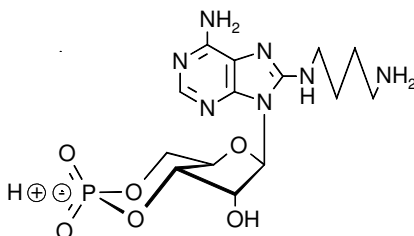


Technical Information about 8-(4-Aminobutyl)amino-cAMP

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

Update: September 21, 2007 TR



Abbreviation: 8-ABA-cAMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₄ H ₂₂ N ₇ O ₆ P (acid)	[82927-68-2]	415.4	λ _{max} 273 nm / ε 17000 / pH7	A 017

Name: 8- (4- Aminobutyl)aminoadenosine- 3', 5'- cyclic monophosphate

Description: 8-ABA-cAMP is an analog of the natural signal molecule cyclic AMP where the hydrogen in position 8 of the nucleobase is replaced by an aminobutylamino 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 analogs 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-ABA-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 often used as a partner for selective stimulation of PKA type I by synergistic pairs of cAMP analogs. The free primary amino group separated from the nucleotide by a butyl spacer is suitable for coupling to gels for affinity chromatography and for binding of various labels, e.g. fluorescent dyes. Biolog also offers similar compounds with shorter (8-AEA-cAMP) and with longer spacer arms (8-AHA-cAMP), as well as such ligands already immobilized to agarose.

Specification: Crystallized or lyophilized solid. Please keep in mind that equal amounts of the compound may look different in volume. 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.

Solubility: Due to its ability to form internal and polymeric salts, 8-ABA-cAMP is often difficult to dissolve in water or buffer. The compound is better soluble in dilute alkali of pH 9.5 and can, after dissolution, be 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 make sure that no substance is lost within the cap.

Stability and Storage: 8-ABA-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

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

References for 8-ABA-cAMP:

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