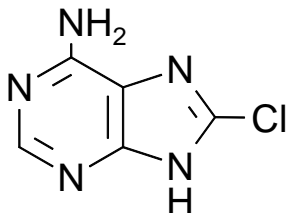


Technical Information about 8- Chloroadenine

Update: October 23, 2012 MP



Abbreviation: 8-Cl-Ade

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
C ₅ H ₄ ClN ₅	[28128-28-1]	169.6	λ _{max} 268 nm / ε 17000 / pH 7	C 023

Name: 8- Chloroadenine (8-Cl-Ade)

Description: 8-Chloroadenine is an analogue of adenine in which the hydrogen in position 8 of the heterocyclic nucleobase is replaced by a chlorine atom.

Properties: 8-Chloroadenine is of interest as starting structure for purine nucleobases, modified in position 8, and as reference for monitoring the degradation of 8-chloroadenine-containing nucleosides or nucleotides.

Specification: Crystallized or lyophilized solid. Equal concentrations of 8-Chloroadenine can appear very 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 95% (HPLC / UV / 268 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: 8-Chloroadenine has limited solubility in cold water but can be dissolved in 1n HCl. Alternatively, DMSO can be used. 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: 8-Chloroadenine 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 adenine has multiple tasks in every organism, it is very likely that lipophilic analogues could 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 Reference for 8-Chloroadenine:

Gandhi, V.; Chen, W.; Ayres, M.; Rhie, J. K.; Madden, T. L.; Newman, R. A., *Cancer Chemother. Pharmacol.*, **50**, 85 - 94 (2003): "Plasma and Cellular Pharmacology of 8-Chloro-Adenosine in Mice and Rats"

Whiteman, M.; Jenner, A.; Halliwell, B., *Biomarkers*, **4**, 303 - 310 (1999): "8-Chloroadenine: A Novel Product Formed from Hypochlorous Acid-induced Damage to Calf Thymus DNA"

Han, Z.; Chatterjee, D.; Wyche, J.H., *J. Pharmacol. Exp. Ther.*, **265**, 790 - 794 (1992): "Proliferation of Nontransformed Cells is Inhibited by Adenosine Metabolite of But Not by Parental 8-Cl-Cyclic AMP"