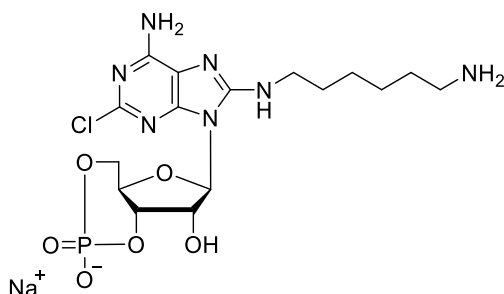


Technical Information about 8-AHA-2-Cl-cAMP

Site-selective activator of cAMP-dependent protein kinase

Update: July 02, 2018 HU



Abbreviation: **8-AHA-2-Cl-cAMP**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₁₆ H ₂₅ ClN ₇ O ₆ P	[pending]	477.8	λ _{max} 281 nm / ε 17000 / pH 7	A 199

Name: 8- (6- Aminohexylamino)- 2- chloroadenosine- 3', 5'- cyclic monophosphate

Description: 8-AHA-2-Cl-cAMP is an analogue of the natural signal molecule cyclic AMP in which the hydrogens in position 2 and 8 of the heterocyclic nucleobase are replaced by a chlorine atom and an aminohexylamino group, respectively.

Properties: 8-AHA-2-Cl-cAMP is an activator of cAMP-dependent protein kinase (PKA) with high selectivity for site B I of PKA. When it is combined with an A I-selective analogue (e.g. 6-Bnz-8-PIP-cAMP, Cat. No. B 055) synergistic activation of PKA type I is achieved.

Specification: Crystallized or lyophilized solid. Please keep in mind that equal concentrations of the compound may look 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 / 281 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: Due to its ability to form internal and polymeric salts the solubility of 8-AHA-2-Cl-cAMP is limited to approx. 3.5 - 4 mM in water. Please rinse tube walls carefully and preferably use ultrasonic 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: 8-AHA-2-Cl-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 cAMP has multiple tasks in every organism, it is possible 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!

Selected Reference for 8-AHA-2-Cl-cAMP:

Gausdal, G.; Wergeland, A.; Skavland, J.; Nguyen, E.; Pendino, F.; Rouhee, N.; McCormack, E.; Herfindal, L.; Kleppe, R.; Havemann, U.; Schwede, F.; Bruserud, Ø; Gjertsen, B.T.; Lanotte, M.; Ségal-Bendirdjian; Døskeland, S.O., *Cell Death Dis.*, **4** e516, (2013): "Cyclic AMP Can Promote APL Progression and Protect Myeloid Leukemia Cells Against Anthracycline-Induced Apoptosis"

Huseby, S.; Gausdal, G.; Keen, T.J.; Kjærland, E.; Krakstad, C.; Myhren, L.; Brønstad, K.; Kunick, C.; Schwede, F.; Genieser, H.-G.; Kleppe, R.; Døskeland, S.O., *Cell Death Dis.*, **2(12)**: e237 (2011): "Cyclic AMP Induces IPC Leukemia Cell Apoptosis via CRE-and CDK-dependent Bim Transcription"