

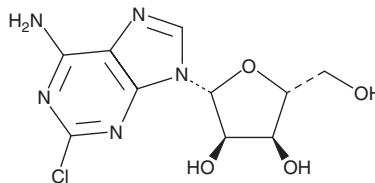
PRODUCT INFORMATION



2-Chloroadenosine

Item No. 15612

CAS Registry No.: 146-77-0
Formal Name: 2-chloro-adenosine
Synonyms: Antibiotic AT-265B, CADO, NSC 36896
MF: C₁₀H₁₂ClN₅O₄
FW: 301.7
Purity: ≥98%
UV/Vis.: λ_{max}: 210, 264 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

2-Chloroadenosine is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-chloroadenosine in the solvent of choice, which should be purged with an inert gas. 2-Chloroadenosine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 2-chloroadenosine in these solvents is approximately 0.25, 2.5, and 2 mg/ml, respectively.

2-Chloroadenosine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2-chloroadenosine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 2-Chloroadenosine has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

2-Chloroadenosine (CADO) is a metabolically stable analog of adenosine that binds to adenosine A₁, A_{2A}, and A₃ receptors with K_i values of 300, 80, and 1,900 nM, respectively.¹ CADO has been used to activate adenosine receptors in the thalamus, generating anticonvulsive activity in a rat model of generalized seizures.² It has also been used to induce bronchoconstrictor effects in a guinea pig model of asthma and to study cardiovascular responses in normotensive and hypertensive rats.^{1,3}

References

1. Mathôt, R.A.A., Soudijn, W., Breimer, D.D., *et al.* Pharmacokinetic-haemodynamic relationships of 2-chloroadenosine at adenosine A₁ and A_{2a} receptors *in vivo*. *Br. J. Pharmacol.* **118(2)**, 369-77 (1996).
2. Ates, N., Ilbay, G., and Sahin, D. Suppression of generalized seizures activity by intrathalamic 2-chloroadenosine application. *Exp. Biol. Med. (Maywood)* **230(7)**, 501-5 (2005).
3. Manzini, S. and Ballati, L. 2-Chloroadenosine induction of vagally-mediated and atropine-resistant bronchomotor responses in anaesthetized guinea-pigs. *Br. J. Pharmacol.* **100(2)**, 251-256 (1990).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/21/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM