BT-11

Product Data Sheet

Cat. No.: HY-102013
CAS No.: 1912399-75-7
Molecular Formula: C₃₀H₂₄N₈O₂
Molecular Weight: 528.56
Target: Others
Pathway: Others
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 : ≥ 30 mg/mL (56.76 mM)
* “≥” means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th></th>
<th>Solvent Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing Stock Solutions</td>
<td>1 mM</td>
<td>1.8919 mL</td>
<td>9.4597 mL</td>
<td>18.9193 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.3784 mL</td>
<td>1.8919 mL</td>
<td>3.7839 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1892 mL</td>
<td>0.9460 mL</td>
<td>1.8919 mL</td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Description BT-11 is an orally available LANCL2 binding compound for treating inflammatory bowel disease.

In Vitro LANCL2 engagement produces an increase of PKA, followed by an accumulation of cAMP in the cytoplasm. BT-11 treatment splenocytes shows a dose−response increase of cAMP production. BT-11 stimulates cAMP production by activating the LANCL2 pathway[^1].

In Vivo The oral treatment with BT-11 (8 mg/kg/d) in a mouse model of inflammatory bowel disease results in lowering the disease activity index, decreasing colonic inflammatory lesions by 4-fold, and suppressing inflammatory markers (e.g., TNF-α, and interferon-γ) in the gut. Furthermore, studies in LANCL2−/− mice demonstrates that loss of LANCL2 abrogates beneficial actions of BT-11, suggesting high selectivity for the target. Oral treatment with BT-11 (8 mg/kg/day) ameliorates colitis in mice. Initial safety assessment in rats indicates that oral treatment with BT-11 at high doses has an excellent safety profile up to 1000 mg/kg/day[^1]. BT-11 is well tolerated in rats, and may hold promise as an orally active therapeutic for Crohn’s disease. One hour after oral administration of a single dose of 80
mg/kg, BT-11 has a maximal concentration of 21 ng/mL; the half-life is 3 hours[^2].

**PROTOCOL**

**Animal Administration[^1][^2]**

Rats: Male Harlan Sprague Dawley rats are treated with a single oral dose of 500 mg/kg and 80 mg/kg/d for 14 days. Treated and control rats are observed for behavioral detriments, and blood and tissues are collected for clinical pathology and histopathological examination[^2].

Mice: Wild type and LANCL2^-/-^ male mice are treated with 8 mg/kg/d BT-11 over 8 weeks. Mice are sacrificed and spleens are collected for splenocytes isolation. Cell lysates are collected and cAMP intracellular concentration is measured[^1].

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

**REFERENCES**
