

## Puromycin Aminonucleoside PRODUCT DATA SHEET

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Product Name:	Puromycin Aminonucleoside
Product Number:	P041
CAS Number:	58-60-6
Molecular Formula:	C <sub>12</sub> H <sub>18</sub> N <sub>6</sub> O <sub>3</sub>
Molecular Weight:	294.31 g/mol
Form:	Powder
Appearance:	White crystalline
Solubility:	Water: Soluble with heat as needed
Source:	Streptomyces Alboniger
Melting Point:	215-216 °C
Storage Conditions:	2-8 °C
Description:	Puromycin Aminonucleoside is the aminonucleoside portion of Puromycin. It is a Puromycin derivative that lacks the methoxyphenylalanyl group on the amine of the sugar ring. The compound is used in animal models of nephrosis and can induce apoptosis. It has antineoplastic Puromycin was isolated from <i>Streptomyces alboniger in the 1950s</i> . Puromycin is routinely used in cell culture as a selective agent in transfection and transformation protocols to select for cells that have been transformed with the <i>pac</i> gene and express puromycin-N-acetyl-transferase. Puromycin Aminonucleoside is soluble in water. We also offer:
	<ul> <li>Puromycin (<u>P097</u>)</li> <li>Puromycin Dihydrochloride (<u>P001</u>)</li> <li>Puromycin DiHCl Solution (10 mg/ml in 20 mM HEPES)(<u>P025-P026</u>)</li> </ul>
Mechanism of Action:	Puromycin Aminonucleoside interferes with protein synthesis, terminating the ribosomal chain.
Spectrum:	Gram-positive bacteria, neoplastics, parasites
Cancer Applications	Puromycin Aminonucleoside is an antimetabolite and antineoplastic agent that is useful in cancer chemotherapy.

**References:** 

Azzam ME (1973) Mechanism of Puromycin action: Fate of ribosomes after release of nascent protein chains from polysomes." *PNAS* 70.12:3866-3869.

Kawakami H et al (2012) Dynamics of absolute amount of nephrin in a single podocyte in Puromycin Aminonucleoside nephrosis rats calculated by quantitative glomerular proteomics approach with selected reaction monitoring mode. Nephrol Dial.Transplant 27(4):1324-1330 PMID 21862459

Lacalle RA, Tercero JA and Jimenez A (1992) Cloning of the complete biosynthetic gene cluster for an aminonucleoside antibiotic, Puromycin, and its regulated expression in heterologous hosts. EMBO J. 11(2):785-792

Vara J (1985) Cloning and expression of a Puromycin N-acetyl transferase gene from *Streptomyces alboniger* in *Streptomyces lividans* and *Escherichia coli*. Gene 33(2):195-206

Wada et al (2005) Dexamethasone prevents podocyte apoptosis induced by Puromycin Aminonucleoside: Role of p53 and Bcl-2-related family proteins. J. Am. Soc. Nephrol. 16(9):2615-2625 PMID 15987750

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