

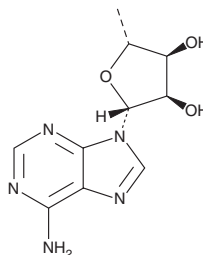
# PRODUCT INFORMATION



## 5'-Deoxyadenosine

Item No. 29619

CAS Registry No.: 4754-39-6  
Formal Name: 5'-deoxy-adenosine  
MF:  $C_{10}H_{13}N_5O_3$   
FW: 251.2  
Purity:  $\geq 95\%$   
UV/Vis.:  $\lambda_{\text{max}}$ : 259 nm  
Supplied as: A crystalline solid  
Storage:  $-20^{\circ}\text{C}$   
Stability:  $\geq 4$  years



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

### Laboratory Procedures

5'-Deoxyadenosine is supplied as a crystalline solid. A stock solution may be made by dissolving the 5'-deoxyadenosine in the solvent of choice, which should be purged with an inert gas. 5'-Deoxyadenosine is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of 5'-deoxyadenosine in these solvents is approximately 15 and 30 mg/ml, respectively.

5'-Deoxyadenosine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 5'-deoxyadenosine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 5'-Deoxyadenosine has a solubility of approximately 0.2 mg/ml in a 1:4 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'-Deoxyadenosine is an analog of adenosine (Item No. 21232) and an intermediate in the degradation of S-adenosylmethionine (SAM).<sup>1</sup> It has been used in the study of enzyme kinetics, including those of phosphomethylpyrimidine synthase, glutamate mutase, and 5'-methylthioadenosine phosphorylase.<sup>2-4</sup>

### References

1. Grove, T.L., Lee, K.-H., St. Clair, J., *et al.* In vitro characterization of AtsB, a radical SAM formylglycine-generating enzyme that contains three [4Fe-4S] clusters. *Biochemistry* **47**(28), 7523-7538 (2008).
2. Palmer, L.D. and Downs, D.M. The thiamine biosynthetic enzyme ThiC catalyzes multiple turnovers and is inhibited by S-adenosylmethionine (AdoMet) metabolites. *J. Biol. Chem.* **288**(42), 30693-30699 (2013).
3. Chen, H.P. and Marsh, E.N. Adenosylcobalamin-dependent glutamate mutase: Examination of substrate and coenzyme binding in an engineered fusion protein possessing simplified subunit structure and kinetic properties. *Biochemistry* **36**(48), 14939-14945 (1997).
4. Savarese, T.M., Crabtree, G.W., and Parks, J., R.E. 5'-Methylthioadenosine phosphorylase-I substrate activity of 5'-deoxyadenosine with the enzyme from sarcoma 180 cells. *Biochem. Pharmacol.* **30**(3), 189-199 (1981).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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