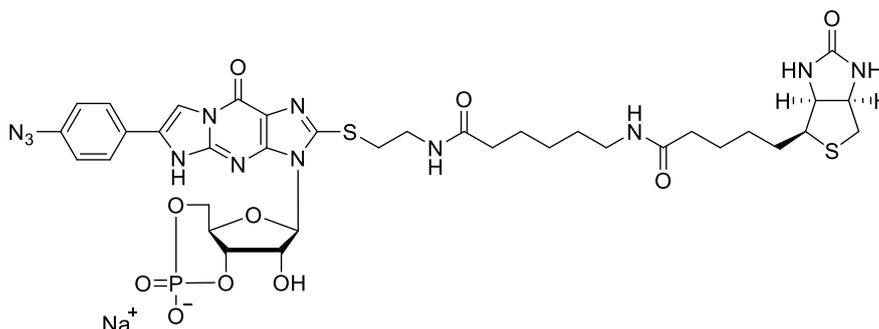


Technical Information about 4-N₃-PET-8-Biotin-11-cGMP

Update: June 26, 2020 AI



Abbreviation: 4-N₃-PET-8-Biotin-11-cGMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₃₆ H ₄₄ N ₁₂ O ₁₀ PS ₂ .Na	[pending]	922.9	λ _{max} 287 nm / ε 40000 / pH 7	A 186

Name: β- (4- Azidophenyl)- 1, N²- etheno- 8- (2- (6- [biotinyl]aminohexanoyl)aminoethylthio)guanosine- 3', 5'- cyclic monophosphate (4-N₃-PET-8-Biotin-11-cGMP / 4-N₃-PET-8-[Biotin]-AET-cGMP), sodium salt

Description: 4-N₃-PET-8-Biotin-11-cGMP is an analogue of the natural signal molecule cyclic GMP in which both the amino group in position 2 and the nitrogen in position 1 are involved in a 4-azidophenyl-substituted 5-membered ring system fused to the purine structure. In addition, the hydrogen in position 8 of the heterocyclic nucleobase is replaced by a 11 atom spacer, carrying a biotin at its end.

Properties: 4-N₃-PET-8-Biotin-11-cGMP is a biotinylated cGMP analogue for photoaffinity labelling of cGMP-responsive receptors.

Specification: Crystallized or lyophilized sodium salt. Other salt forms of 4-N₃-PET-8-Biotin-11-cGMP are available upon request. 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_{max}.

Purity: Typical analysis is better than 95% (HPLC / UV / 287 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: Due to its increased lipophilicity the solubility of 4-N₃-PET-8-Br-cGMP in water or buffer is limited to approximately 100 μM. We suggest to use a small amount of organic solvent such as methanol (recommended), ethanol, DMSO or DMF for dissolution and to dilute with water to the concentrations needed immediately before use. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing. When opening the tube make sure that no substance is lost within the cap.

Stability and Storage: 4-N₃-PET-8-Biotin-11-cGMP is chemically rather stable. Nevertheless, it should be protected from light and stored in the freezer (-20°C necessary, -80°C recommended), for longer storage periods preferably in freeze-dried form.

Toxicity and Safety: Since cyclic GMP has multiple tasks in every organism it is very 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 compounds are not sufficiently characterized up to now. Avoid contact with eyes and skin 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 4-N₃-PET-8-Biotin-11-cGMP:

Kemp, B.A.; Howell, N.L.; Keller, S.R.; Gildea, J.J.; Hinkle, J.D.; Shabanowitz, J.; Hunt, D.F.; Carey, R.M., *Hypertension*, 70:AP437 (2017): "The Extracellular Domain of Na⁺/K⁺ATPase Serves as a Receptor for Cyclic GMP in Mediating Natriuresis"