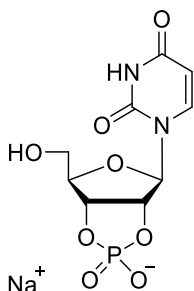


## Technical Information about 2',3'-cUMP

Update: August 18, 2018 HJ



**Abbreviation:** 2',3'-cUMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C <sub>9</sub> H <sub>10</sub> N <sub>2</sub> O <sub>8</sub> P·Na	[15718-50-0]	328.2	λ <sub>max</sub> 260 nm / ε 10000 / pH 7	U 004

**Name:** Uridine- 2', 3'- cyclic monophosphate

**Description:** 2',3'-cUMP is a cyclic phosphate ester of uridine, where both the 2'- and the 3'-hydroxy groups are esterified by phosphoric acid.

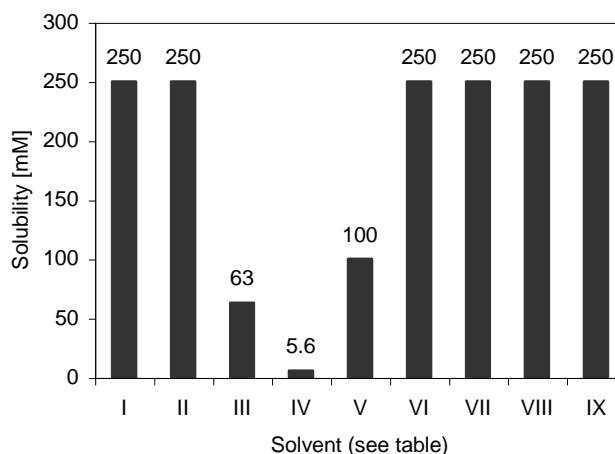
**Properties:** 2',3'-cUMP is a transition-state analogue of RNA hydrolysis by Ribonuclease A.

**Specification:** Crystallized or lyophilized sodium salt. Other salt forms of 2',3'-cUMP are available upon request. Please keep in mind that equal concentrations of the compound 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<sub>max</sub>.

**Purity:** Typical analysis is better than 97% (HPLC / UV / 260 nm). The product is not sterile and has not been tested for endotoxins.

**Solubility:** Detailed information on the solubility of 2',3'-cUMP in various solvents are listed in the solubility chart below. Concentrations have been determined at ambient temperature and can be considered as minimum concentrations usually obtainable, however, slight batch-to-batch variations cannot be ruled out. When opening the tube please make sure that no substance is lost within the cap. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing.

No.	Solvent	Solubility [mM]
I	H <sub>2</sub> O	250
II	DMSO	250
III	DMF	63
IV	Ethanol 96%	5.6
V	Methanol	100
VI	PBS, pH 7.4	250
VII	100 mM Na <sub>2</sub> HPO <sub>4</sub> , pH 7.0	250
VIII	25 mM Hepes/NaOH, pH 7.2	250
IX	25 mM Tris/HCl, pH 7.4	250



**Stability and Storage:** 2',3'-cUMP 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 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'-cUMP:**

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Bronk, J.R.; Hastewell, J.G., *J. Physiol.*, **408**, 129 - 135 (1989): "The Transport and Metabolism of the Uridine Mononucleotides by Rat Jejunum in Vitro"

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