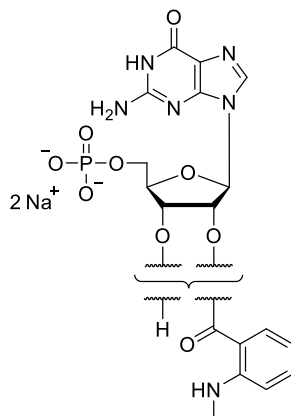


Technical Information about MANT-5'-GMP

Update: October 15, 2018 HU



Abbreviation:

MANT-GMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₈ H ₂₁ N ₆ O ₉ P	[85287-54-3]	496.4 (free acid)	λ _{max} 252 nm / ε 22600 / pH 8	M 042

Name: 2'-/3'- O- (N'- Methylanthraniloyl)guanosine- 5'- O- monophosphate (MANT-5'-GMP)

Description: MANT-GMP is an analogue of the natural structure 5'-GMP where either the ribose 2' hydroxy or the 3' hydroxy group have been esterified by the fluorescent methylisatoic acid.

Properties: MANT-GMP is a fluorescent analogue of GMP with λ_{exc} 355 nm and λ_{em} 448 nm.

Specification: Crystallized or lyophilized sodium salt. Other salt forms of MANT-GMP are available upon request. Micro molar quantities are determined by UV at λ_{max}.

Purity: Typical analysis is better than 97% (HPLC / UV / 252 nm) for mixture of 2'- and 3'- isomers 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.

Solubility: MANT-GMP has excellent solubility in water or buffer and any reasonable concentration of interest can be achieved. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing. When opening the tube make sure that no substance is lost within the cap. A short spin-down in a bench centrifuge is recommended before use.

Stability and Storage: MANT-GMP is relatively stable when stored frozen (- 20° celsius).

Toxicity and Safety: Since GMP has multiple tasks in every organism, it is very likely that GMP analogs 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!

References for MANT-5'-GMP:

Reinicke, D.; Schwede, F.; Genieser, H.-G.; Seifert, R., *PLOS ONE*, **8**, e54158 (2013): "Analysis of Substrate Specificity and Kinetics of Cyclic Nucleotide Phosphodiesterases with N'-Methylanthraniloyl-Substituted Purine and Pyrimidine 3',5'-Cyclic Nucleotides by Fluorescence Spectrometry"

Copyright October 18 by BIOLOG Life Science Institute

Hiratsuka, T., *Biochim Biophys Acta*, **742**, 496 - 508 (1983): "New Ribose-modified Fluorescent Analogs of Adenine and Guanine Nucleotides Available as Substrates for Various Enzymes"

Shi, G.-X.; Rehmann, H.; Andres, D.A., *Moll. Cell. Biol.*, **26**, 9136 – 9147 (2006): "A Novel cAMP-dependent Epac-Rit Signaling Pathway Contributes to PACAP38-mediated Neuronal Differentiation"