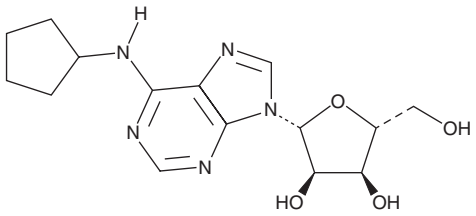
PRODUCT INFORMATION

N^6-Cyclopentyladenosine

Item No. 21448

CAS Registry No.: 41552-82-3
Formal Name: N-cyclopentyl-adenosine
Synonyms: CPA, UK 80882
MF: $C_{15}H_{21}N_5O_4$
FW: 335.4
Purity: ≥98%
Supplied as: A 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

N^6-Cyclopentyladenosine is supplied as a solid. A stock solution may be made by dissolving the N^6-cyclopentyladenosine in the solvent of choice. N^6-Cyclopentyladenosine is soluble in organic solvents such as ethanol and DMSO, which should be purged with an inert gas. The solubility of N^6-cyclopentyladenosine in DMSO is approximately 100 mM and approximately 25 mM in ethanol (warmed).

Description

N^6-Cyclopentyladenosine is a selective agonist at adenosine 1 receptors (A_1Rs) (K_is = 2.3, 790, and 43 nM for A_1R, A_2R, and A_3R receptors, respectively, in transfected CHO cells).[1,2] When microinjected into the rat brainstem, it increases blood pressure and heart rate.[3] It is effective for pain in normal and nerve-injured rats and shows anticonvulsant activity in a rat model of generalized seizures.[4,5]

References

1. Klotz, K.-N. Adenosine receptors and their ligands. *Naunyn-Schmiedeberg's Arch. Pharmacol.* **362(4)**, 382-391 (2000).
2. Klotz, K.-N., Hessling, J., Hegler, J., *et al.* Comparative pharmacology of human adenosine receptor subtypes - characterization of stably transfected receptors in CHO cells. *Naunyn-Schmiedeberg's Arch. Pharmacol.* **357(1)**, 1-9 (1998).
3. Barraco, R.A., el-Ridi, M.R., Ergene, E., *et al.* Adenosine receptor subtypes in the brainstem mediate distinct cardiovascular response patterns. *Brain Res. Bull.* **26(1)**, 59-84 (1991).
4. Gong, Q.-J., Li, Y.-Y., Xin, W.-J., *et al.* Differential effects of adenosine A_1 receptor on pain-related behavior in normal and nerve-injured rats. *Brain Res.* **1361**, 23-30 (2010).
5. Jaishree, J., Kumaresan, S., Sudha, S., *et al.* Individual and combined effects of N^6-cyclopentyladenosine, flunarizine and diazepam on aminophylline-induced recurrent generalized seizures in mice. *Pol. J. Pharmacol.* **55(4)**, 559-564 (2003).

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