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DATASHEET

Puromycin dihydrochloride

Product overview

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

Biological Data

Biological description	<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

Storage instructions	-20°C
Solubility overview	Soluble in DMSO (100 mM) and water (100 mM)
Handling	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.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	3'-[α-Amino-p-methoxyhydrocinnaamido]-3'-deoxy-N,N-dimethyladenosine dihydrochloride
Molecular Weight	544.43
Chemical structure	
Molecular Formula	C ₂₂ H ₂₉ N ₇ O ₅ ·2HCl
CAS Number	58-58-2
PubChem identifier	443311
SMILES	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
InChiKey	RXWNC PJZOCPEPQ-VJWOANPKSA-N
MDL number	MFCD00012691
Appearance	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](#)
