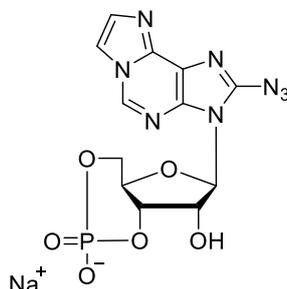


Technical Information about 8-N₃-ε-cAMP

Immobilizable cAMP analogue for fluorescent tagging

Update: July 02, 2018 HU



Abbreviation: 8-N₃-ε-cAMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat.No.
C ₁₂ H ₁₀ N ₈ O ₆ P·Na	[60902-12-7]	416.2	λ _{max} 290 nm / ε 10000 / pH 7	A 077

Name: 8- Azido- 1, N⁶- ethenoadenosine- 3', 5'- cyclic monophosphate

Description: 8-N₃-ε-cAMP is an analogue of the parent second messenger cyclic AMP in which both the N¹ and the N⁶ nitrogen atoms in the adenine nucleobase are connected by an etheno bridge forming a tricyclic ring system. In addition, the hydrogen in position 8 of the nucleobase is replaced by the light-sensitive azido moiety.

Properties: 8-N₃-ε-cAMP is a nonfluorescent cAMP analogue, that can be used for labelling of cAMP receptors. Upon UV-light-induced immobilization the ethenoadenine moiety starts to fluoresce, providing a label for tracing the receptor protein.

Specification: Crystallized or lyophilized sodium salt. Other salt forms are available upon request. 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 / 290 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: 8-N₃-ε-cAMP is soluble in water (≥ 7mM). When opening the tube please 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: 8-N₃-ε-cAMP 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 AMP 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 References for 8-N₃-ε-cAMP:

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“

Dreyfuss, G.; Schwartz, K.; Blout, E.R.; Barrio, J.R.; Liu, F.-T.; Leonard, N.J., *Proc. Natl. Acad. Sci. USA*, **75**, 1199 - 1203 (1978): "Fluorescent Photoaffinity Labeling: Adenosine 3', 5'- cyclic Monophosphate Receptor Sites"

Keeler, E.; Campbell, P., *Biochem. Biophys. Res. Comm.*, **72**, 575 - 580 (1976): "A Fluorescent Photo-Affinity Label for Cyclic AMP Binding Proteins"

