

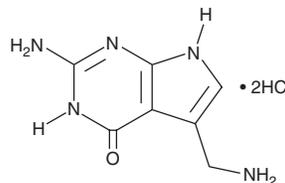
PRODUCT INFORMATION



preQ₁ (hydrochloride)

Item No. 21864

CAS Registry No.: 86694-45-3
Formal Name: 2-amino-5-(aminomethyl)-3,7-dihydro-4H-pyrrolo[2,3-d]pyrimidin-4-one, dihydrochloride
Synonym: Pre-Queuosine 1
MF: C₇H₉N₅O • 2HCl
FW: 252.1
Purity: ≥90%
UV/Vis.: λ_{max}: 217, 254 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

preQ₁ (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the preQ₁ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. preQ₁ (hydrochloride) is soluble in the organic solvent DMSO at a concentration of approximately 10 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 preQ₁ (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of preQ₁ (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

preQ₁ is a precursor in the biosynthesis of queuosine, a bacterial nucleoside incorporated into tRNA by tRNA transglycosylase.¹ preQ₁ binds to an aptamer domain on tRNA that acts as a riboswitch to repress gene expression.²

References

1. Okada, N., Noguchi, S., Kasai, H., *et al.* Novel mechanism of post-transcriptional modification of tRNA. Insertion of bases of Q precursors into tRNA by a specific tRNA transglycosylase reaction. *J. Biol. Chem.* **254**(8), 3067-3073 (1979).
2. Wu, M.-C., Lowe, P.T., Robinson, C.J., *et al.* Rational re-engineering of a transcriptional silencing PreQ1 riboswitch. *J. Am. Chem. Soc.* **137**(28), 9012-9021 (2015).

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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