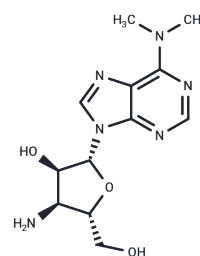


Puromycin aminonucleoside

Chemical Properties

CAS No. :	58-60-6
Formula:	C ₁₂ H ₁₈ N ₆ O ₃
Molecular Weight:	294.31
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Puromycin aminonucleoside (NSC-3056) increases podocyte permeability by modulating ZO-1 in an oxidative stress-dependent manner.
Targets(IC50)	Apoptosis,Proteasome,Aminopeptidase,Antibacterial,Antibiotic
In vitro	Puromycin aminonucleoside -induced podocyte apoptosis is p53 dependent. Puromycin aminonucleoside causes podocyte apoptosis in a time-dependent manner. The IC50 values for PMAT-expressing and vector-transfected cells are 48.9 and 122.1 μ M, respectively, suggesting expression of PMAT-enhanced cell sensitivity to Puromycin aminonucleoside. Puromycin aminonucleoside uptake in PMAT-expressing cells is fourfold higher at pH 6.6 than that at pH 7.4. Puromycin aminonucleoside (30 μ g/mL) markedly enhances p53 protein levels in podocytes. Puromycin aminonucleoside (250 μ M) is toxic to both PMAT-expressing and vector-transfected cells [2][4].
In vivo	Rats administered Puromycin aminonucleoside (100 mg/kg, s.c.) exhibited reduced weight gain and elevated serum creatinine levels compared to controls. The podocyte count per glomerulus in control rats stood at 95.5 $\pm$ 17.6, dropping to 90.7 by Day 4 in rats with Puromycin aminonucleoside (8 mg/100 g, i.v.)-induced nephrosis. Furthermore, nephrin levels per glomerulus in controls were 1.02 $\pm$ 0.11 fmol, which decreased significantly in nephrosis rats to 0.46 $\pm$ 0.06 fmol and 0.35 $\pm$ 0.04 fmol on Days 4 and 7, respectively. This reduction in nephrin per podocyte was closely linked to proteinuria development in rats affected by Puromycin aminonucleoside nephrosis [5][6].

Solubility Information

Solubility	H ₂ O: 33.33 mg/mL (113.25 mM),Sonication is recommended. DMSO: 31 mg/mL(105.33 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3978 mL	16.9889 mL	33.9778 mL
5 mM	0.6796 mL	3.3978 mL	6.7956 mL
10 mM	0.3398 mL	1.6989 mL	3.3978 mL
50 mM	0.068 mL	0.3398 mL	0.6796 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.

Reference

Lacalle RA, et al. Cloning of the complete biosynthetic gene cluster for an aminonucleoside antibiotic, puromycin, and its regulated expression in heterologous hosts. EMBO J. 1992 Feb;11(2):785-92.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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