

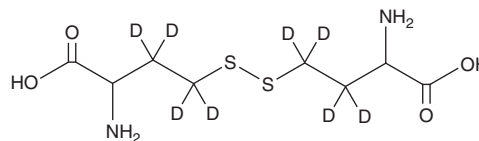
PRODUCT INFORMATION



DL-Homocystine-d₈

Item No. 43799

CAS Registry No.: 108641-82-3
Formal Name: 4,4'-dithiobis[2-amino-butanoic-3,3,4,4-d₄ acid]
MF: C₈H₈D₈N₂O₄S₂
FW: 276.4
Chemical Purity: ≥98% (DL-Homocystine)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
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

DL-Homocystine-d₈ is intended for use as an internal standard for the quantification of DL-homocystine (Item No. 36223) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

DL-Homocystine-d₈ is supplied as a solid. A stock solution may be made by dissolving the DL-homocystine-d₈ in the solvent of choice, which should be purged with an inert gas. DL-Homocystine-d₈ is slightly soluble (0.1-1 mg/ml) in acetonitrile and hydrochloric acid.

Description

DL-Homocystine is an oxidized dimeric form of homocysteine (Item No. 30285). It inhibits CDNB-induced L-cystine (Item No. 31727) transport into isolated human erythrocytes by 75% when used at a concentration of 2.5 mM.¹ DL-Homocystine increases the number of circulating endothelial cells and permeability of the pulmonary microcirculation and decreases the number of circulating platelets, as well as activates venostatic thrombosis induced by bowel loop ligation in a rat model of homocystinemia, an inborn error of metabolism characterized by a deficiency in cystathionine β-synthase (CBS) that is associated with thrombosis and atherosclerosis.²

References

1. Ohtsuka, Y., Kondo, T., and Kawakami, Y. Oxidative stresses induced the cystine transport activity in human erythrocytes. *Biochem. Biophys. Res. Commun.* **155**(1), 160-166 (1988).
2. Hladovec, J. Experimental homocystinemia, endothelial lesions and thrombosis. *Blood Vessels* **16**(4), 202-205 (1979).

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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