Technical Information about 2-Chloroadenosine

Update: April 24, 2014

Abbreviation: 2-Chloroadenosine (2-Cl-Ado) or 6-amino-2-chloropurine riboside

<table>
<thead>
<tr>
<th>Formula</th>
<th>CAS No.</th>
<th>Molecular Weight</th>
<th>UV</th>
<th>BIOLOG Cat. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C_{10}H_{12}ClN_{5}O_{4}</td>
<td>[146-77-0]</td>
<td>301.7</td>
<td>$\lambda_{\text{max}}$ 263 nm / $\varepsilon$ 14000 / pH 7</td>
<td>C 017</td>
</tr>
</tbody>
</table>

Name: 2-Chloroadenosine (2-Cl-Ado) or 6-amino-2-chloropurine riboside

Description: 2-Cl-Ado is an analogue of adenosine where the hydrogen in position 2 of the adenine nucleobase has been replaced by chlorine.

Properties: Non-metabolizable, selective A(1) adenosine receptor agonist and useful as starting structure for nucleosides and nucleotides modified in position 2 of the purine nucleobase.

Specification: Crystallized or lyophilized solid. Equal concentrations of 2-Cl-Ado 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. Micro molar quantities are determined by UV at $\lambda_{\text{max}}$.

Purity: Typical analysis is better than 98% (HPLC / UV / 263 nm). The product is not sterile and has not been tested for endotoxins.

Solubility: Due to its increased lipophilicity the solubility of 2-Cl-Ado in water or buffer is limited. It is a good idea to dissolve first in a small volume of dimethyl sulfoxide (DMSO) and to pipet subsequently into the aqueous stock solution needed. 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: 2-Cl-Ado 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 adenosine has multiple tasks in every organism, it is very likely that also 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 References for 2-Cl-Ado:


