TD139

Cat. No.: HY-19940
CAS No.: 1450824-22-2
Molecular Formula: C₂₈H₃₀F₂N₆O₈S
Molecular Weight: 648.64
Target: Galectin
Pathway: 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: 50 mg/mL (77.08 mM; Need ultrasonic)
- Ethanol: ≥ 3.33 mg/mL (5.13 mM)
- H₂O: < 0.1 mg/mL (insoluble)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass (mg/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>50.00</td>
</tr>
<tr>
<td>Ethanol</td>
<td>≥ 3.33</td>
</tr>
<tr>
<td>H₂O</td>
<td>&lt; 0.1</td>
</tr>
</tbody>
</table>

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.5417 mL</td>
<td>7.7084 mL</td>
<td>15.4169 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3083 mL</td>
<td>1.5417 mL</td>
<td>3.0834 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1542 mL</td>
<td>0.7708 mL</td>
<td>1.5417 mL</td>
</tr>
</tbody>
</table>

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

In Vivo
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
  Solubility: ≥ 2.5 mg/mL (3.85 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
  Solubility: ≥ 2.5 mg/mL (3.85 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
  Solubility: ≥ 2.5 mg/mL (3.85 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
TD139 is an inhaled galectin-3 inhibitor with a Kᵰ of 14 nM.

IC₅₀ & Target
Kd: 14 nM (galectin-3) [1]
In Vitro

TD139 is a novel synthetic inhibitor of galectin-3. TD139 has high affinity for galectin-3 with a $K_d$ of 14 nM and 10 nM for galectin-1, but low affinity for galectins 2, 4N, 4C, 7, 8N, or 9N[1].

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

In Vivo

In primary lung AECs TD139 reduces TGF-$\beta$1–induced $\beta$-catenin translocation to the nucleus, with most of the $\beta$-catenin remaining at the cell surface. TD139 blocks TGF-$\beta$1–induced $\beta$-catenin phosphorylation. A marked reduction in fibrosis and $\beta$-catenin activation accompanied by decreased galectin-3 expression is observed in the lungs of WT mice treated with TD139[1]. Pretreatment of WT C57BL/6 mice with TD139 leads to the attenuation of liver injury and milder infiltration of IFN$\gamma$- and IL-17- and -4-producing CD4(+) T cells, as well as an increase in the total number of IL-10-producing CD4(+) T cells and F4/80(+) CD206(+) alternatively activates macrophages and prevents the apoptosis of liver-infiltrating MNCs[2].

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

PROTOCOL

Animal Administration[2]

Mice: The susceptibility to Con A-induced hepatitis in galectin-3-deficient mice is tested and the effects of pretreatment with a selective inhibitor of Gal-3 (TD139) in wild-type(WT) C57BL/6 mice are analyzed, as evaluated by a liver enzyme test, quantitative histology, mononuclear cell (MNC) infiltration, cytokine production, intracellular staining of immune cells, and percentage of apoptotic MNCs in the liver[2].

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

CUSTOMER VALIDATION


See more customer validations on www.MedChemExpress.com

REFERENCES
