Ladarixin

Cat. No.: HY-19519

CAS No.: 849776-05-2

Molecular Formula: $C_{11}H_{12}F_3NO_6S_2$

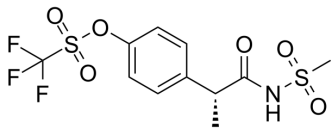
Molecular Weight: 375.34

Target: CXCR

Pathway: GPCR/G Protein; Immunology/Inflammation

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 : 100 mg/mL (266.43 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6643 mL	13.3213 mL	26.6425 mL
	5 mM	0.5329 mL	2.6643 mL	5.3285 mL
	10 mM	0.2664 mL	1.3321 mL	2.6643 mL

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

In Vivo

1. Add each solvent one by one: 50% PEG300 >> 50% saline
   Solubility: 10 mg/mL (26.64 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.66 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.66 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.66 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ladarixin (DF 2156A free base) is an orally active, allosteric non-competitive and dual CXCR1 and CXCR2 antagonist. Ladarixin can be used for the research of COPD and asthma[1].

In Vitro

Ladarixin inhibits human polymorphonuclear leukocyte (PMN) migration to CXCL8 (IC_{50} at 0.7 nM)[2].

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

In Vivo

Ladarixin (10 mg/kg; p.o. once a day) reduces allergic airway inflammation in a model of single OVA exposure. Ladarixin reduces allergic airway inflammation, remodeling, and bronchial hyperreactivity in a model of chronic OVA exposure[1].

Ladarixin (10 mg/kg; p.o. once a day for 8 days) reduces pulmonary inflammation and fibrosis induced by bleomycin in mice [1].

Ladarixin (10 mg/kg; p.o. once a day for 3 days) protects mice from cigarette smoke-induced exacerbation of influenza-A infection[1].

Ladarixin is also effective in decreasing CXCL8-induced polymorphonuclear leukocyte infiltration in several animal models without a significant dose-related reduction in systemic neutrophil counts[2].

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

Animal Model:	Mice (cigarette smoke-induced exacerbation of Influenza-A infection model)[1]
Dosage:	10 mg/kg
Administration:	P.o. once a day at days 2, 3 and 4 post-infection
Result:	Significantly attenuated the exacerbation in lethality and respiratory changes noted in CSFlu group.

REFERENCES

[1]. Matheus Silverio Mattos, et al. CXCR1 and CXCR2 Inhibition by Ladarixin Improves Neutrophil-Dependent Airway Inflammation in Mice. Front Immunol. 2020 Oct 2;11:566953.

[2]. Daria Marley Kemp, et al. Ladarixin, a dual CXCR1/2 inhibitor, attenuates experimental melanomas harboring different molecular defects by affecting malignant cells and tumor microenvironment. Oncotarget. 2017 Feb 28;8(9):14428-14442

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