxidant glutathione (GSH; Item No. 10007461). L-Cysteine supplementation increases GSH levels as well as decreases oxidative stress and pro-inflammatory cytokine levels in various rat and porcine disease models, including type 2 diabetes, aging, and inflammatory bowel disease (IBD). It is also an excitotoxin, inducing neuronal damage by overactivation of NMDA receptors.²

References

1. Yin, J., Ren, W., Yang, G., *et al.* L-Cysteine metabolism and its nutritional implications. *Mol. Nutr. Food Res.* **60(1)**, 134-146 (2016).
2. Janáky, R., Varga, V., Hermann, A., *et al.* Mechanisms of L-cysteine neurotoxicity. *Neurochem. Res.* **25(9-10)**, 1397-1405 (2000).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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