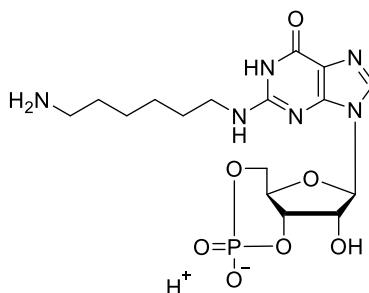


Technical Information about N²- (6- Aminohexyl)-cGMP

Update: August 24, 2018 HU



Abbreviation: 2-AH-cGMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₆ H ₂₅ N ₆ O ₇ P	[205368-58-7]	444.4	λ _{max} 254 nm / ε 15000 / pH 7	A 055

Name: N²- (6- Aminohexyl)guanosine- 3', 5'- cyclic monophosphate

Description: 2-AH-cGMP is an analogue of the natural signal molecule cyclic GMP in which a hexyl spacer with a terminal amino group has been attached to the amino group in position 2 of the guanine nucleobase.

Properties:

- Analogue of cyclic GMP prepared to be coupled to various structures including proteins,
- ligand for immobilization to yield affinity gels,
- also suitable for conjugation with fluorescent dyes or labels.

In spite of its modification, 2-AH-cGMP could be still sensitive against phosphodiesterases. For corresponding PDE-resistant structures such as phosphorothioate-modified congeners, or other types of spacers please inquire.

Specification: Crystallized or lyophilized solid. Please keep in mind that equal concentrations of the compound may look 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 98% (HPLC / UV / 254 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: Due to its ability to form internal and polymeric salts, 2-AH-cGMP is often difficult to dissolve in water or buffer. The compound is better soluble in alkali of pH 11 and can, after dissolution, titrated back to neutral. In addition, gentle heating and an ultrasonic bath usually helps to get complete dissolution. 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-AH-cGMP is chemically rather stable. 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 GMP has multiple tasks in every organism, it is likely that cGMP 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-AH-cGMP:

Hebert, M.C.; Schwede, F.; Jastorff, B.; Cote, R. H., *J. Biol. Chem.*, **273**, 5557 - 5565 (1998): "Structural Features of the Noncatalytic cGMP Binding Sites of Frog Photoreceptor Phosphodiesterase Using cGMP Analogs"

Selected Reference for Immobilized Cyclic Nucleotides:

Dills, W.L.; Beavo, J.A.; Bechtel, P.J.; Myers, K.R.; Sakai, L.J.; Krebs, E.G., *Biochemistry* **15**, 3724 - 3730 (1976): "Binding of Adenosine 3', 5'- Monophosphate Dependent Protein Kinase Regulatory Subunit to Immobilized Cyclic Nucleotide Derivatives"