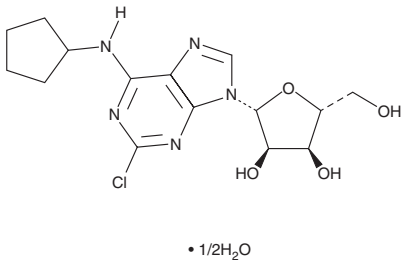
PRODUCT INFORMATION

2-chloro-N^6-Cyclopentyladenosine (hydrate)

Item No. 28731

CAS Registry No.: 1217443-91-8
Formal Name: 2-chloro-N-cyclopentyl-adenosine, hemihydrate
Synonym: CCPA
MF: $C_{15}H_{20}ClN_5O_4 \bullet 0.5H_2O$
FW: 378.8
Purity: ≥98%
UV/Vis.: λ_{max}: 217, 275 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



• 1/2H_2O

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

Laboratory Procedures

2-chloro-N^6-Cyclopentyladenosine (hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-chloro-N^6-cyclopentyladenosine (hydrate) in the solvent of choice, which should be purged with an inert gas. 2-chloro-N^6-Cyclopentyladenosine (hydrate) is soluble in the organic solvent DMSO. 2-chloro-N^6-Cyclopentyladenosine (hydrate) is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

2-chloro-N^6-Cyclopentyladenosine is an adenosine receptor agonist.[1] It binds selectively to adenosine A_1 receptors over A_{2A} and A_3 receptors with K_i values of 0.83, 2,300 and 42 nM, respectively, for the human recombinant receptors expressed in CHO cells. 2-chloro-N^6-Cyclopentyladenosine decreases heart rate in isolated rat atria (EC_{50} = 8.2 nM) but does not affect vasodilation in bovine coronary arteries.[2] It inhibits convulsions induced by isoniazid (Item No. 20378) and pentylenetetrazole (Item No. 18682) in mice when administered at a dose of 8.3 µmol/kg.[3]

References

1. Cristalli, G., Camaioni, E., Costanzi, S., *et al.* Characterization of potent ligands at human recombinant adenosine receptors. *Drug Develop. Res.* **45(3-4)**, 176-181 (1998).
2. Monopoli, A., Conti, A., Dionisotti, S., *et al.* Pharmacology of the highly selective A1 adenosine receptor agonist 2-chloro-N6-cyclopentyladenosine. *Arzneimittelforschung* **44(12)**, 1305-1312 (1994).
3. Concas, A., Santoro, G., Mascia, M.P., *et al.* Anticonvulsant doses of 2-chloro-N^6-cyclopentyladenosine, an adenosine A_1 receptor agonist, reduce GABAergic transmission in different areas of the mouse brain. *J. Pharmacol. Exp. Ther.* **267(2)**, 844-851 (1993).

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