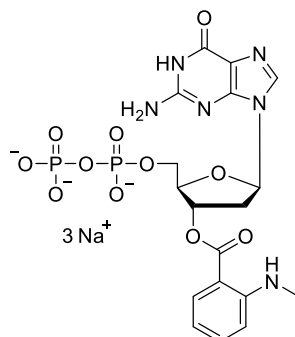


Technical Information about MANT-dGDP

Update: October 16, 2018 HJ



Abbreviation: MANT-dGDP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₈ H ₂₂ N ₆ O ₁₁ P ₂ (free acid)	[127383-33-9]	560.4 (free acid)	λ _{max} 252 nm / ε 22600 / pH 8	D 084

Name: 2'- Deoxy- 3'- O- (N'- methylanthraniloyl)guanosine- 5'- O- diphosphate

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

Properties: Fluorescent analogue with λ_{exc} 350 nm and λ_{em} 442 nm, useful for research into dGDP-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, pH 7.6). Other salt forms of MANT-dGDP are available upon request. Micromolar quantities are determined by UV at 355 nm. 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 / 252 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-dGDP 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. In order to maintain its original high quality it is recommended to protect the product from light and 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 diphosphates have multiple tasks in every organism, it is very likely that GDP 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 MANT-dGDP:

Nomanbhoy, T.K.; Leonard, D.A.; Manor, D.; Cerione, R.A., *Biochemistry*, **35**, 4602 - 4608 (1996): "Investigation of the GTP-binding/GTPase Cycle of Cdc42Hs Using Extrinsic Reporter Group Fluorescence"

Selected Reference for Related Fluorescent Analogs:

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"