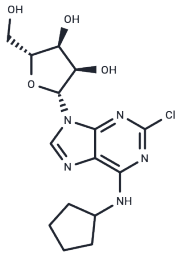
Data Sheet (Cat.No.T21519)

TargetMol

CCPA

Chemical Properties



CAS No. : 37739-05-2

Formula: C15H20ClN5O4

Molecular Weight: 369.8

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	CCPA (2-chloro-N(6)cyclopentyladenosine) is a potent and selective agonist of adenosine A1 receptor
Targets(IC50)	Apoptosis,Nucleoside Antimetabolite/Analog,Adenosine Receptor
In vitro	CCPA suppressed the mRNA and protein expressions of CnAβ and exerted antihypertrophic effects to a greater degree than CsA. The inhibition of CCPA on cardiomyocyte hypertrophy was counteracted by the A1 receptor antagonist DPCPX[1].
In vivo	CCPA (CCPA) was synthesized as a potential high affinity ligand for A1 adenosine receptors. Binding of [3H]PIA to A1 receptors of rat brain membranes was inhibited by CCPA with a Ki-value of 0.4 nM, compared to a Ki-value of 0.8 nM for the parent compound N6-cyclopentyladenosine (CPA)[2].

Solubility Information

Solubility	DMSO: 55 mg/mL (148.73 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.41 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7042 mL	13.5208 mL	27.0416 mL
5 mM	0.5408 mL	2.7042 mL	5.4083 mL
10 mM	0.2704 mL	1.3521 mL	2.7042 mL
50 mM	0.0541 mL	0.2704 mL	0.5408 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Zhang X , Xia J , Qian D , et al. An adenosine A1 agonist 2-chloro-N6 cyclopentyladenosine inhibits the angiotensin II-induced cardiomyocyte hypertrophy through the calcineurin pathway.[J]. Cardiology, 2014, 129(3):153-62.
Zhang L, Chen X, Li M, et al.Activation of the adenosine A1 receptor in the lumbosacral spinal cord improves bladder overactivity in rats with cystitis induced by cyclophosphamide.International Urology and Nephrology. 2023: 1-9.
Lohse M J , Klotz K N , Schwabe U , et al. 2-Chloro-N6-cyclopentyladenosine: a highly selective agonist at A1 adenosine receptors[J]. Naunyn-Schmiedeberg's Archives of Pharmacology, 1988, 337(6):687-689.