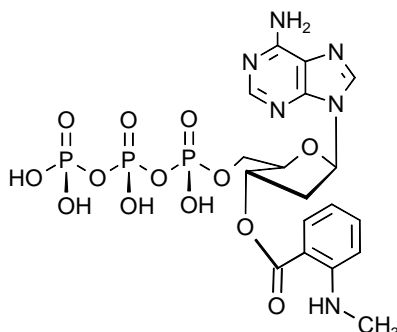


Technical Information about MANT-dATP

Update: January 23, 2009 AI



Abbreviation: MANT-dATP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₈ H ₂₃ N ₆ O ₁₃ P ₃ (free acid)	[128113-53-1]	624.3 (free acid)	λ _{max} 255 nm / ε 22200 / pH 7	D 085

Name: 2'- Deoxy- 3'- O- (N'- methylanthraniloyl)adenosine- 5'- O- triphosphate

Description: MANT-dATP is an analogue of the parent nucleotide 2'-deoxyadenosine-5'-O-triphosphate (dATP) in which the 3'-hydroxy group is esterified by the fluorescent methylisatoic acid.

Properties: Fluorescent analogue of dATP with λ_{exc} 355 nm and λ_{em} 448 nm, useful for research into dATP-dependent receptor proteins. The MANT fluorophore has a certain sensitivity for its environment and can change its spectral properties upon binding.

Specification: Aqueous solution of the sodium salt (10 mM). Other salt forms of MANT-dATP 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 / 255 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: MANT-dATP 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 nucleoside triphosphates have multiple tasks in every organism, it is very likely that dATP 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 Reference for MANT-dATP:

Nomanbhoy, T.K.; Schimmel, P., *Bioorg. Med. Chem. Lett.*, **11**, 1485 - 1491 (2001): "Active Site of an Aminoacyl-tRNA Synthetase Dissected by Energy-Transfer-dependent Fluorescence"

Woodward, S.K.A.; Eccleston, J.F.; Geeves, M.A., *Biochem.*, **30**, 422 - 430 (1991): "Kinetics of the Interaction of 2'(3')-O-(N-Methylanthraniloyl)-ATP with Myosin Subfragment 1 and Actomyosin Subfragment 1: Characterization of Two Acto-S1-ADP Complexes"