bio-techne
TOCRIS

Print Date: Jan 23rd 2024

Certificate of Analysis

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Product Name: **Puromycin dihydrochloride** **Catalog No.: 4089** **Batch No.: 12**

CAS Number: 58-58-2 EC Number: 200-387-8

IUPAC Name: 3'-[α-Amino-*p*-methoxyhydrocinnamamido]-3'-deoxy-*N*,*N*-dimethyladenosine dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{22}H_{29}N_7O_5.2HCl.4.75H_2O$

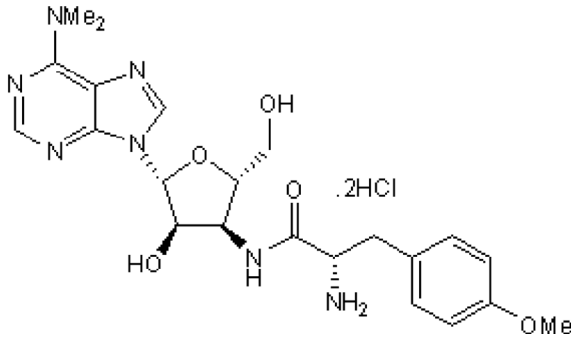
Batch Molecular Weight: 630.03

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.3% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	41.94	6.48	15.56	11.25
Found	41.61	6.18	15.09	11.55

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IUPAC Name: 3'-[α-Amino-*p*-methoxyhydrocinnamamido]-3'-deoxy-*N*,*N*-dimethyladenosine dihydrochloride

Description:

Puromycin dihydrochloride is a protein synthesis inhibitor; leads to the premature release of polypeptide chains as polypeptidyl purine derivatives. Analog of the 3' end of aminoacyl-tRNA. Aminonucleoside antibiotic. Inhibits translation in both in vitro and in vivo systems. Also inhibits the transport of proteins into the mitochondria in vitro.

Physical and Chemical Properties:

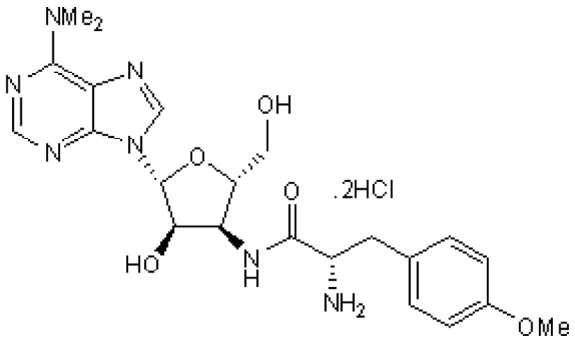
Batch Molecular Formula: $C_{22}H_{29}N_7O_5.2HCl.4.75H_2O$

Batch Molecular Weight: 630.03

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 100 mM
DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Price and Verner (1993) Puromycin inhibits protein import into mitochondria by interfering with an intramitochondrial ATP-dependent reaction. Biochim.Biophys.Acta. ***1150*** 89. PMID: 8334141.

Azzam and Algranati (1973) Mechanism of puromycin action: fate of ribosomes after release of nascent polypeptide chains from polysomes. Proc.Nat.Acad.Sci. ***70*** 3866. PMID: 4590173.