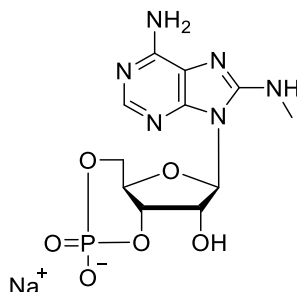


Technical Information about 8-Methylamino- cAMP

Site selective activator of cAMP- dependent protein kinase type I & II



Update: July 06, 2018 нп

Abbreviation: 8-MA-cAMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₁ H ₁₄ N ₆ O ₆ P·Na	[33823-18-6]	380.3	λ _{max} 273 nm / ε 15000 / pH 7	M 001

Name: 8- Methylaminoadenosine- 3', 5'- cyclic monophosphate

Description: 8-MA-cAMP is an analogue of the natural signal molecule cyclic AMP in which the hydrogen in position 8 of the purine nucleobase is replaced by a methylamino group.

Properties:

- activator of protein kinase A type I and type II¹
- site-selective cyclic AMP analogue, selecting site B of the regulatory subunits of protein kinase A I and II²
- suitable for combination with A I- selective partner analogues for specific synergistic activation of protein kinase A I³
- increased metabolic stability towards cyclic nucleotide- responsive phosphodiesterases

8-MA-cAMP is a site-selective activator of cAMP-dependent protein kinases, preferring the B sites of the regulatory subunits of PKA. Since 8-MA-cAMP shows highest affinity towards site B of PKA type I, it is often used in combination with analogues that select the corresponding A site of the receptor (e.g. 8-PIP-cAMP, Cat. No. P 002) to take advantage from potent synergistic activation of solely type I of PKA. Due to its modification at position 8 of the purine nucleobase it is metabolized only slowly by mammalian cyclic nucleotide-responsive phosphodiesterases.

Specification: Crystallized or lyophilized sodium salt. Other salts of 8-MA-cAMP are available upon request. 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/ 273 nm). The product is not sterile.

Solubility: 8-MA-cAMP has good solubility in water or buffer. Please rinse tube walls carefully and preferably use ultrasonic or vortex to achieve total and uniform mixing. When opening the tube make sure that no substance is lost within the cap.

Stability and Storage: 8-MA-cAMP is chemically stable under conditions of biological systems and media. Nevertheless solutions should be stored in the refrigerator and should be lyophilized and frozen for longer storage periods.

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!

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