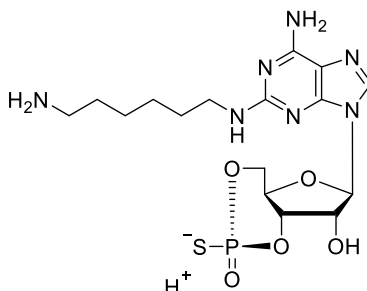


Technical Information about 2- (6- Aminohexylamino)- cAMPS, Sp- isomer (Sp-2-AHA-cAMPS)

Update: August 21, 2018 HJ



Abbreviation: **Sp-2-AHA-cAMPS**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₆ H ₂₆ N ₇ O ₅ PS	[214276-94-5]	459.5	λ_{\max} 258 nm / ϵ 12600 / pH 7	A 068

Name: 2- (6- Aminohexylamino)adenosine- 3', 5'- cyclic monophosphorothioate, Sp- isomer

Description: Sp-2-AHA-cAMPS is an analogue of the natural signal molecule cyclic AMP in which the hydrogen in position 2 of the nucleobase is replaced by an aminohexylamino group. In addition, the axial one of the two exocyclic oxygen atoms in the cyclic phosphate moiety is modified by sulfur. The suffix "p" indicates that R/S nomenclature refers to phosphorus.

Properties: Sp-2-AHA-cAMPS is a PDE-resistant form of 2-AHA-cAMP (Cat. No. A 053) which is an activator of cAMP-dependent protein kinases. The free terminal primary 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. Sp-2-AHA-cAMPS is also available as ligand immobilized to agarose (Sp-2-AHA-cAMPS-Agarose, Cat. No. A 069).

Specification: Crystallized or lyophilized solid. Please keep in mind that equal concentrations of the compound may look different in volume. Micro molar 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: Due to its ability to form internal and polymeric salts, Sp-2-AHA-cAMPS 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 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 please make sure that no substance is lost within the cap.

Stability and Storage: Sp-2-AHA-cAMPS is chemically rather stable. 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 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 Sp-2-AHA-cAMPS:

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

Selected Reference for 2-AHA-cAMP:

Iwizki, F., PhD Thesis, University of Bremen, Bremen, Germany, 1993