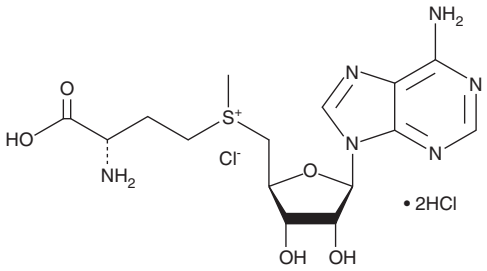
PRODUCT INFORMATION

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, SAMe
MF: $C_{15}H_{23}ClN_6O_5S \bullet 2HCl$
FW: 507.8
Purity: ≥95%
Supplied as: A lyophilized powder
Storage: -80°C
Stability: ≥1 year



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

Laboratory Procedures

S-(5'-Adenosyl)-L-methionine chloride (SAM) (hydrochloride) is supplied as a lyophilized powder. A stock solution may be made by dissolving the SAM (hydrochloride) in the solvent of choice, which should be purged with an inert gas. SAM (hydrochloride) is soluble in organic solvents such as methanol. It is also soluble in water. The solubility of SAM (hydrochloride) in methanol and water is approximately 1 and 5 mg/ml, respectively. We do not recommend storing the aqueous solution for more than one day.

Description

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 decarboxlase to give decarboxylated SAM, which is involved in the polyamine pathway that generates spermine.[2] Cayman Chemical's SAM has been purified to remove all S-adenosylhomocysteine, a known inhibitor of most SAM-dependent methyltransferases which is commonly found in other commercially available SAM. In addition, Cayman's SAM contains no S-methylthioadenosine, a common impurity which may act as a substrate in some assay formats, resulting in high background.

References

1. Chiang, P.K. Biological effects of inhibitors of S-adenosylhomocysteine hydrolase. *Pharmacol. Ther.* **77(2)**, 115-134 (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(4)**, 471-480 (1996).

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