Vidofludimus

Cat. No.: HY-14908
CAS No.: 717824-30-1
Molecular Formula: C₂₀H₁₈FNO₄
Molecular Weight: 355.36
Target: Dihydroorotate Dehydrogenase; DNA/RNA Synthesis; Interleukin Related
Pathway: Metabolic Enzyme/Protease; Cell Cycle/DNA Damage; 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 : ≥ 46 mg/mL (129.45 mM)
H₂O : < 0.1 mg/mL (insoluble)
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Concentration</td>
<td></td>
<td>1 mg</td>
<td>5 mg</td>
<td>10 mg</td>
</tr>
<tr>
<td>1 mM</td>
<td></td>
<td>2.8140 mL</td>
<td>14.0702 mL</td>
<td>28.1405 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.5628 mL</td>
<td>2.8140 mL</td>
<td>5.6281 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.2814 mL</td>
<td>1.4070 mL</td>
<td>2.8140 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: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.5 mg/mL (7.04 mM); Suspended solution; Need ultrasonic

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (7.04 mM); Suspended solution; Need ultrasonic

3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.04 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Vidofludimus(4SC-101; SC12267) is a novel immunosuppressive drug that inhibits DHODH; inhibits IL-17 secretion in vitro independently of effects on lymphocyte proliferation. IC₅₀ value: Target: DHODH inhibitor in vitro: 4SC-101 is a potent inhibitor of human DHODH, inhibits lymphocyte proliferation, and uniquely blocks phytohemagglutinin-
stimulated IL-17 production by lymphocytes [2]. In vivo: In vivo Vido treatment alone most effectively reduced macroscopic and histological pathology and the numbers of CD3+ T cells. In contrast, similarly reduced nuclear signal transducer and activator of transcription 3 (STAT3) binding and IL-17 levels were observed from animals treated with Vido alone and Vido + Uri. Vido improves TNBS-induced colonic inflammation by a unique dual mode of action [1]. Oral administration of 4SC-101 effectively improved both chronic DSS and acute TNBS colitis in mice. In these colitis models the overall efficacy profile of 4SC-101 was similar to that of dexamethasone [2].

REFERENCES
