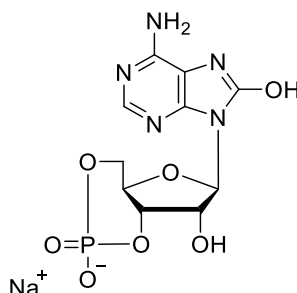


Technical Information about 8-OH-cAMP

Polar, membrane-impermeant and site-selective activator of cAMP-dependent protein kinases

Update: July 06, 2018 HJ



Abbreviation: 8-OH-cAMP

| Formula | CAS No. | Molecular Weight | UV | BIOLOG Cat. No. |
|--|--------------|------------------|--|-----------------|
| C ₁₀ H ₁₁ N ₅ O ₇ P·Na | [31356-95-3] | 367.2 | λ _{max} 268 nm / ε 11000 / pH 7 | H 003 |

Name: 8- Hydroxyadenosine- 3', 5'- cyclic monophosphate (8-OH-cAMP)

Description: 8-OH-cAMP is an analogue of the parent second messenger cyclic AMP in which the hydrogen in position 8 of the adenine nucleobase is replaced by the polar hydroxy moiety.

Properties:

- **Potent activator of cAMP dependent protein kinase with high preference for B II of PKA**
- **High polarity and hence low membrane permeability**
- **Increased metabolic stability towards cyclic nucleotide-responsive phosphodiesterases**

Summing up, 8-OH-cAMP is a membrane-impermeant activator of protein kinase A which can be used for the stimulation of extracellular cAMP receptors and for prevention of membrane permeation after intracellular pipette application. Its high metabolic stability avoids potential side effects through active metabolites. 8-OH-cAMP is a suitable partner for A II-selective structures, if synergistic pairs of analogues are used (please ask for our corresponding technical information sheet).

Specification: Crystallized or lyophilized sodium salt. Other salt forms are available upon request. Equal concentrations of 8-OH-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 / 268 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: 8-OH-cAMP has excellent solubility in water or buffer. 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.

Stability and Storage: 8-OH-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 possible that even polar 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 compounds 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 References for 8-OH-cAMP:

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