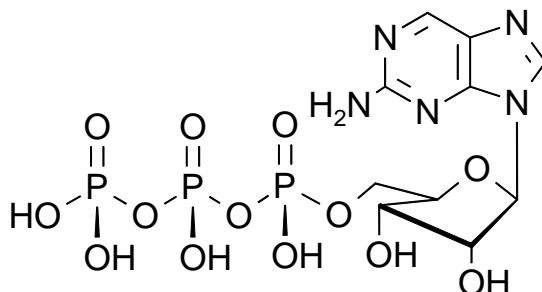


Technical Information about 2-Aminopurine riboside-5'-O-triphosphate

Update: December 10, 2010 AI



Abbreviation: 2-NH₂-PuTP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₀ H ₁₆ N ₅ O ₁₃ P ₃ (for free acid)	[23001-60-7]	507.2 (for free acid)	λ _{max} 243 nm / ε 8000 / pH 7	A 124

Name: 2- Aminopurine riboside- 5'- O- triphosphate

Description: 2-NH₂-PuTP is an analogue of adenosine-5'-O-triphosphate (ATP) in which the amino group in position 6 of adenine has been replaced by hydrogen, to yield a purine nucleobase. In addition, position 2 of the nucleobase has been modified by an amino group.

Properties: 2-NH₂-PuTP is a fluorescent analogue of ATP and/or GTP with λ_{exc} 305 nm and λ_{em} 370 nm.

Specification: Aqueous solution of the sodium salt (10 mM). Other salt forms of 2-NH₂-PuTP are available upon request. Micromolar quantities are determined by UV at λ_{max}. When opening the tube please make sure that no liquid is lost within the cap. A short spin-down in a bench centrifuge is recommended before use.

Purity: Typical purity is better than 95% (HPLC / UV / 243 nm) at time of quality control and packing. However, actual purity depends on storage and transport conditions. The product is not sterile and has not been tested for endotoxins.

Stability and Storage: 2-NH₂-PuTP is most stable when stored as aqueous solution in the freezer (-20° Celsius necessary, -80° recommended), however, at ambient temperature the compound slowly starts to decompose. Thus, in order to maintain its original high quality it is recommended to allow thawing only before using the product. If you will not use up the vial with one application, please aliquot the contents of the vial in order to avoid repeated freeze/thaw cycles for the rest. When making such aliquots be sure to operate quickly and to freeze the vial again as soon as possible.

Toxicity and Safety: Since triphosphates have multiple tasks in every organism, it is very likely that triphosphate analogues will interfere with many cell regulation processes *in vivo*. However, due to the rather small quantities to work with, no health hazards have been reported. Nevertheless please keep in mind, that the *in vivo* properties of this compound are not sufficiently characterized up to now. Avoid skin contact or ingestion and allow only trained personnel to handle the product.

Our products are designed, developed and sold for research purposes only! They are intended for *in vitro* and nonhuman *in vivo* laboratory applications. Any other use requires approval of health authorities.

Not for drug, household or related uses!

Selected References for 2-NH₂-PuTP:

Kinoshita, Y.; Nishigaki, K., *J. Biochem.*, **122**, 205 - 211 (1997): "Unexpectedly General Replaceability of ATP in ATP-Requiring Enzymes"

McClure, W.R.; Scheit, K.-H., *FEBS Lett.*, **32**, 267 - 269 (1973): "Enzyme Kinetic Parameters of the Fluorescent ATP Analogue, 2-Aminopurine Triphosphate"

Ward, D.C.; Reich, E.; Stryer, L., *J. Biol. Chem.*, **244**, 1228 - 1237 (1969): "Fluorescence Studies of Nucleotides and Polynucleotides - I. Formycin, 2-Aminopurine Riboside, 2,6-Diaminopurine riboside, and Their Derivatives"