

Product Name: DPCPX

Catalog No.: 0439

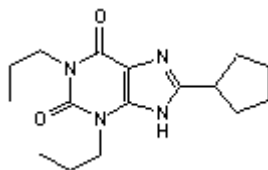
Batch No.: 9

CAS Number: 102146-07-6

IUPAC Name: 8-Cyclopentyl-1,3-dipropylxanthine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆H₂₄N₄O₂
Batch Molecular Weight: 304.39
Physical Appearance: White solid
Solubility: DMSO to 5 mM
 ethanol to 10 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.29 (Ethyl acetate:Petroleum ether [1:9])
Melting Point: Between 193 - 196°C
HPLC: Shows >99.6% purity
¹H NMR: Consistent with structure

	Carbon Hydrogen Nitrogen			
	Theoretical	63.13	7.95	18.41
Found	63.04	7.93	18.23	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent and selective A₁ adenosine receptor antagonist, both in vitro and in vivo. K_i values are 3.9, 130, 50 and 4000 nM for human A₁, A_{2A}, A_{2B} and A₃ receptors respectively.

Physical and Chemical Properties:

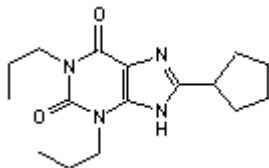
Batch Molecular Formula: C₁₆H₂₄N₄O₂

Batch Molecular Weight: 304.39

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 5 mM

ethanol to 10 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Von der Leyen (1989) Effects of 1,3-dipropyl-8-cyclopentylxanthine (DPCPX), a highly selective adenosine receptor antagonist, on force of contraction in guinea-pig atrial and ventricular cardiac preparations. *Naunyn Schmiedebergs Arch.Pharmacol.* **340** 204. PMID: 2554151.

Kuan et al (1992) An experimental paradigm for investigating the role of endogenous adenosine/A₁ receptor interactions *in vivo*. *J.Pharmacol.Exp.Ther.* **263** 657. PMID: 1432696.

Klotz (2000) Adenosine receptors and their ligands. *Naunyn Schmiedebergs Arch.Pharmacol.* **362** 382. PMID: 11111832.

Canals et al (2008) Metabolic challenge to glia activates an adenosine-mediated safety mechanism that promotes neuronal survival by delaying the onset of spreading depression waves. *J.Cereb.Blood Flow Metab.* **28** 1835. PMID: 18612316.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956