

Puromycin aminonucleoside

Catalog No: tcsc1551



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Size: 500mg

Size: 1g



Specifications

CAS No:

58-60-6

Formula:

$C_{12}H_{18}N_6O_3$

Pathway:

Apoptosis

Target:

MDM-2/p53

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 32 mg/mL (108.73 mM); H₂O : 33.33 mg/mL (113.25 mM; Need ultrasonic)

Alternative Names:

NSC 3056

Observed Molecular Weight:

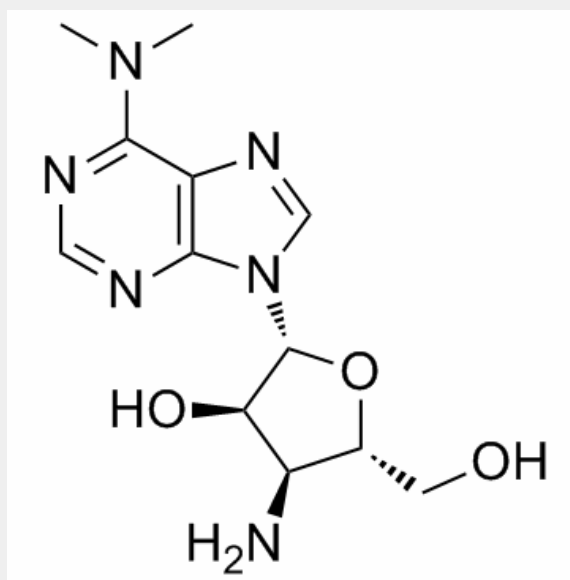
294.31

Product Description

Puromycin aminonucleoside (NSC 3056) is the aminonucleoside portion of the antibiotic puromycin, and a puromycin analog which does not inhibit protein synthesis or induce apoptosis.

In Vitro: Puromycin aminonucleoside (NSC 3056) (30 µg/mL) markedly increases p53 protein levels in podocytes. Puromycin aminonucleoside (NSC 3056)-induced podocyte apoptosis is p53 dependent and supports the notion that dexamethasone exerts an antiapoptotic effect on cells that are exposed to Puromycin aminonucleoside (NSC 3056) through the downregulation of p53. Puromycin aminonucleoside (NSC 3056) induces podocyte apoptosis in a time-dependent manner^[1]. The IC₅₀ values for PMAT-expressing and vector-transfected cells are 48.9 and 122.1 µM, respectively, suggesting expression of PMAT-enhanced cell sensitivity to Puromycin aminonucleoside. Puromycin aminonucleoside (NSC 3056) (250 µM) is toxic to both PMAT-expressing and vector-transfected cells. Puromycin aminonucleoside (NSC 3056) uptake in PMAT-expressing cells is fourfold higher at pH 6.6 than that at pH 7.4^[2].

In Vivo: The number of podocytes per glomerulus is 95.5±17.6 in the control rats, 90.7 on Day 4 in Puromycin aminonucleoside (NSC 3056) (8 mg/100 g, i.v.)-treated nephrosis rats. The amount of nephrin per glomerulus in control rats is 1.02±0.11 fmol and those in Puromycin aminonucleoside (NSC 3056) nephrosis rats are reduced to 0.46±0.06 fmol and 0.35±0.04 fmol on Day 4 and Day 7. The nephrin amount per podocyte is significantly decreased association with the development of proteinuria in Puromycin aminonucleoside (NSC 3056) nephrosis rats^[3]. Rats given Puromycin aminonucleoside (NSC 3056) (100 mg/kg, s.c.) gain less weight and their serum creatinine levels are higher than the control rats^[4].



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