

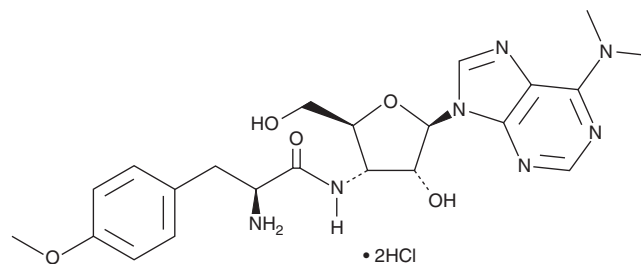
PRODUCT INFORMATION



Puromycin (hydrochloride)

Item No. 13884

CAS Registry No.:	58-58-2
Formal Name:	3'-[[2S-amino-3-(4-methoxyphenyl)-1-oxopropyl]amino]-3'-deoxy-N,N-dimethyl-adenosine, dihydrochloride
Synonyms:	CL 13,900, CL 16,536, NSC 3055, PDH
MF:	C ₂₂ H ₂₉ N ₇ O ₅ • 2HCl
FW:	544.4
Purity:	≥98%
UV/Vis.:	λ _{max} : 217, 276 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

Puromycin (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the puromycin (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Puromycin (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of puromycin (hydrochloride) in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

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 puromycin (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. Puromycin (hydrochloride) is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Puromycin is a derivative of the glomerular epithelial cell toxin puromycin aminonucleoside (Item No. 15509) and an inhibitor of protein synthesis that has been found in *S. alboniger*.¹⁻⁴ Puromycin is structurally similar to the amino acid-bearing end of tRNA, which allows it to enter the ribosome during protein synthesis, bind to the nascent polypeptide chain, and halt chain elongation.²⁻⁴ It inhibits protein synthesis by 99% *in vitro*.⁵ Puromycin is also an inhibitor of puromycin-sensitive aminopeptidase (PSA) and aminopeptidase N (APN; IC₅₀s = 9.7 and 41 μM, respectively). It reduces viability of HL-60 human promyelocytic leukemia and MOLT-4 human acute lymphoblastic leukemia cells (EC₅₀s = 0.055 and 0.17 μM, respectively). Puromycin is active against the chloroquine-sensitive and -resistant *P. falciparum* strains T9-96 and K1 (IC₅₀s = 0.024 and 0.023 μM, respectively).⁶ Puromycin has been used as a selective marker in cell culture systems and has been chemically modified for use in labeling or imaging newly synthesized proteins.⁷

References

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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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