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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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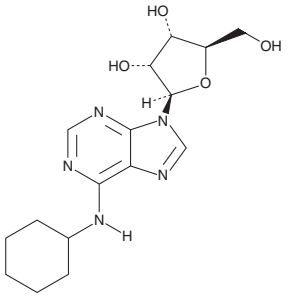
PRODUCT INFORMATION

N^6-Cyclohexyladenosine

Item No. 28427



CAS Registry No.:	36396-99-3
Formal Name:	N-cyclohexyl-adenosine
MF:	$C_{16}H_{23}N_5O_4$
FW:	349.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 212, 269 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years

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

Laboratory Procedures

N^6-Cyclohexyladenosine is supplied as a crystalline solid. A stock solution may be made by dissolving the N^6-cyclohexyladenosine in the solvent of choice, which should be purged with an inert gas. N^6-Cyclohexyladenosine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of N^6-cyclohexyladenosine in these solvents is approximately 3, 5, and 20 mg/ml, respectively.

N^6-Cyclohexyladenosine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, N^6-cyclohexyladenosine should first be dissolved in DMSO or DMF and then diluted with the aqueous buffer of choice. N^6-Cyclohexyladenosine has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) and 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

N^6-Cyclohexyladenosine is an adenosine receptor agonist.[1] It selectively binds to adenosine A_1 receptors in rat cortical membranes (IC_{50} = 2.3 nM) over A_2 receptors in rat striatal membranes (IC_{50} = 870 nM). N^6-Cyclohexyladenosine decreases heart rate and increases coronary flow in a perfused working rat heart model *ex vivo* (EC_{25}s = 5 and 860 nM, respectively). *In vivo*, it decreases heart rate and blood pressure in normotensive rats (EC_{25}s = 2.4 and 4.2 µg/kg, respectively).[1] N^6-Cyclohexyladenosine (100 µM) induces sleep in rats when administered *via* basal forebrain infusion.[2] N^6-Cyclohexyladenosine also decreases locomotor activity in mice (ED_{50} = 60 µg/kg, i.p.).[3]

References

1. Hutchison, A.J., Webb, R.L., Oei, H.H., *et al.* CGS 21680C, an A_2 selective adenosine receptor agonist with preferential hypotensive activity. *J. Pharmacol. Exp. Ther.* **251(1)**, 47-55 (1989).
2. Blanco-Centurion, C., Xu, M., Murillo-Rodriguez, E., *et al.* Adenosine and sleep homeostasis in the basal forebrain. *J Neurosci.* **26(31)**, 8092-8100 (2006).
3. Nikodijević, O., Daly, J.W., and Jacobson, K.A. Characterization of the locomotor depression produced by an A_2-selective adenosine agonist. *FEBS Lett.* **261(1)**, 67-70 (1990).

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