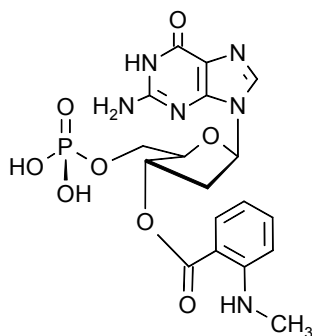


Technical Information about MANT-5'-dGMP

Fluorescent analogue of 2'-deoxyguanosine-5'-O-monophosphate

Update: March 20, 2009 AI



Abbreviation:

MANT-5'-dGMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₈ H ₂₁ N ₆ O ₈ P (free acid)	[pending]	480.4 (free acid)	λ_{\max} 252/355 nm / ϵ 22600/5700 / pH 7	D 082

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

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

Properties: Fluorescent analogue with λ_{exc} 355 nm and λ_{em} 448 nm, useful for research into 5'-dGMP-dependent receptor proteins. The MANT fluorophore has a certain sensitivity for its environment and can change its spectral properties upon binding.

Specification: Lyophilized or crystallized sodium salt. Other salt forms are available upon request. Equal concentrations of MANT-5'-dGMP 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. Micro molar quantities are determined by UV at 355 nm.

Purity: Typical analysis is better than 97% (HPLC / UV / 252 nm). The product is not sterile and has not been tested for endotoxins.

Stability and Storage: MANT-5'-dGMP is chemically rather stable. Nevertheless, we recommend that the compound should be protected from light and stored in the freezer, for longer storage periods preferably in freeze-dried form.

Solubility: MANT-5'-dGMP is soluble in water (≥ 9 mM). 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.

Toxicity and Safety: Since 5'-dGMP has multiple tasks in every organism it is very likely that its 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!

References for MANT-5'-dGMP: MANT-5'-dGMP is a new structure and there are no corresponding references available at the moment. For information on related compounds compare:

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"