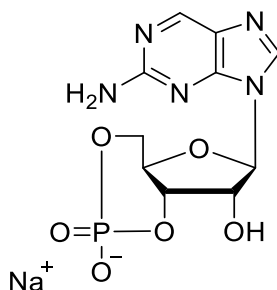


Technical Information about 2-NH₂-cPuMP

Fluorescent cyclic nucleotide

Update: August 06, 2018 HU



Abbreviation: 2-NH₂-cPuMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₀ H ₁₁ N ₅ O ₆ P·Na	[42467-66-3]	351.2	λ _{max} 243 nm / ε 8000 / pH7	A 027

Name: 2- Aminopurine riboside- 3', 5'- cyclic monophosphate (2-NH₂-cPuMP)

Description: 2-NH₂-cPuMP is an analogue of the parent second messenger cyclic GMP which lacks the oxo group in position 6 of the guanine nucleobase.

Properties: Fluorescent analogue of cyclic GMP (λ_{exc} 305 nm; λ_{em} 370 nm). Due to its lacking 6 oxo group the binding affinity to cGMP receptor proteins is reduced compared to cGMP.

Specification: Crystallized or lyophilized sodium salt. Please keep in mind that equal amounts of the compound may look different in volume depending on humidity. Micromolar quantities are determined by UV at 243 nm. Other salt forms of 2-NH₂-cPuMP are available upon request.

Purity: Typical analysis is better than 98% (HPLC / UV / 243 nm). The product is not sterile.

Solubility: 2-NH₂-cPuMP has excellent solubility in water or buffers. When opening the tube 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.

Stability and Storage: 2-NH₂-cPuMP has sufficient stability at room temperature and does not need special care during handling or shipment. Nevertheless, the compound and its solutions should be protected from bright light, stored in the freezer and should be lyophilized and frozen for longer storage periods.

Toxicity and Safety: Since cyclic GMP has multiple tasks in every organism, it is possible that cGMP analogs 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 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 Reference for 2-NH₂-cPuMP:

For a detailed list please inquire.

- 1 Jäger, R.; Russwurm, C.; Schwede, F.; Genieser, H.-G.; Koesling, D.; Russwurm, M., *J. Biol. Chem.*, **287**, 1210 – 1219 (2012): „Activation of PDE10 and PDE11 Phosphodiesterases“
- 2 Matthiesen, K.; Nielsen, J., *Biochemical J.*, **423**, 401 – 409 (2009): “Binding of cyclic nucleotides to phosphodiesterase 10A and 11A GAF domains does not stimulate catalytic activity”
- 3 Hofbauer, K.; Schultz, A.; Schultz, J.E., *J. Biol. Chem.*, **283**, 25164 – 25170 (2008): „Functional Chimeras of the Phosphodiesterase 5 and 10 Tandem GAF Domains“
- 4 Scheit, K.H. ; *J. Carbohydr. Nucleosides Nucleotides*, **1**, 385 - 399 (1974): “Biological and Spectroscopic Properties of a Fluorescent Cyclic AMP Analogue, 2-Aminopurine Nucleoside- 5', 3'- Cyclic Phosphate“