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Technical Information about N^6-Phenyl-cAMP

Potent membrane-permeant, site-selective and PDE-resistant activator of cAMP-dependent protein kinases

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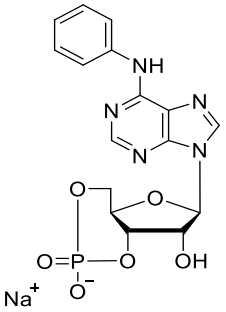

Abbreviation: **6-Phe-cAMP**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{16}H_{15}N_5O_6P{\cdot}Na$	[34051-30-4]	427.3	λ_{max} 288 nm / ε 20800 / pH 7	P 006

Name: N^6- Phenyladenosine- 3', 5'- cyclic monophosphate

Description: 6-Phe-cAMP is an analogue of the natural signal molecule cyclic AMP in which one of the hydrogen atoms of the amino group in position 6 of the adenine moiety is replaced by a lipophilic phenyl ring.

Properties:

- **One of the most potent activators of cAMP-dependent protein kinase isozymes which does not activate Epac**
- **Excellent selectivity between cAMP- and cGMP protein kinases**
- **High metabolic stability towards cyclic nucleotide-responsive phosphodiesterases[1]**
- **Site-selective analogue with strong preference for the A-sites of PKA type I and type II[2]**
- **Suitable partner for synergistic activation of PKA I or II by pairs of analogues** (please ask for corresponding information)
- **High lipophilicity and good membrane permeability while still soluble in aqueous solvents**

6-Phe-cAMP is an extraordinary potent and site-selective cAMP agonist with unusual high affinity for the A sites of PKA. When combined with analogues of corresponding B-site selectivity (e.g. Sp-5,6-DCl-cBIMPS, Cat. No. D 014) it is a powerful tool for synergistic activation of PKA type I and type II, respectively.
Furthermore, 6-Phe-cAMP does not activate Epac and thus can be used as an Epac-negative control.

Specification: Crystallized or lyophilized sodium salt. Other salt forms are available upon request. Equal concentrations of 6-Phe-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 / 288 nm). The product is not sterile and has not been tested for endotoxins.

Stability and Storage: 6-Phe-cAMP has sufficient stability at room temperature 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 lipophilic 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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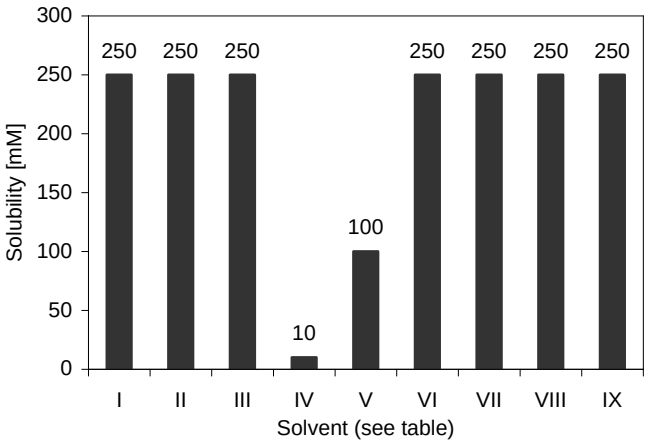
Solubility: Detailed information on the solubility of 6-Phe-cAMP in water and various buffers are listed in the solubility chart below. Concentrations have been determined at ambient temperature and can be considered as minimum concentrations usually obtainable, however, slight batch-to-batch variations 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_2O	250
II	DMSO	250
III	DMF	250
IV	Ethanol 96%	10
V	Methanol	100
VI	PBS, pH 7.4	250
VII	100 mM Na_2HPO_4, pH 7.0	250
VIII	25 mM Hepes/NaOH, pH 7.2	250
IX	25 mMTris/HCl, pH 7.4	250



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