

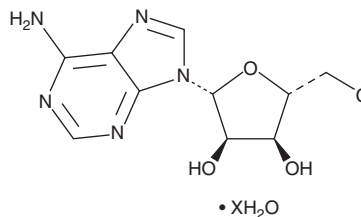
PRODUCT INFORMATION



5'-chloro-5'-Deoxyadenosine (hydrate)

Item No. 21012

CAS Registry No.: 698999-09-6
Formal Name: 5'-chloro-5'-deoxy-adenosine, hydrate
Synonyms: 5'-CIDA, 5'-Deoxy-5'-chloroadenosine
MF: C₁₀H₁₂ClN₅O₃ • XH₂O
FW: 285.7
Purity: ≥98%
UV/Vis.: λ_{max}: 258 nm
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

5'-chloro-5'-Deoxyadenosine (hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the 5'-chloro-5'-deoxyadenosine (hydrate) in the solvent of choice, which should be purged with an inert gas. 5'-chloro-5'-Deoxyadenosine (hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 5'-chloro-5'-deoxyadenosine (hydrate) in these solvents is approximately 0.5, 25, and 30 mg/ml, respectively.

5'-chloro-5'-Deoxyadenosine (hydrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 5'-chloro-5'-deoxyadenosine (hydrate) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 5'-chloro-5'-Deoxyadenosine (hydrate) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

5'-chloro-5'-Deoxyadenosine (hydrate) is a nucleoside analog used as a substrate in polyketide biosynthesis. S-(5'-adenosyl)-L-methionine (SAM; Item No. 13956) can be converted to 5'-chloro-5'-deoxyadenosine in a reaction catalyzed by a SAM-dependent chlorinase.¹ Through a 7-step route, 5'-chloro-5'-deoxyadenosine can be converted to chloroethylmalonyl-CoA, which has been shown to be involved in the biosynthesis of the anticancer agent salinosporamide A (Item No. 10007311) in the marine bacterium *S. tropica*.¹

Reference

1. Eustáquio, A.S., McGlinchey, R.P., Liu, Y., *et al.* Biosynthesis of the salinosporamide A polyketide synthase substrate chloroethylmalonyl-coenzyme A from S-adenosyl-L-methionine. *Proc. Natl. Acad. Sci. USA* **106**(30), 12295-12300 (2009).

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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