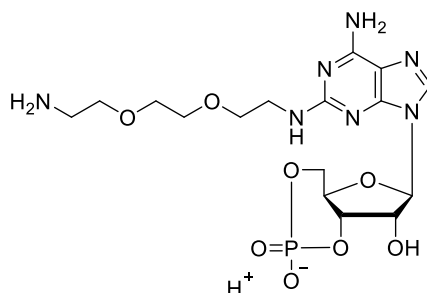


Technical Information about 2-ADOA-cAMP

Ligand for affinity chromatography of cyclic nucleotide-dependent binding proteins

Update: August 14, 2018 HU



Abbreviation: 2-ADOA-cAMP

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₆ H ₂₆ N ₇ O ₈ P	[pending]	475.4	λ _{max} 258 nm / ε 12600 / pH 7	A 136

Name: 2- (8- Amino- 3, 6- dioxaoctylamino)adenosine- 3', 5'- cyclic monophosphate

Description: 2-ADOA-cAMP is an analogue of the natural signal molecule cyclic AMP in which the hydrogen in position 2 of the adenine nucleobase is substituted by a 10 atoms spacer containing two ethyleneglycol units.

Properties: Due to its free aliphatic amino group various activated structures such as fluorescent dyes or other labels can be linked to 2-ADOA-cAMP. Another application is its use as a ligand for affinity chromatography of cAMP- and cGMP-dependent protein kinases and phosphodiesterases.

Specification: Crystallized or lyophilized solid. Please keep in mind that equal amounts of the compound may appear different in volume since the compound is hygroscopic and tends to form a droplet at the tube wall. Micromolar quantities are determined by UV at λ_{max}.

Purity: Typical analysis is better than 98% (HPLC / UV / 258 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: Due to its ability to form internal and polymeric salts 2-ADOA-cAMP has limited solubility in water or buffer, however, a ≥ 13 mM solution in water can be achieved. The compound is better soluble in dilute alkali of pH 9.5 and can, after dissolution, be titrated back to neutral. In addition, gentle heating and an ultrasonic bath usually helps to get complete dissolution. Please rinse tube walls carefully and preferably use ultrasonics or vortex to achieve total and uniform mixing. When opening the tube please make sure that no substance is lost within the cap.

Stability and Storage: 2-ADOA-cAMP is chemically stable under conditions of biological systems and media. 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 cAMP analogues will interfere with 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!

Selected References for 2-ADOA-cAMP: 2-ADOA-cAMP is a new structure which has been synthesized by BIOLOG LSI for the first time. There are no corresponding references available at present. For information on related compounds as well as on immobilized cyclic nucleotides please compare:

Moll, D.; Prinz, A.; Gesellchen, F.; Drewianka, S.; Zimmermann, B.; Herberg, F.W., *J. Neural. Transm.*, **113**, 1015 - 1032 (2006): "Biomolecular Interaction Analysis in Functional Proteomics"

Dills, W.L.; Beavo, J.A.; Bechtel, P.J.; Myers, K.R.; Sakai, L.J.; Krebs, E.G., *Biochemistry*, **15**, 3724 - 3730 (1976): "Binding of Adenosine 3', 5'- Monophosphate Dependent Protein Kinase Regulatory Subunit to Immobilized Cyclic Nucleotide Derivatives"