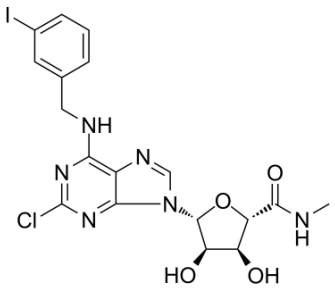
Namodenoson

Cat. No.:	HY-12365
CAS No.:	163042-96-4
Molecular Formula:	$C_{18}H_{18}ClIN_6O_4$
Molecular Weight:	544.73
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 : ≥ 31 mg/mL (56.91 mM)

H_2O : < 0.1 mg/mL (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	1.8358 mL	9.1789 mL	18.3577 mL
5 mM	0.3672 mL	1.8358 mL	3.6715 mL
10 mM	0.1836 mL	0.9179 mL	1.8358 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: 5.5 mg/mL (10.10 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 5.5 mg/mL (10.10 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5.5 mg/mL (10.10 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Namodenoson (CF-102) is a selective A3 adenosine receptor (A3AR) agonist (K_i=0.33 nM). Namodenoson displays 2500- and 1400-fold selectivity over A1 and A2A receptors respectively[1][2].

IC_{50} & Target

Ki:0.33 nM (A3 adenosine receptor)[1][2].

In Vitro	In human ADF cells of astroglial lineage, 100 nM Namodenoson (2-Cl-IB-MECA) caused a marked reorganization of the cytoskeleton, with appearance of stress fibres and numerous cell protrusions. High concentrations of Namodenoson (2-Cl-IB-MECA) directly cause influx of $Ca2+$[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Intravenous administration of 200 μg/kg Namodenoson (2-Cl-IB-MECA) resulted in a short-lasting hypotension, which was accompanied by a 50-100-fold increase in plasma histamine concentrations. Administration of a second dose of Namodenoson (2-Cl-IB-MECA) did not elicit any hemodynamic effects[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Van Schaick EA et al. Hemodynamic effects and histamine release elicited by the selective adenosine A3 receptor agonist 2-Cl-IB-MECA in conscious rats. Eur J Pharmacol. 1996 Jul 25;308(3):311-4.

[2]. Jacobson KA et al. Adenosine A3 receptors: novel ligands and paradoxical effects. Trends Pharmacol Sci. 1998 May;19(5):184-91.

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