



## Product Information

Product ID P8167

CAS No. 58-60-6

### Chemical Name

Synonym Stylomycin aminonucleoside

Formula  $C_{12}H_{18}N_6O_3$

Formula Wt. 294.31

Melting Point 215-216°C

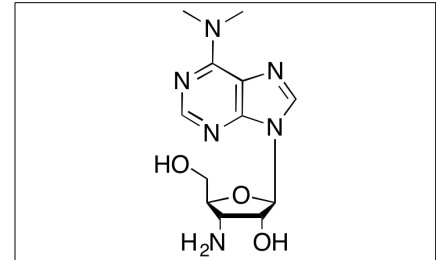
Purity ≥98%

Solubility DMSO: 50mg/ml  
Water: 10mg/ml

Store Temp 4°C

Ship Temp Ambient

**Description** Puromycin is an aminonucleoside antibiotic compound originally produced by *Streptomyces alboniger*. Puromycin displays antibacterial activity through inhibition of ribosomal protein translation; it resembles the 3' end of tRNA and is incorporated into growing protein chains through the ribosomal A site, inducing premature chain termination. Puromycin also induces DNA damage mediated by ROS and oxidative stress in animal models. In vitro, puromycin inhibits insulin-stimulated glycolysis by inhibiting insulin activation of phosphofructokinase 2. Puromycin also inhibits dipeptidyl peptidase II (DPP2; serine peptidase) and metallopeptidase. Additionally, this compound induces ERK activation-dependent apoptosis and mTOR-dependent autophagy in podocytes, leading to proteinuria and glomerular damage.



## Pricing and Availability

*Bulk quantities available upon request*

Product ID	Size	List Price
P8167	5 mg	\$82.70
P8167	25 mg	\$204.00
P8167	100 mg	\$600.90

**References** Kang YL, Saleem MA, Chan KW, et al. The cytoprotective role of autophagy in puromycin aminonucleoside treated human podocytes. *Biochem Biophys Res Commun.* 2014 Jan 10;443(2):628-34. PMID: 24333414.

Liu S, Ding J, Fan Q, et al. The activation of extracellular signal-regulated kinase is responsible for podocyte injury. *Mol Biol Rep.* 2010 Jun;37(5):2477-84. PMID: 19728154.

Marshall CB, Pippin JW, Krofft RD, et al. Puromycin aminonucleoside induces oxidant-dependent DNA damage in podocytes in vitro and in vivo. *Kidney Int.* 2006 Dec;70(11):1962-73. PMID: 17035936.

Probst I, Quentmeier A, Schweickhardt C, et al. Stimulation by insulin of glycolysis in cultured hepatocytes is attenuated by extracellular ATP and puromycin through purine-dependent inhibition of phosphofructokinase 2 activation. *Eur J Biochem.* 1989 Jun 15;182(2):387-93. PMID: 2525468.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.