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# Technical Information about 1,N$^6$-Etheno-cAMP

**Fluorescent activator of cyclic AMP-dependent protein kinase**

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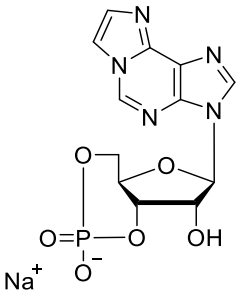

**Abbreviation:** **ε-cAMP**

| Formula | CAS No. | Molecular Weight | UV | BIOLOG Cat. No. |
|---|---|---|---|---|
| $C_{12}H_{11}N_5O_6P{\cdot}Na$ | [103213-51-0] | 375.2 | $\lambda_{max}$ 275 nm / ε 6000 / pH 7 | E 001 |

**Name:** 1, N$^6$- Ethenoadenosine- 3', 5'- cyclic monophosphate

**Description:** ε-cAMP is an analogue of the parent second messenger cyclic AMP in which both the N$^1$ and the N$^6$ nitrogen atoms in the adenine nucleobase are connected by an etheno bridge forming a tricyclic ring system.

**Properties:** ε-cAMP is a fluorescent analogue of cyclic AMP with long radiative lifetime of > 30 ns. Binding can be detected by fluorescence anisotropy and circular dichroism. Increased membrane permeability compared to cAMP. $\lambda_{exc}$ 300 nm, $\lambda_{em}$ 415 nm.

**Specification:** Crystallized or lyophilized sodium salt. Other salt forms of ε-cAMP are available upon request. Please keep in mind that equal amounts of the compounds may look different in volume depending on 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 $\lambda_{max}$.

**Purity:** Typical analysis is better than 98% (HPLC / UV / 275 nm). The product is not sterile and has not been tested for endotoxins.

**Solubility**: ε-cAMP has sufficient solubility in water or buffer for most applications. 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:** ε-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 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 ε-cAMP:


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