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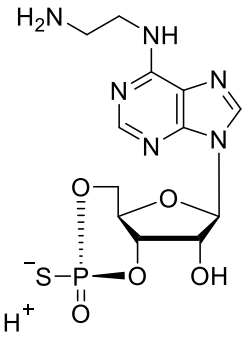
Technical Information about Sp-6-AE-cAMPS

PDE-resistant activator of cAMP-depending protein kinase, precursor for fluorescence labelling and ligand for affinity chromatography of cyclic nucleotide binding proteins

Update: December 17, 2018 HGG



Abbreviation: **Sp-6-AE-cAMPS**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{12}H_{17}N_6O_5PS$ (free acid)	[pending]	388.4 (free acid)	λ_{max} 266 nm / ε 16200 / pH 7	A 092

Name: N^6- (2- Aminoethyl)adenosine- 3', 5'- cyclic monophosphorothioate, Sp- isomer (Sp-6-AE-cAMPS)

Description: Sp-6-AE-cAMPS is an analogue of the natural signal molecule cyclic AMP in which the axial one of the two exocyclic oxygen atoms in the cyclic phosphate moiety is replaced by sulfur. The suffix "p" indicates that R/S nomenclature refers to phosphorus. In addition, one of the hydrogen atoms of the amino group in position 6 of the nucleobase is replaced by an aminoethylamino group.

Properties: The free terminal amino group of Sp-6-AE-cAMPS (separated from the nucleotide by an ethyl spacer) is suitable for coupling to gels for affinity chromatography and for binding of various labels, e.g. fluorescent dyes. Products where the corresponding ligand already is immobilized to agarose (Sp-6-AE-cAMPS-Agarose, Cat. Nos. A 109), is connected to a different position of the nucleobase (Sp-8-AEA-cAMPS, Cat. No. A 094), has a longer spacer (Sp-6-AH-cAMPS, Cat. No. A 089) or comes without phosphorothioate modification 6-AE-cAMP (Cat. No. A 096) are available as well.

Specification: Crystallized or lyophilized solid. Equal concentrations of Sp-6-AE-cAMPS 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 / 258 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: Sp-6-AE-cAMPS has only very limited solubility in water (≥ 11 mM) and coupling reactions are usually performed in DMSO. 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: Sp-6-AE-cAMPS 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 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!

p.t.o

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References for a similar product (Sp-8-AEA-cAMPS):

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Hanke, S.E.; Bertinetti, D.; Badel, A.; Schweinsberg, S.; Genieser, H.-G.; Herberg, F.W., *N. Biotechnol.*, Epub ahead of print (2010): "Cyclic Nucleotides as Affinity Tools: Phosphorothioate cAMP Analogues Adress Specific PKA Subproteomes"

Bertinetti, D.; Schweinsberg, S.; Hanke, S.E.; Schwede, F.; Bertinetti, O.; Drewianka, S.; Genieser, H.-G.; Herberg, F.W., *BMC Chem. Biol.*, **9**: 3 (2009): "Chemical Tools Selectively Target Components of the PKA System"

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