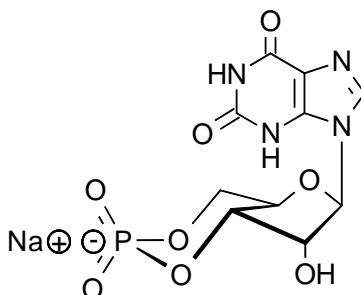


Technical Information about Xanthosine-3', 5'-cyclic monophosphate

Update: September 14, 2011 AI



Abbreviation:

cXMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat.No.
C ₁₀ H ₁₀ N ₄ O ₈ P·Na	[31319-70-7]	368.2	λ _{max} 252 nm / ε 11000 / pH 7	X 001

Name: Xanthosine- 3', 5'- cyclic monophosphate

Description: cXMP is an analogue of cyclic GMP in which the amino group in position 2 of the guanine nucleobase has been replaced by oxygen.

Specification: Lyophilized or crystallized sodium salt. The free acid or other salt forms are available upon request. Equal concentrations of cXMP 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 98% (HPLC / UV / 252 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: cXMP is readily soluble in water or buffer. Please rinse tube walls (and cap if necessary) 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: cXMP has sufficient stability at room temperature and does not need special care during handling or shipment. Nevertheless, we recommend that the compound should be stored in the freezer, for longer storage periods preferably in freeze-dried form.

Toxicity and Safety: Since cyclic nucleotides have multiple tasks in every organism it is not unlikely that cXMP could interfere with 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 these compounds 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 cXMP:

Spangler, C.; Böhm, A.; Jenal, U.; Seifert, R.; Kaefer, V., *J. Microbiol. Methods*, **81**, 226 - 231 (2010): "A Liquid Chromatography-coupled Tandem Mass Spectrometry Method for Quantitation of Cyclic Di-guanosine Monophosphate"

Erneux, C.; Miot, F.; Van Haastert, P.J.M.; Jastorff, B., *J. Cyclic Nucleotide Protein Phosphorylation Res.*, **10**, 463 - 472 (1985): "The Binding of Cyclic Nucleotide Analogs to a Purified Cyclic GMP- Stimulated Phosphodiesterase from Bovine Adrenal Tissue"

Meyer, R.B.; Uno, H.; Shuman, D.A.; Robins, R.K.; Simon, L.N.; Miller, J.P., *J. Cyclic Nucl. Res.*, **1**, 159 - 167 (1975): "The Synthesis of 2,6-Disubstituted-9- β -D-Ribofuranosylpurine Cyclic 3',5'-Phosphates and the Selectivity of cAMP and cGMP-specific Enzymes to Substituents in These Positions"