

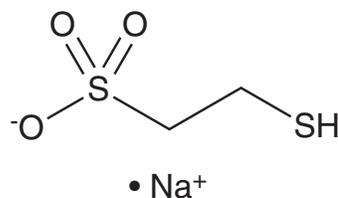
PRODUCT INFORMATION



Mesna

Item No. 21238

CAS Registry No.: 19767-45-4
Formal Name: 2-mercapto-ethanesulfonic acid, monosodium salt
Synonyms: Coenzyme M, HS-CoM,
2-Mercaptoethanesulfonate, UCB 3983
MF: C₂H₅O₃S₂ • Na
FW: 164.2
Purity: ≥95%
Supplied as: A crystalline 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

Mesna is supplied as a crystalline solid. A stock solution may be made by dissolving the mesna in the solvent of choice. Mesna is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of mesna in these solvents is approximately 20 and 25 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of mesna can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of mesna in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Mesna is a cofactor found in methanogenic archaea that is essential for the final step of methanogenesis and is also important for alkene metabolism.¹ It functions as an antioxidant and cytoprotective agent and is widely used for protection from toxicity of chemotherapeutic agents.² In the bladder, mesna conjugates to urotoxic metabolites such as acrolein through a Michael addition, converting the toxic compound into inactive metabolites that can be excreted in the urine.²

References

1. Krishnakumar, A.M., Sliwa, D., Endrizzi, J.A., *et al.* Getting a handle on the role of coenzyme M in alkene metabolism. *Microbiol. Mol. Biol. Rev.* **72(3)**, 445-456 (2008).
2. Monach, P.A., Arnold, L.M. and Merkel, P.A. Incidence and prevention of bladder toxicity from cyclophosphamide in the treatment of rheumatic diseases: A data-driven review. *Arthritis Rheum.* **62(1)**, 9-21 (2010).

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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