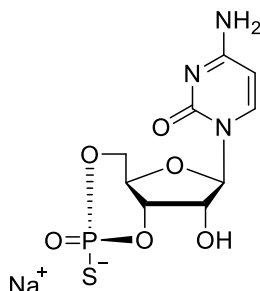


## Technical Information about Rp-cCMPS

Update: July 12, 2018 HU



**Abbreviation:** Rp-cCMPS

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C <sub>9</sub> H <sub>11</sub> N <sub>3</sub> O <sub>6</sub> PS·Na	[87063-79-4]	343.2	λ <sub>max</sub> 270 nm / ε 9000 / pH 7	C 065

**Name:** Cytidine- 3', 5'- cyclic monophosphorothioate, Rp- isomer

**Description:** Rp-cCMPS is an analogue of cyclic CMP in which the equatorial one of the two exocyclic oxygen atoms in the cyclic phosphate moiety is replaced by sulfur. The suffix "p" indicates that R/S nomenclature refers to phosphorus.

**Properties:** Rp-cCMPS is a potential phosphodiesterase-resistant inhibitor of cCMP-binding proteins.

**Specification:** Lyophilized or crystallized sodium salt. The free acid or other salt forms are available upon request. Equal concentrations of Rp-cCMPS 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 99% (HPLC / UV / 270 nm). The product is not sterile and has not been tested for endotoxins.

**Solubility:** Rp-cCMPS is soluble in water (≥ 12 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.

**Stability and Storage:** Rp-cCMPS 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, since cCMP can be formed by oxidation processes.

**Toxicity and Safety:** Since cCMP could have multiple tasks in every organism, it is not unlikely that its analogues could 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 Rp-cCMPS:**

Wolter, S.; Dove, S.; Golombek, M.; Schwede, F.; Seifert, R., *Naunyn-Schmiedebergs Arch. Pharmacol.*, **387**, 1163 – 1175 (2014): " N4-monobutyl-yl-cCMP Activates PKA RIα and PKA RIIα more Potently and with Higher Efficacy than PKG Iα in Vitro but not in Vivo"

Eckstein, F.; Kutzke, U., *Tetrahedr. Lett.*, **27**, 1657 – 1660 (1986): „Synthesis of Nucleoside 3',5'- Cyclic Phosphorothioates"