MMP-9/MMP-13 Inhibitor I

Cat. No.: HY-128026

CAS No.: 204140-01-2

Molecular Formula: $C_{25}H_{25}N_3O_6S$

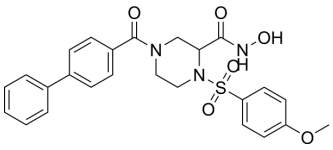
Molecular Weight: 495.55

Target: MMP

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (504.49 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.0180 mL	10.0898 mL	20.1796 mL
5 mM	0.4036 mL	2.0180 mL	4.0359 mL
10 mM	0.2018 mL	1.0090 mL	2.0180 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 (4.20 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.20 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.20 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MMP-9/MMP-13 Inhibitor I is a potent MMP-9 and MMP-13 inhibitor with IC_{50}s of both 0.9 nM. MMP-9/MMP-13 Inhibitor I shows >20-folds selectivity for MMP-9/MMP-13 over other MMPs[1].

IC_{50} & Target

MMP-9 0.9 nM (IC_{50})	MMP-13 0.9 nM (IC_{50})	MMP-1 43 nM (IC_{50})	MMP-3 23 nM (IC_{50})
MMP-7 931 nM (IC_{50})			

In Vitro	MMP-9/MMP-13 Inhibitor I (compound 35) inhibits MMP-1, MMP-3, and MMP-7 with IC_{50} values of 43 nM, 23 nM, and 931 nM, respectively[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. M Cheng, et al. Design and synthesis of piperazine-based matrix metalloproteinase inhibitors. J Med Chem. 2000 Feb 10;43(3):369-80.

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