

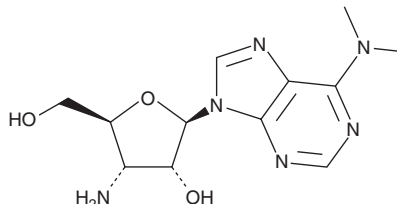
# PRODUCT INFORMATION



## Puromycin Aminonucleoside

Item No. 15509

**CAS Registry No.:** 58-60-6  
**Formal Name:** 3'-amino-3'-deoxy-N,N-dimethyl-adenosine  
**Synonyms:** NSC 3056, PANS  
**MF:** C<sub>12</sub>H<sub>18</sub>N<sub>6</sub>O<sub>3</sub>  
**FW:** 294.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 215, 275 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Puromycin aminonucleoside is supplied as a crystalline solid. A stock solution may be made by dissolving the puromycin aminonucleoside in the solvent of choice, which should be purged with an inert gas. Puromycin aminonucleoside is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of puromycin aminonucleoside in these solvents is approximately 20 and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of puromycin aminonucleoside can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of puromycin aminonucleoside in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Puromycin (Item No. 13884) is an aminonucleoside antibiotic that blocks protein synthesis in both prokaryotes and eukaryotes by causing premature termination of nascent polypeptide chains.<sup>1</sup> Puromycin aminonucleoside (PANS) is the aminonucleoside portion of puromycin. This analog cannot inhibit protein synthesis or induce apoptosis. Instead it is used to induce nephropathy in laboratory animal models to study focal and segmental glomerulosclerosis, the induction of nephrosis, and the events leading to proteinuria.<sup>2</sup> When administered to rats at 0.5-5 μM, PANS affects glomerular epithelial cell adhesion, reducing α3β1 integrin expression.<sup>3</sup> PANS also has been shown to decrease nephrin and podocin expression.<sup>4</sup>

### References

1. Azzam, M.E. and Algranati, I.D. Mechanism of puromycin action: Fate of ribosomes after release of nascent protein chains from polysomes. *Proc. Natl. Acad. Sci. USA* **70(12)**, 3866-3869 (1973).
2. Furness, P.N. and Harris, K. An evaluation of experimental models of glomerulonephritis. *Int. J. Exp. Pathol.* **75(1)**, 9-22 (1994).
3. Krishnamurti, U., Zhou, B., Fan, W.W., et al. Puromycin aminonucleoside suppresses integrin expression in cultured glomerular epithelial cells. *J. Am. Soc. Nephrol.* **12(4)**, 758-766 (2001).
4. Guan, N., Ding, J., Deng, J., et al. Key molecular events in puromycin aminonucleoside nephrosis rats. *Pathol. Int.* **54(9)**, 703-711 (2004).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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