N6-Cyclopentyladenosine

Cat. No.: HY-103181

CAS No.: 41552-82-3

Molecular Formula: $C_{15}H_{21}N_5O_4$

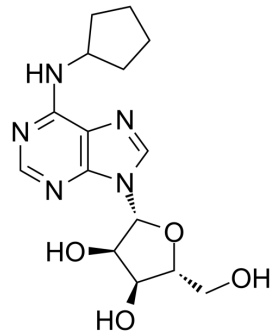
Molecular Weight: 335.36

Target: Adenosine Receptor

Pathway: GPCR/G Protein

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 12.5 mg/mL (37.27 mM; Need ultrasonic)

H_2O : 2.5 mg/mL (7.45 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.9819 mL	14.9094 mL	29.8187 mL
5 mM	0.5964 mL	2.9819 mL	5.9637 mL
10 mM	0.2982 mL	1.4909 mL	2.9819 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.25 mg/mL (3.73 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (3.73 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (3.73 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

N6-Cyclopentyladenosine (CPA) is a selective Adenosine A_1 receptor agonist, with K_i values of 2.3 nM, 790 nM and 43 nM for human A_1, A_{2A} and A_3 receptors, respectively[1][2].

IC_{50} & Target

Ki: 2.3 nM (A_1), 790 nM (A_{2A}), 43 nM(A_3)[1].

REFERENCES

[1]. Klotz KN, et al. Adenosine receptors and their ligands. Naunyn Schmiedebergs Arch Pharmacol. 2000 Nov;362(4-5):382-91.

[2]. Soliño M, et al. Adenosine A1 receptor: A neuroprotective target in light induced retinal degeneration. PLoS One. 2018 Jun 18;13(6):e0198838.

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