Ladarixin

Cat. No.: HY-19519
CAS No.: 849776-05-2
Molecular Formula: C_{11}H_{12}F_{3}NO_{6}S_{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

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.6643 mL</td>
<td>13.3213 mL</td>
<td>26.6425 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5329 mL</td>
<td>2.6643 mL</td>
<td>5.3285 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2664 mL</td>
<td>1.3321 mL</td>
<td>2.6643 mL</td>
</tr>
</tbody>
</table>

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.
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.

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### REFERENCES
