Balsalazide

Cat. No.: HY-B0667
CAS No.: 80573-04-2
Molecular Formula: C₁₇H₁₅N₃O₆
Molecular Weight: 357.32
Target: Interleukin Related; STAT
Pathway: Immunology/Inflammation; JAK/STAT Signaling; Stem Cell/Wnt
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 (279.86 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass 1 mM</td>
<td>2.7986 mL</td>
<td>13.9931 mL</td>
<td>27.9861 mL</td>
<td></td>
</tr>
<tr>
<td>Mass 5 mM</td>
<td>0.5597 mL</td>
<td>2.7986 mL</td>
<td>5.5972 mL</td>
<td></td>
</tr>
<tr>
<td>Mass 10 mM</td>
<td>0.2799 mL</td>
<td>1.3993 mL</td>
<td>2.7986 mL</td>
<td></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 (7.00 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (7.00 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Balsalazide could suppress colitis-associated carcinogenesis through modulation of IL-6/STAT3 pathway.

IC₅₀ & Target
| IL-6 | STAT3 |

In Vivo
At the endpoint, the protein production of MIP-1β, MCP-1, IL-6, and IL-10 in the colon tissues decrease in concordance with the plasma concentrations of the cytokines. The drug-treated groups reveal lower expression of p-STAT3 compared to the CAC group. In addition, BCL2 decreases and BAX increases markedly in the BSZ+VSL#3 group [1]. Balsalazide is a new 5-aminosalicylic acid (5-ASA) containing prodrug[2].
Mice\(^{[1]}\)

C57B/L6J mice are randomly divided into four groups: CAC group, Balsalazide (BSZ) group \((300 \text{ mg/kg})\), VSL\(^{#3}\) group, and BSZ+VSL\(^{#3}\) group. After two weeks, the AOM/DSS model is induced by AOM injection followed by two cycles of 2\% DSS\(^{[1]}\).

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

REFERENCES


[2]. Kruis W, et al. Low dose balsalazide (1.5 g twice daily) and mesalazine (0.5 g three times daily) maintained remission of ulcerative colitis but high dose balsalazide (3.0 g twice daily) was superior in preventing relapses. Gut, 2001. 49(6): p. 783-789.