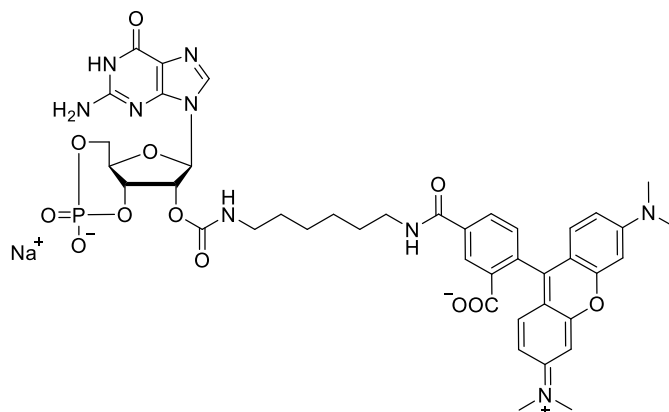


Technical Information about 2'-TAMRA-AHC-cGMP

Fluorescent analogue of cyclic GMP

Update: November 09, 2018 HU



Abbreviation: **2'-TAMRA-AHC-cGMP**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₄₂ H ₄₅ N ₉ O ₁₂ P·Na	[pending]	921.8	λ _{max} 543 nm / ε 95000 (MeOH)	T 017

Name: 2'- O- (6- [Tetramethylrhodaminy]amino)hexylcarbamoyl)guanosine- 3', 5'- cyclic monophosphate

Description: 2'-TAMRA-AHC-cGMP is a tetramethylrhodamine-modified analogue of the parent second messenger cyclic GMP (cGMP) in which the dye is connected to the 2'-hydroxy group via a 9-atom spacer.

Properties: Fluorescent analogue of cGMP with λ_{exc} 555 nm and λ_{em} 580 nm. 2'-TAMRA-AHC-cGMP can be used as a substrate for phosphodiesterases (PDEs) in corresponding assays. This type of fluorescent analogue is also available with a shorter 5-atom spacer (2'-TAMRA-AEC-cGMP, Cat. No. T 018).

Specification: Lyophilized or crystallized sodium salt. Other salt forms are available upon request. Equal concentrations of 2'-TAMRA-AHC-cGMP 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 255 nm / VIS 546 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: 2'-TAMRA-AHC-cGMP is soluble in water (≥ 2 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: 2'-TAMRA-AHC-cGMP is chemically rather stable. Nevertheless, it should be protected from light and 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 very likely that its 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 Tetramethylrhodamine-labelled cGMP:

Abadi, A.H.; Gary, B.D.; Tinsley, H.N.; Piazza, G.A.; Abdel-Halim, M., *Eur. J. Med. Chem.*, **45**, 1278 - 1286 (2010): "Synthesis, Molecular Modeling and Biological Evaluation of Novel Tadalafil Analogues as Phosphodiesterase 5 and Colon Tumor Cell Growth Inhibitors, New Stereochemical Perspective"