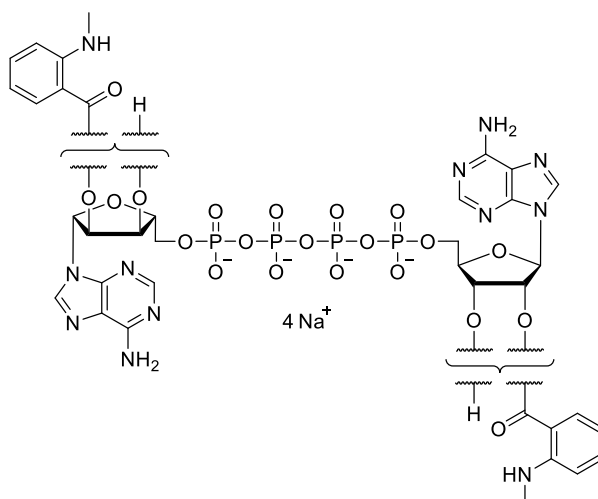


Technical Information about MANT-Ap₄-MANT-A

Update: August 09, 2019 HU



Abbreviation: MANT-Ap₄-MANT-A / MANT-Apppp-MANT-A

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₃₆ H ₄₂ N ₁₂ O ₂₁ P ₄ (free acid)	[pending]	1102.7 (free acid)	λ _{max} 255 nm / ε 41940 / pH 8	M 131

Name: P¹- (5'- [2'- / 3'- O- (N'- Methylanthraniloyl)adenosyl])- P⁴- (5'- [2'- / 3'- O- (N'- methylanthraniloyl)adenosyl])- tetraphosphate (MANT-Ap₄-MANT-A / MANT-Apppp-MANT-A),

Description: MANT-Ap₄-MANT-A is an analogue of the natural signalling molecule Ap₄A where either the ribose 2' hydroxy or the 3' hydroxy groups of both adenosine moieties have been esterified by the fluorescent methylisatoic acid.

Properties: MANT-Ap₄-MANT-A is a fluorescent analogue of Ap₄A (BIOLOG Cat. No. D 115), fluorescent with λ_{exc} 357 nm, λ_{em} 446 nm (values for MANT-Ap₄A (BIOLOG Cat. No. M 130) according to Wright & Miller (2004)). The MANT fluorophore has a certain sensitivity for its environment and can change its spectral properties upon binding. MANT-Ap₄-MANT-A can be useful in research on dinucleoside polyphosphate-dependent receptor proteins.

Specification: Lyophilized or crystallized sodium salt. The free acid or other salt forms are available upon request. Equal concentrations of MANT-Ap₄-MANT-A can appear very different in volume due to sensitivity of the lyophilized form to humidity. The compound can even contract to small volume droplets. Normally the product is located in the conical bottom of the tube. Micromolar quantities are determined by UV at λ_{max}.

Purity: Typical analysis is better than 95% (HPLC / UV / 255 nm) for mixture of 2'- and 3'- isomers. The product is not sterile and has not been tested for endotoxins.

Solubility: MANT-Ap₄-MANT-A is soluble in water (≥ 2 mM, limits have not been determined). Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing. When opening the tube please make sure that no substance is lost within the cap.

Stability and Storage: MANT-Ap₄-MANT-A is chemically rather stable and does not need special care during handling or shipment. Nevertheless, the compound should be protected from light and stored in the freezer, for longer storage periods preferably in freeze-dried form.

Toxicity and Safety: 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 MANT-Ap₄-MANT-A and MANT-Ap₄A:

Wright, M.; Miller, A.D., *Bioorg. Med. Chem. Lett.*, **14**, 2813 - 2816 (2004): "Synthesis of Novel Fluorescent-labelled Dinucleoside Polyphosphates"

Pelicano, H.; Maury, G.; Elalaoui, A.; Shafiee, M.; Imbach, J.-L.; Goody, R.S.; Divita, G., *Eur. J. Biochem.*, **248**, 930 - 937 (1997): "Study of Substrate-binding Properties of Bovine Liver Adenosine Kinase and Inhibition by Fluorescent Nucleoside Analogues"