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$_{12}$H$_{18}$N$_6$O$_3$
FW: 294.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

UV/Vis: $\lambda_{max}$: 215, 275 nm

Laboratory Procedures
For long term storage, we suggest that puromycin aminonucleoside (PANS) be stored as supplied at -20°C. It should be stable for at least two years.

PANS is supplied as a crystalline solid. A stock solution may be made by dissolving the PANS in the solvent of choice. PANS is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of PANS 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 PANS can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of PANS in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

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. 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. When administered to rats at 0.5-5 μM, PANS affects glomerular epithelial cell adhesion, reducing α3β1 integrin expression. PANS also has been shown to decrease nephrin and podocin expression.

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/15509

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent with your order.

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