CE-224535

Cat. No.: HY-15487

CAS No.: 724424-43-5

Molecular Formula: $C_{22}H_{29}ClN_4O_6$

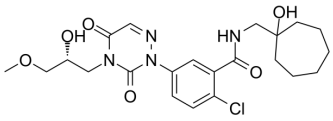
Molecular Weight: 480.94

Target: P2X Receptor

Pathway: Membrane Transporter/Ion Channel

Storage: -20°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (207.93 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0793 mL	10.3963 mL	20.7926 mL
	5 mM	0.4159 mL	2.0793 mL	4.1585 mL
	10 mM	0.2079 mL	1.0396 mL	2.0793 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: ≥ 10 mg/mL (20.79 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 10 mg/mL (20.79 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 10 mg/mL (20.79 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CE-224535 is a selective $P2X_7$ receptor antagonist.

IC_{50} & Target

$P2X_7$ receptor[1]

In Vitro

CE-224535 is developed as a disease-modifying antirheumatic drugs (DMARD) and is a selective antagonist of the human $P2X_7$ receptor. CE-224535 can reduce leukocyte secretion of IL-1 and IL-18, thereby providing a novel therapeutic approach for treatment of rheumatoid arthritis (RA)[1].

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

In Vivo	In rats, CE-224535 has low CL_p (11 mL/min/kg) and a large V_{dss} of 7.6 L/kg, which results in a half-life of 2.4 h. Upon oral administration to rats at 5 mg/kg, CE-224535 provides maximal plasma exposure (C_{max}) that is ~90 fold over its IC_{90} in human blood (C_{max}=0.21 μg/mL or 0.44 μM). The oral bioavailability of CE-224535 is low in rats (F=2.6%), but this is believed to be a rat specific phenomenon since corresponding oral bioavailability in both dog (59%) and monkey (22%) is adequate[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Stock TC, et al. Efficacy and safety of CE-224,535, an antagonist of P2X7 receptor, in treatment of patients with rheumatoid arthritis inadequately controlled by methotrexate. J Rheumatol. 2012 Apr;39(4):720-7.

[2]. Duplantier AJ, et al. Optimization of the physicochemical and pharmacokinetic attributes in a 6-azauracil series of P2X7 receptor antagonists leading to the discovery of the clinical candidate CE-224,535. Bioorg Med Chem Lett. 2011 Jun 15;21(12):3708-11

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