

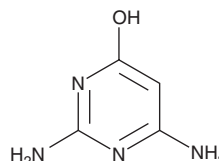
Product Information



2,4-Diamino-6-hydroxypyrimidine

Catalog No. 81260

CAS Registry No.: 56-06-4
Formal Name: 2,4-diamino-6(1H)-pyrimidinone
Synonym: DAHP
MF: C₄H₆N₄O
FW: 126.0
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that 2,4-Diamino-6-hydroxypyrimidine (DAHP) be stored as supplied at -20°C. It should be stable for at least one year.

DAHP is supplied as a crystalline solid. A stock solution may be made by dissolving the DAHP in an organic solvent purged with an inert gas. DAHP is soluble in organic solvents such as DMSO, and dimethyl formamide. The solubility of DAHP in these solvents is approximately 14 mg/ml.

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 DAHP can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of DAHP in PBS, pH 7.2, is approximately 3.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

DAHP is a selective, specific inhibitor of GTP cyclohydrolase I, the rate limiting step for *de novo* pterin synthesis. In HUVEC, the IC₅₀ for inhibition of BH₄ is about 0.3 mM and can be used to effectively block NO production in several cell types.¹⁻³

References

1. Werner-Felmayer, G., Werner, E.R., Fuchs, D., *et al.* Pteridine biosynthesis in human endothelial cells. Impact on nitric oxide-mediated formation of cyclic GMP. *J. Biol. Chem.* **268**, 1842-1846 (1993).
2. Sung, Y.-J., Hotchkiss, J.H., and Diert, R.R. 2,4-Diamino-6-hydroxypyrimidine, an inhibitor of GTP cyclohydrolase I, suppresses nitric oxide production by chicken macrophages. *Int. J. Immunopharmacol.* **16**, 101-108 (1994).
3. Gross, S.S. and Levi, R. Tetrahydrobiopterin synthesis. An absolute requirement for cytokine-induced nitric oxide generation by vascular smooth muscle. *J. Biol. Chem.* **267**, 25722-25729 (1992).

Related Products

L-Sepiapterin - Cat. No. 81650 • tetrahydro-L-Biopterin (dihydrochloride) - Cat. No. 81880 • 7,8-dihydro-L-Biopterin - Cat. No. 81882

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

MATERIAL 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 Material Safety Data Sheet, which has been sent via email to your institution.

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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 of all claims hereunder with respect to said material.

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