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## DATASHEET

### Puromycin dihydrochloride

#### Product overview

<b>Name</b>	Puromycin dihydrochloride
<b>Cat No</b>	HB4041
<b>Applications</b>	Cell Culture, Selection Agent
<b>Purity</b>	>98%
<b>Description</b>	Protein synthesis inhibitor. Cell culture selection antibiotic.

#### Biological Data

<b>Biological description</b>	<p>Aminonucleoside antibiotic which disrupts peptide transfer on ribosomes on both prokaryotic and eukaryotic ribosomes to cause premature chain termination during translation.</p> <p>It inhibits protein transport of into the mitochondria and also induces apoptosis and shows antineoplastic and antibacterial activity.</p> <p>It is widely used as a selection antibiotic in cell culture. Puromycin allows the selection of cells that contain the puromycin N-acetyl-transferase gene (PAC) resistance gene.</p>
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#### Solubility & Handling

<b>Storage instructions</b>	-20 °C
<b>Solubility overview</b>	Soluble in DMSO (100 mM) and water (100 mM)
<b>Handling</b>	This compound is light sensitive; exposure to light may affect compound performance. We therefore recommend storing the solid material and any solutions in the dark and protecting from light.
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

#### Chemical Data

<b>Chemical name</b>	3'-[ $\alpha$ -Amino-p-methoxyhydrocinnamamido]-3'-deoxy-N,N-dimethyladenosine dihydrochloride
<b>Molecular Weight</b>	544.43
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>22</sub> H <sub>29</sub> N <sub>7</sub> O <sub>5</sub> ·2HCl
<b>CAS Number</b>	58-58-2
<b>PubChem identifier</b>	443311
<b>SMILES</b>	<chem>CN(C)C1=NC=NC2=C1N=CN2[C@H]3[C@@H]([C@@H]([C@H](O3)CO)NC(=O)[C@H](CC4=CC=C(C=C4)OC)N)O.Cl.Cl</chem>
<b>InChiKey</b>	RXWNC PJZOCPEPQ-VJWOANPKSA-N
<b>MDL number</b>	MFCD00012691
<b>Appearance</b>	White to off-white

#### References

[Puromycin inhibits protein import into mitochondria by interfering with an intramitochondrial ATP-dependent reaction.](#)

Price and Verner (1993) Biochim Biophys Acta. 1150(1)

**PubMedID** [8334141](#)

**Complexes between nascent polypeptides and their molecular chaperones in the cytosol of mammalian cells.**

Eggers et al (1997) Mol Biol Cell 8(8)

**PubMedID** [9285825](#)

**Dipeptidyl arylamidase II of the pituitary. Properties of lysylalanyl-beta-naphthylamide hydrolysis: inhibition by cations, distribution in tissues, and subcellular localization.**

McDonald et al (1968) J Biol Chem 243(8)

**PubMedID** [5646493](#)

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