SC-57461A

Cat. No.: HY-103226

CAS No.: 423169-68-0

Molecular Formula: $C_{20}H_{26}ClNO_3$

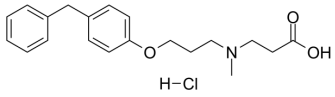
Molecular Weight: 364

Target: Aminopeptidase

Pathway: Metabolic Enzyme/Protease

Storage: 4°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 : 250 mg/mL (686.81 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7473 mL	13.7363 mL	27.4725 mL
	5 mM	0.5495 mL	2.7473 mL	5.4945 mL
	10 mM	0.2747 mL	1.3736 mL	2.7473 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 (5.71 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.71 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.71 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SC-57461A is a potent, orally active, nonpeptide, and selective inhibitor of Leukotriene A4 (LTA4) hydrolase with IC_{50}s of 2.5 nM, 3 nM, and 23 nM for recombinant human, mouse, and rat LTA4 hydrolase, respectively[1].

In Vitro

SC-57461A inhibits ionophore-stimulated LTB4 production in whole blood with IC_{50}s of 49, 166, and 466 nM in human mouse and rat, respectively[1].SC-57461A demonstrates excellent potency against LTA4 hydrolase (IC_{50}=2.5 nM) and in whole cells (IC_{50}=49 nM)[2]<

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

In Vivo

SC-57461A also shows excellent potency in the mouse ex vivo assay, inhibiting the production of LTB4 with an ED_{50}=0.2

mg/kg and an ED_{90}=1 mg/kg. SC-57461A also inhibits the production of LTB4 in the rat peritoneal model with an ED_{50}=1 mg/kg[2]. SC-57461A is a potent, selective, and competitive inhibitor of LTA4 hydrolase with excellent activity in whole animals. SC-57461A demonstrates good oral activity in both the mouse and the rat[3].

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

Animal Model:	Fasted CD rats[3]
Dosage:	0.01, 0.1, 1, and 10 mg/kg
Administration:	Orally administered
Result:	The ED_{50} values were 0.2 mg/kg at 1.0 h and 0.8 mg/kg at 3.0 h. A single dose of 10 mg/kg blocked LTB4 production 79% at 6 h, 67% at 18 h, and 44% at 24 h.

REFERENCES

[1]. Leslie J Askonas, et al. Pharmacological characterization of SC-57461A (3-[methyl[3-[4-(phenylmethyl)phenoxy]propyl]amino]propanoic acid HCl), a potent and selective inhibitor of leukotriene A(4) hydrolase I: in vitro studies. J Pharmacol Exp Ther. 2002 F

[2]. T D Penning. Inhibitors of leukotriene A4 (LTA4) hydrolase as potential anti-inflammatory agents. Curr Pharm Des. 2001 Feb;7(3):163-79.

[3]. James F Kachur, et al. Pharmacological characterization of SC-57461A (3-[methyl[3-[4-(phenylmethyl)phenoxy]propyl]amino]propanoic acid HCl), a potent and selective inhibitor of leukotriene A(4) hydrolase II: in vivo studies. J Pharmacol Exp Ther. 2002 Feb

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