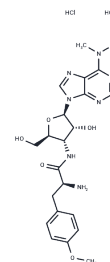


Puromycin dihydrochloride

Chemical Properties

CAS No. :	58-58-2
Formula:	C ₂₂ H ₃₁ Cl ₂ N ₇ O ₅
Molecular Weight:	544.44
Storage:	Store under nitrogen, Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Puromycin dihydrochloride (CL13900 dihydrochloride) is a cinnamamide adenosine antibiotic and an inhibitor of protein synthesis. Puromycin dihydrochloride inhibits protein synthesis by binding to RNA and has antitumor and antitrypanosomal activity.
Targets(IC50)	ribosome, Antibacterial, Antibiotic, Parasite, DNA/RNA Synthesis
In vitro	<p>METHODS: Human hepatocellular carcinoma cells, HepG2, and primary rat hepatocytes, PRH, were treated with Puromycin dihydrochloride (0-300 μmol/L) for 72 h, and cell growth inhibition was detected by MTT.</p> <p>RESULTS: Puromycin dihydrochloride dose-dependently inhibited the growth of HepG2 and PRH cells, with IC₅₀s of 1600 μmol/L and 2000 nmol/L, respectively. [1]</p> <p>METHODS: Human breast cancer cells MDA-MB-231 and MDA-MB-436 were transfected with shRNAs-Puro lentivirus, and after 24 h, the transfected cells were cultured in new medium containing Puromycin dihydrochloride (1 μg/ml) for about 12 days, and then the cells were screened for the success of transfection.</p> <p>RESULTS: Puromycin dihydrochloride screened the lentivirally transfected cells successfully. [2]</p> <p>METHODS: Cells transfected with lentivirus were cultured in medium supplemented with Puromycin dihydrochloride (2 μg/mL).</p> <p>RESULTS: Puromycin dihydrochloride screened and maintained lentivirally successfully transfected cells. [3]</p>
In vivo	Puromycin is utilized to select recombinant cells from non-cultured cells. It serves as a tool for studying protein synthesis in many systems.

Solubility Information

Solubility	H ₂ O: 92 mg/mL (168.98 mM), Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 255 mg/mL (468.37 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (9.18 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.</i>

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In vivo Formulation	<i>Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8367 mL	9.1837 mL	18.3675 mL
5 mM	0.3673 mL	1.8367 mL	3.6735 mL
10 mM	0.1837 mL	0.9184 mL	1.8367 mL
50 mM	0.0367 mL	0.1837 mL	0.3673 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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