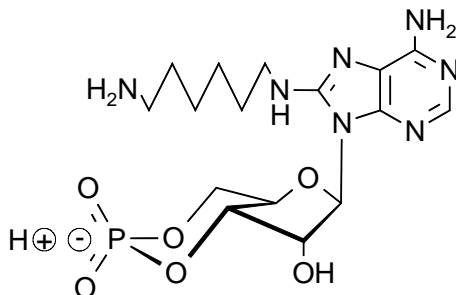


Technical Information about 8-(6-Aminohexylamino)-cAMP

Site-selective activator of cAMP-dependent protein kinase, precursor for fluorescence labelling and ligand for affinity chromatography of cyclic nucleotide binding proteins

Update: March 7, 2012 WH



Abbreviation:

8-AHA-cAMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₆ H ₂₆ N ₇ O ₆ P (acid)	[39824-30-1]	443.4	λ _{max} 273 nm / ε 17000 / pH 7	A 011

Name: 8- (6- Aminohexylamino)adenosine- 3', 5'- cyclic monophosphate

Description: 8-AHA-cAMP is an analogue of the natural signal molecule cyclic AMP where the hydrogen in position 8 of the nucleobase is replaced by an aminohexylamino group.

Properties:

- **Activator of protein kinase A (PKA),**
- **site selective for site B of PKA I and hence a suitable partner for synergistic activation by pairs of analogues with opposite site selectivity,**
- **suitable for immobilization as a ligand for affinity chromatography and, e.g. , for binding of fluorescent dyes,**
- **high metabolic stability towards cyclic nucleotide-responsive phosphodiesterases.**

8-AHA-cAMP is a selective activator of cAMP-dependent protein kinase, which is hardly metabolized by mammalian cyclic nucleotide-responsive phosphodiesterases. Due to its site selectivity, it is frequently used as a partner for selective stimulation of PKA type I by synergistic pairs of cAMP analogues. The free terminal amino group (separated from the nucleotide by a hexyl spacer) is suitable for coupling to gels for affinity chromatography and for binding of various labels, e.g. fluorescent dyes. 8-AHA-cAMP as well as the corresponding phosphorothioate analogues, Rp- and Sp-8-AHA-cAMPS, are available from BIOLOG also as ligands already immobilized to agarose (Cat. Nos. A 028 / A 012 / A 013).

Application: If 8-AHA-cAMP is combined with an analogue which selects site A of PKA I (e.g. 8-PIP-cAMP, Cat. No. P 002), type I of PKA is selectively activated. Please ask for the special corresponding technical leaflet (No. T11001) on this topic.

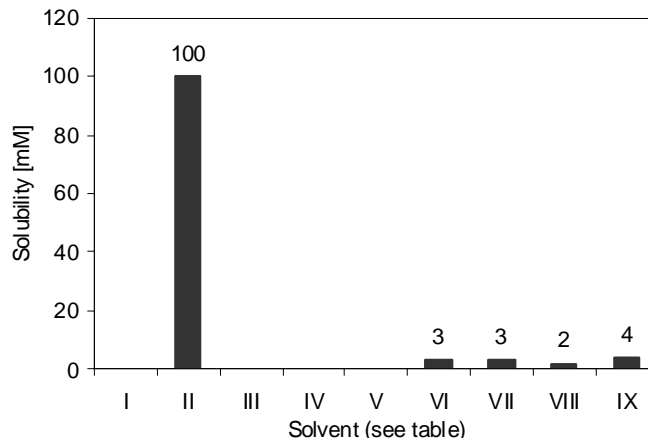
Specification: Crystallized or lyophilized solid. Equal concentrations of 8-AHA-cAMP can appear very different in volume due to sensitivity of the lyophilized form to humidity. The compound can even contract to small volume droplets. Normally the product is located in the conical bottom of the tube. Micromolar quantities are determined by UV at λ_{max}.

Purity: Typical analysis is better than 98% (HPLC / UV / 273 nm). The product is not sterile and has not been tested for endotoxins.

Stability and Storage: 8-AHA-cAMP is chemically stable under conditions of biological systems and media. Nevertheless, we recommend that the compound should be stored in the freezer, for longer storage periods preferably in freeze-dried form.

Solubility: Detailed information on the solubility of 8-AHA-cAMP in water and various buffers are listed in the solubility chart below. Concentrations have been determined at ambient temperature and can be considered as minimum concentrations usually obtainable, however, slight batch-to-batch variations cannot be ruled out. 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.

No.	Solvent	Solubility [mM]
I	H ₂ O	0
II	DMSO	100
III	DMF	0
IV	Ethanol 96%	0
V	Methanol	0
VI	PBS, pH 7.4	3
VII	100 mM Na ₂ HPO ₄ , pH 7.0	3
VIII	25 mM Hepes/NaOH, pH 7.2	2
IX	25 mM Tris/HCl, pH 7.4	4



Toxicity and Safety: Since cyclic AMP has multiple tasks in every organism, it is possible that cAMP 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!

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