MM 419447

Cat. No.: HY-P3282

CAS No.: 1092457-78-7

Molecular Formula: $C_{50}H_{70}N_{14}O_{19}S_6$

Molecular Weight: 1363.56

Sequence Shortening: CCEYCCNPACTGC (Disulfide bridge:Cys1-Cys6; Cys2-Cys10; Cys5-Cys13)

CCEYCCNPACTGC (Disulfide bridge:Cys_1-Cys_6; Cys_2-Cys_{10}; Cys_5-Cys_{13})

Target: Guanylate Cyclase

Pathway: GPCR/G Protein

Storage: Sealed storage, away from moisture

Powder -80°C 2 years

-20°C 1 year

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

SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (73.34 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.7334 mL	3.6669 mL	7.3337 mL
	5 mM	0.1467 mL	0.7334 mL	1.4667 mL
	10 mM	0.0733 mL	0.3667 mL	0.7334 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (1.83 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (1.83 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MM 419447, a linaclotide metabolite, is a guanylate cyclase-C agonist. MM 419447 has the potential for the research of the irritable bowel syndrome with constipation (IBS-C)[1].

In Vitro

MM 419447 exhibits high-affinity binding to T84 cells, resulting in a significant, concentration-dependent accumulation of intracellular cyclic guanosine-39,59-monophosphate (cGMP)[1].

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

In Vivo

MM 419447 (10 mg/kg; p.o.) treatment shows the C_{max}, AUC_{0-6} and $t_{1/2}$ values of 27 ng/mL, ≤ 29.7 ng h/mL and 0.33 hours,

respectively[1]

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

Animal Model:	Female Sprague-Dawley rats[1]
Dosage:	10 mg/kg
Administration:	P.o. (Pharmacokinetic Analysis)
Result:	The C_{max}, AUC_{0-6} and T_{max} were 27 ng/mL, ≤ 29.7 ng h/mL and 0.33 hours, respectively.

REFERENCES

[1]. Busby RW, et al. Pharmacologic properties, metabolism, and disposition of linaclotide, a novel therapeutic peptide approved for the treatment of irritable bowel syndrome with constipation and chronic idiopathic constipation. J Pharmacol Exp Ther. 2013;344

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