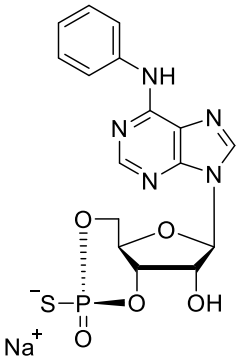
BIOLOG - LIFE SCIENCE INSTITUTE -

Technical Information about Sp-6-Phe-cAMPS

Update: January 19, 2021 HJ



Abbreviation: **Sp-6-Phe-cAMPS**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{16}H_{15}N_5O_5PS{\cdot}Na$	[169335-92-6]	443.4	λ_{max} 288 nm / ε 20800 / pH 7	P 018

Name: N^6- Phenyladenosine- 3', 5'- cyclic monophosphorothioate, Sp- isomer

Description: Sp-6-Phe-cAMPS is an analogue of the natural signal molecule cyclic AMP in which one hydrogen atom of the amino group in position 6 of the heterocyclic nucleobase is replaced by a lipophilic phenyl ring. 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-6-Phe-cAMPS is a hydrolysis-resistant form of 6-Phe-cAMP (Cat. No. P 006), a potent site-selective and membrane-permeant activator of cAMP-dependent protein kinase. Sp-6-Phe-cAMPS does not activate the exchange factors directly activated by cAMP (Epac or cAMP-GEF) and thus can be used as an Epac-negative control.

Specification: Crystallized or lyophilized sodium salt. The free acid or other salt forms of Sp-6-Phe-cAMPS 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 / 288 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: Sp-6-Phe-cAMPS has sufficient solubility in water (≥ 17 mM). 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-Phe-cAMPS is chemically rather stable and does not need special care during handling or shipment. 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 i*n 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-6-Phe-cAMPS:

Ouyang, M.; Zhang, L.; Zhu, J.J.; Schwede, F.; Thomas, S.A., *PNAS*, **105**, 11993 - 11997 (2008): "Epac Signaling is Required for Hippocampus-dependent Memory Retrieval"

BIOLOG Life Science Institute, Bremen, Germany Phone: 49 (0) 421 591355 Fax: 49 (0) 421 5979713 e-mail: service@biolog.de

Gjertsen, B.T.; Mellgren, G.; Otten, A.; Maronde, E.; Genieser, H.-G.; Jastorff, B.; Vintermyr, O.; McKnight, G. S.; Doeskeland, S.O., *J. Biol. Chem.*, **270**, 20599 - 20607 (1995): "Novel (Rp)-cAMPS Analogs as Tools for Inhibition of cAMP-Kinase in Cell Culture"

BIOLOG Life Science Institute, Bremen, Germany Phone: 49 (0) 421 591355 Fax: 49 (0) 421 5979713 e-mail: service@biolog.de