Technical Information about 8- Chloroinosine

Potential product of metabolic degradation of 8-chloro cyclic AMP

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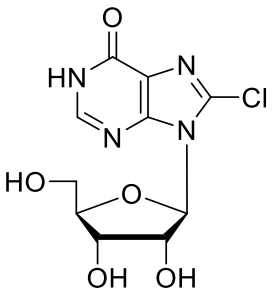

Abbreviation: **8-Cl-Ino**

Formula	CAS No.	Molecular Weight	UV	BIOLOG Cat. No.
$C_{10}H_{11}ClN_4O_5$	[116285-77-9]	302.7	λ_{max} 252 nm / ε 10500 / pH7	C 019

Name: 8- Chloroinosine (8-Cl-Ino)

Description: 8- Chloroinosine is an analog of inosine where the hydrogen in position 8 of the nucleobase has been replaced by chlorine.

Properties: 8- Chloroinosine could be one of the main metabolites of the tumor growth inhibitor 8-chloro cyclic AMP. Other metabolites of 8-Cl-cAMP and related structures are available as well: 8-Cl-5'-IMP, 8-Cl-5'-AMP, 8-Cl-5'-ADP, 8-Cl-5'-ATP, 8-Cl-adenine, 8-Cl-adenosine, Rp-8-Cl-cAMPS, 8-Cl-hypoxanthine and 8-Cl-xanthine. BIOLOG offers also the metabolically resistant form of 8-Cl-cAMP, Sp-8-Cl-cAMPS, which does not produce these metabolites but works solely as a cyclic AMP analog.

Specification: Crystallized or lyophilized solid. 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/ 252 nm). The product is not sterile.

Solubility: Due to its increased lipophilicity 8- chloroinosine has only poor solubility in cold water. However, if warmed up to 50^{O}C a 100 mM solution can be achieved. When opening the tube 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- Chloroinosine 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 inosine has multiple tasks in every organism, it is very likely that also analogs 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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Reference for 8- chloroinosine:

Lange-Carter, C.A.; Vuillequez, J.J.; Malkinson, A.M*., Cancer Res*., **53**, 393 - 400 (1992): "8-Chloroadenosine Mediates 8-Chloro-Cyclic AMP-Induced Down- Regulation of Cyclic AMP-dependent Protein Kinase in Normal and Neoplastic Mouse Lung Epithelial Cells by a Cyclic AMP-independent Mechanism"

Gandhi, V.; Ayres, M.; Halgren, R. G.; Krett, N. L.; Newman, R. A.; Rosen, S. T., *Cancer Res*., **61**, 5474 – 5479 (2001): "8-Chloro-cAMP and 8-Chloro-Adenosine Act by the Same Mechanism in Multiple Myeloma Cells"

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"

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