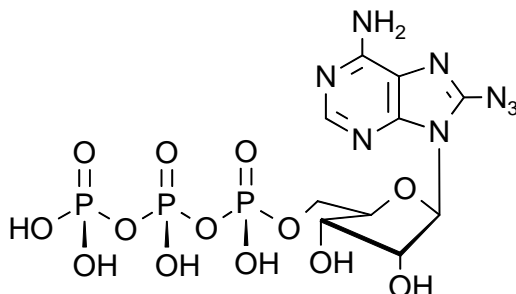


Technical Information about 8-N₃-ATP

Analogue of ATP for photoaffinity labelling of ATP-binding receptor proteins

Update: December 2, 2010 AI



Abbreviation: 8-N₃-ATP

| Formula | CAS No. | Molecular Weight | UV | BIOLOG Cat. No. |
|--|--------------|------------------------|--|-----------------|
| C ₁₀ H ₁₅ N ₈ O ₁₃ P ₃ for free acid | [53696-59-6] | 548.2 for free acid | λ _{max} 281 nm / ε 13000 / pH 6 | A 043 |

Name: 8- Azidoadenosine- 5'- O- triphosphate, sodium salt

Description: In 8-N₃-ATP the position 8 of the adenine nucleobase has been modified by an azido group.

Properties: 8-N₃-ATP is useful for photoaffinity labelling of ATP binding proteins and for incorporation into RNA for labelling purposes.

Specification: 10 mM aqueous solution of the sodium salt. Other salt forms of 8-N₃-ATP 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 analysis is better than 95% (HPLC / UV / 281 nm) at time of quality control and packing. The product is not sterile and has not been tested for endotoxins.

Stability and Storage: 8-N₃-ATP is relatively stable when stored frozen in the dark in aqueous solution (- 20° Celsius necessary, - 80° recommended). Avoid bright light or UV radiation during handling. In order to maintain its original high quality, and especially if you want to avoid any decomposition, 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 ATP 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 8-N₃-ATP:

Daniel, J.M.; McCombie, G.; Wendt, S.; Zenobi, R., *Am. Soc. Mass Spect.*, **14**, 442 - 448 (2003): "Mass Spectrometric Determination of Association Constants of Adenylate Kinase with Two Noncovalent Inhibitors"

Maruta, S.; Ohki, T.; Kambara, T.; Ikebe, M., *Eur. J. Biochem.*, **256**, 229 - 237 (1998): "Characterization of the Interaction of Myosin with ATP Analogues Having the Syn Conformation with Respect to the Adenine-Ribose Bond"

Rajagopalant, K.; Chavan, A.; Haley, B.E.; Watt, D.S., *J. Biolog. Chem.*, **268**, 14230 - 14238 (1993): "Synthesis and Application of Bidentate Photoaffinity Cross-linking Reagents"

Haley, B., *Methods in Enzymology*, **200**, 477 - 487 (1984): "Nucleotide Photoaffinity Labeling of Protein Kinase Subunits"

Potter, R.L.; Haley, B.E., *Methods Enzymol.*, **91**, 613 - 633 (1983): "Photoaffinity Labeling of Nucleotide Binding Sites with 8-Azidopurine Analogs: Techniques and Applications"

Czarnecki, J.; Geahlen, R.; Haley, B.E., *Methods Enzymol.*, **56**, 642 - 653 (1979): "Synthesis and Use of Azido Photoaffinity Analogs of Adenine and Guanine Nucleotides"

Haley, B.E.; Hoffman, J.F., *Proc. Nat. Acad. Sci.*, **71**, 3367 - 3371 (1974): "Interactions of a Photo-Affinity ATP Analog with Cation-Stimulated Adenosine Triphosphatases of Human Red Cell Membranes"