Technical Information about 5'-CMPS

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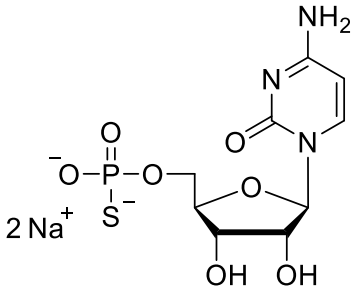

Abbreviation: **5'-CMPS**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_9H_{14}N_3O_7PS$ (for free acid)	[47151-76-8]	339.3 (for free acid)	λ_{max} 271 nm / ε 9200 / pH 7	C 053

Name: Cytidine- 5'- O- monophosphorothioate

Description: 5'-CMPS is an analogue of cytidine-5'-O-monophosphate (5'-CMP), where one of the oxygen atoms in the phosphate moiety has been replaced by sulfur.

Properties: Potential substrate, competitive inhibitor or regulator of enzymes that interact with cytidine-5'-O-monophosphate. Can be linked to structures with SH-groups via a disulfide bond.

Specification: Crystallized or lyophilized sodium salt. Other salt forms are available upon request. Equal concentrations of 5'-CMPS 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 / 271 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: 5'-CMPS has sufficient solubility in water or buffer systems. 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: 5'-CMPS 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 monophosphates have multiple tasks in every organism, it is not unlikely that monophosphate 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 Reference for 5'-CMPS:

Basu, S.; Pazsint, C.; Chowdhury, G., *Meth. Mol. Biol.*, **252**, 57 - 75 (2004): "Analysis of ribozyme structure and function by nucleotide analog interference mapping"

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