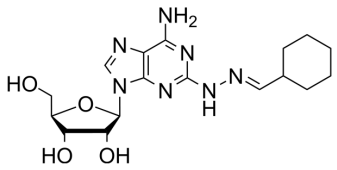
Binodenoson

Cat. No.:	HY-106450
CAS No.:	144348-08-3
Molecular Formula:	$C_{17}H_{25}N_7O_4$
Molecular Weight:	391.42
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 : 125 mg/mL (319.35 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5548 mL	12.7740 mL	25.5480 mL
	5 mM	0.5110 mL	2.5548 mL	5.1096 mL
	10 mM	0.2555 mL	1.2774 mL	2.5548 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: ≥ 2.08 mg/mL (5.31 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.31 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.31 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Binodenoson (MRE-0470) is a potent and selective A2A adenosine receptor agonist (K_D=270 nM). Binodenoson is being developed as a short-acting coronary vasodilator as an adjunct to radiotracers for use in myocardial stress imaging[1].

In Vitro

Binodenoson (MRE-0470) (30-300 nM) decreases oxidative activity of tumor necrosis factor-α–primed FMLP-stimulated polymorphonuclear leukocytes in human whole blood and acts synergistically with Rolipram[1].

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

In Vivo	Binodenoson (infused 0-0.9 μg/kg/h; adult Wistar rat; rat bacterial meningitis model), with or without rolipram (0-0.01 μg/kg/h), inhibits pleocytosis and reduces the lipopolysaccharide-induced increase in blood-brain barrier permeability (BBBP), indicative of decreased neutrophil-induced damage[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Sullivan GW, et al. Neutrophil A2A adenosine receptor inhibits inflammation in a rat model of meningitis: synergy with the type IV phosphodiesterase inhibitor, rolipram. J Infect Dis. 1999;180(5):1550-1560.

[2]. Glover DK, et al. Pharmacological stress thallium scintigraphy with 2-cyclohexylmethylidenehydrazinoadenosine (WRC-0470). A novel, short-acting adenosine A2A receptor agonist. Circulation. 1996;94(7):1726-1732.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA