2,4-Diamino-6-hydroxypyrimidine
Item No. 81260

CAS Registry No.: 56-06-4
Formal Name: 2,4-diamino-6(1H)-pyrimidinone
Synonym: DAHP
MF: C_4H_6N_4O
FW: 126.1
Purity: ≥98%
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

2,4-Diamino-6-hydroxypyrimidine is supplied as a crystalline solid. A stock solution may be made by dissolving the 2,4-diamino-6-hydroxypyrimidine in the solvent of choice, which should be purged with an inert gas. 2,4-Diamino-6-hydroxypyrimidine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 2,4-diamino-6-hydroxypyrimidine in these solvents is approximately 50 µg/ml, 14.6, and 14.4 mg/ml, respectively.

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 2,4-diamino-6-hydroxypyrimidine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 2,4-diamino-6-hydroxypyrimidine in PBS (pH 7.2) is approximately 3.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2,4-Diamino-6-hydroxypyrimidine (DAHP) is a selective, specific inhibitor of GTP cyclohydrolase I, the rate limiting step for de novo pterin synthesis. In HUVEC cells, the IC_{50} for inhibition of BH4 biosynthesis is about 0.3 mM. DAHP can be used to effectively block NO production in several cell types.1-3

References


2,4-Diamino-6-hydroxypyrimidine

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\text{OH} & \\
\text{N} & \\
\text{N} & \\
\text{NH}_2 & \\
\text{H}_2\text{N} & \\
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