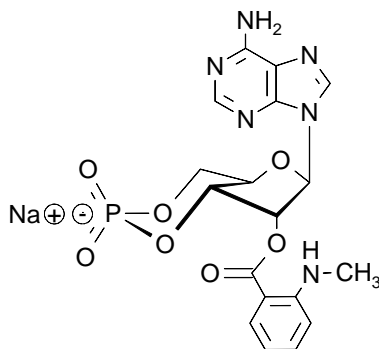


## Technical Information about 2'- O- (N'- Methylanthraniloyl)- cAMP

### Fluorescent analogue of cyclic AMP

Update: October 23, 2009 AI



#### Abbreviation:

**MANT-cAMP**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C <sub>18</sub> H <sub>18</sub> N <sub>6</sub> O <sub>7</sub> P·Na	[83707-15-7]	484.4	λ <sub>max</sub> 255/355 nm / ε 22200/5300 / pH 7	M 008

**Name:** 2'- O- (N'- Methylanthraniloyl)adenosine- 3', 5'- cyclic monophosphate

**Description:** MANT-cAMP is an analogue of the parent second messenger cyclic AMP in which the 2'-hydroxy group of the ribose is esterified by the fluorescent methylisatoic acid.

**Properties:** MANT-cAMP is a fluorescent analogue of cyclic AMP suitable for phosphodiesterase studies. λ<sub>exc</sub> 350 nm, λ<sub>em</sub> 445 nm. Upon hydrolysis the intensity of the fluorescence is decreased considerably.

**Specification:** Yellow-coloured, crystallized or lyophilized sodium salt. Other salt forms of MANT-cAMP are available upon request. Please keep in mind that equal amounts of MANT-cAMP 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 255 nm.

**Purity:** Typical analysis is better than 98% (HPLC / UV / 255 nm). The product is not sterile and has not been tested for endotoxins.

**Stability and Storage:** If protected from light MANT-cAMP has sufficient stability at room temperature and does not need special care during handling or shipment. Nevertheless the compound and its solution should be stored in the refrigerator and should be lyophilized and frozen for longer storage periods.

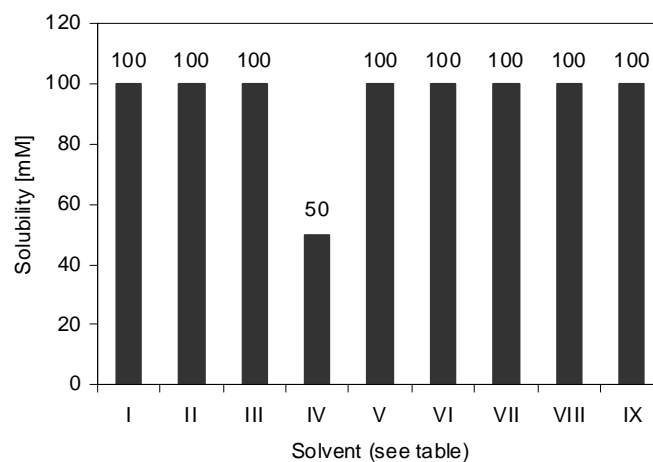
**Toxicity and Safety:** Since cyclic AMP has multiple tasks in every organism it is very likely that lipophilic cAMP analogues will interfere with many cell regulation processes *in vivo*. However, due to the rather small quantities to work with no health hazards have been reported. Nevertheless please 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!**

**Solubility:** Detailed information on the solubility of MANT-cAMP in water and various buffers are listed in the solubility chart below. Concentrations have been tested at ambient temperature and can be considered as minimum concentrations usually obtainable. 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 <sub>2</sub> O	100
II	DMSO	100
III	DMF	100
IV	Ethanol 96%	50
V	Methanol	100
VI	PBS, pH 7.4	100
VII	100 mM Na <sub>2</sub> HPO <sub>4</sub> , pH 7.0	100
VIII	25 mM HEPES/NaOH, pH 7.2	100
IX	25 mM Tris/HCl, pH 7.4	100



#### Selected References for MANT-cAMP:

Diaz-Benjumea, R.; Laxman, S.; Hinds, T.R.; Beavo, J.A.; Rascon, A., *Biochem. J.*, **399**, 305 - 314 (2006): "Characterization of a Novel cAMP-binding, cAMP-specific Cyclic Nucleotide Phosphodiesterase (TcrPDEB1) from *Trypanosoma cruzi*"

Kraemer, A.; Rehmann, H.; Cool, R.H.; Theiss, C.; de Rooij, J.; Bos, J.L.; Wittinghofer, A., *J. Mol. Biol.*, **306**, 1167 - 1177 (2001): "Dynamic Interaction of cAMP with the Rap Guanine-nucleotide Exchange Factor Epac1"

Hiratsuka, T., *J. Biol. Chem.*, **252**, 13354 - 13358 (1982): "New Fluorescent Analogs of cAMP and cGMP Available as Substrates for Cyclic Nucleotide Phosphodiesterase"