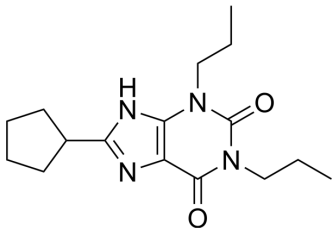
DPCPX

Cat. No.:	HY-100937
CAS No.:	102146-07-6
Molecular Formula:	$C_{16}H_{24}N_4O_2$
Molecular Weight:	304.39
Target:	Adenosine Receptor
Pathway:	GPCR/G Protein
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 10 mg/mL (32.85 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.2853 mL	16.4263 mL	32.8526 mL
5 mM	0.6571 mL	3.2853 mL	6.5705 mL
10 mM	0.3285 mL	1.6426 mL	3.2853 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1 mg/mL (3.29 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

DPCPX (PD 116948), a xanthine derivative, is a highly potent and selective Adenosine A1 receptor antagonist, with a K_i of 0.46 nM in ^{3}H-CHA binding to A1 receptors in rat whole brain membranes[1][2][3].

IC_{50} & Target

Ki: 0.46 nM (^{3}H-CHA binding to A1 receptors in rat whole brain membranes); 340 nM (^{3}H-NECA binding to A2 receptors in rat striatal membranes)[2].

In Vivo

DPCPX (PD 116948) (0.1, 0.3 and 1.0 mg/kg i.v.) produces significant dose-related increases (P<0.05) in urine volume and in urinary sodium, potassium and chloride excretion[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Commun. 2023 Jun 8;14(1):3364.
- Redox Biol. 2023 Nov, 67, 102884.
- J Neurochem. 2022 Jul 1.

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REFERENCES

[1]. S J Haleen, et al. PD 116,948, a Highly Selective A1 Adenosine Receptor Antagonist. Life Sci. 1987 Feb 9;40(6):555-61.

[2]. R F Bruns, et al. Binding of the A1-selective Adenosine Antagonist 8-cyclopentyl-1,3-dipropylxanthine to Rat Brain Membranes. Naunyn Schmiedebergs Arch Pharmacol. 1987 Jan;335(1):59-63.

[3]. POSTER COMMUNICATIONS Part II. Br J Pharmacol. 1989 Jul; 97(Suppl): 496P–535P.

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