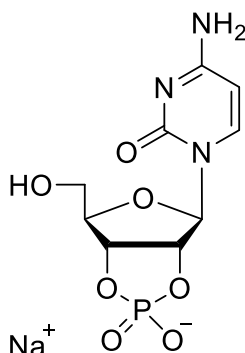


Technical Information about 2',3'-cCMP

Update: March 15, 2023 ss



Abbreviation: 2',3'-cCMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₉ H ₁₁ N ₃ O ₇ P · Na	[15718-51-1]	327.2	λ _{max} 270 nm / ε 9000 / pH 7	C 104

Name: Cytidine- 2', 3'- cyclic monophosphate, sodium salt

Description: 2',3'-cCMP is a cyclic phosphate ester of cytidine in which both the 2'- and the 3'-hydroxy groups are esterified by phosphoric acid.

Properties: 2',3'-cCMP is structurally related to the naturally occurring 2',3'-cNMPs 2',3'-cAMP (Cat. No. A 307), 2',3'-cGMP (Cat. No. G 025), 2',3'-cIMP (Cat. No. I 032) and 2',3'-cUMP (Cat. No. U 004). 2',3'-cCMP is a 2',3'-cyclic nucleotide with a pyrimidine nucleobase which was detected in both eukaryotes and prokaryotes.

Specification: Lyophilized or crystallized sodium salt. Other salt forms are available upon request. Equal concentrations of 2',3'-cCMP 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 97 % (HPLC / UV / 270 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: 2',3'-cCMP is soluble in water (≥ 100 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: 2',3'-cCMP 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 possible that corresponding 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 2',3'-cCMP:

Duggal, Y.; Kurasz J.E.; Fontaine B.M.; Marotta N.J.; Chauhan S.S.; Karls A.C.; Weinert E.E., *J. Bacteriol.*, **204**, e0020821 (2022): "Cellular Effects of 2',3'-Cyclic Nucleotide Monophosphates in Gram-Negative Bacteria"

Bordeleau E.; Oberc Ch.; Ameen E.; Mendes da Silva A.; Yan H., *Bioorg. Med. Chem. Lett.*, **24**, 4520 - 4522 (2014): "Identification of Cytidine 2',3'-Cyclic Monophosphate and Uridine 2',3'-Cyclic Monophosphate in *Pseudomonas Fluorescens* Pfo-1 Culture"

Jia X.; Fontaine B.M.; Strobel F.; Weinert E.E., *Biomolecules*, **4**, 1070 - 1092 (2014): "A Facile and Sensitive Method for Quantification of Cyclic Nucleotide Monophosphates in Mammalian Organs: Basal Levels of Eight cNMPs and Identification of 2',3'-cIMP"