

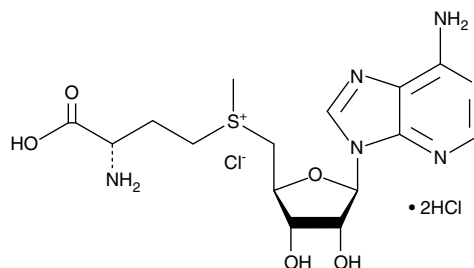
Product Information



S-(5'-Adenosyl)-L-methionine chloride (hydrochloride)

Item No. 13956

CAS Registry No.: 86867-01-8
Formal Name: 5'-[[[(3S)-3-amino-3-carboxypropyl]methylsulfonio]-5'-deoxy-adenosine, dihydrochloride
Synonyms: AdoMet, SAM
MF: C₁₅H₂₃ClN₆O₅S • 2HCl
FW: 507.8
Purity: ≥95%
Stability: ≥1 year at -80°C
Supplied as: A lyophilized solid



Laboratory Procedures

For long term storage, we suggest that S-(5'-adenosyl)-L-methionine chloride (SAM) (hydrochloride) be stored as supplied at -80°C. It should be stable for at least one year.

SAM (hydrochloride) is supplied as a lyophilized solid. A stock solution may be made by dissolving the SAM (hydrochloride) in the solvent of choice. SAM (hydrochloride) is soluble in methanol and water. The solubility of SAM (hydrochloride) in these solvents is approximately 1 and 5 mg/ml, respectively. We do not recommend storing the aqueous solution for more than one day as SAM readily decomposes into S-adenosylhomocysteine and 5'-methylthioadenosine. If longer storage is required, we recommend preparing solutions of SAM in 20 mM HCl to minimize decomposition.

SAM is a ubiquitous methyl donor involved in a wide variety of biological reactions, including those mediated by DNA and protein methyltransferases.¹⁻³ The transfer of a methyl group from SAM to an acceptor produces S-adenosyl-L-homocysteine (Item No. 13603).² SAM is also metabolized by SAM decarboxylase to give decarboxylated SAM, which is involved in the polyamine pathway that generates spermine.² Cayman Chemical's SAM has been extensively purified to minimize contamination with S-adenosylhomocysteine and 5'-methylthioadenosine. This high purity makes Cayman's SAM a superior substrate for use with SAM-dependent methyltransferase enzymes. S-Adenosylhomocysteine is a known inhibitor of most SAM-dependent methyltransferases and is commonly found in other commercially available SAM. 5'-Methylthioadenosine may act as a substrate in some enzyme-coupled assay formats, resulting in increased background signals.

References

1. Chiang, P.K. Biological effects of inhibitors of S-adenosylhomocysteine hydrolase. *Pharmacol. Ther.* **77**(2), 115-34 (1998).
2. Loenen, W.A.M. S-Adenosylmethionine: Jack of all trades and master of everything? *Biochem. Soc. Trans.* **34**(2), 330-333 (2006).
3. Chiang, P.K., Gordon, R.K., Tal, J., *et al.* S-adenosylmethionine and methylation. *FASEB J.* **10**, 471-480 (1996).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/13956

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. 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

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com