ML311

Cat. No.: HY-101778
CAS No.: 315698-17-0
Molecular Formula: C₂₃H₂₄F₃N₃O
Molecular Weight: 415.45
Target: Bcl-2 Family
Pathway: Apoptosis
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: 67.5 mg/mL (162.47 mM; Need ultrasonic)

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Mass (1 mg)</th>
<th>Mass (5 mg)</th>
<th>Mass (10 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.4070 mL</td>
<td>12.0351 mL</td>
<td>24.0703 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4814 mL</td>
<td>2.4070 mL</td>
<td>4.8141 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2407 mL</td>
<td>1.2035 mL</td>
<td>2.4070 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: ≥ 2.25 mg/mL (5.42 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.25 mg/mL (5.42 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.25 mg/mL (5.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
ML311 is a potent and selective inhibitor of the Mcl-1/Bim interaction.

IC₅₀ & Target
| Mcl-1 | Bim |

In Vitro
ML311 potently halts viability of several types of Mcl-1 primed cells, including MCL-1-1780 (EC₅₀=0.31 μM), DHL-6 (EC₅₀=3.3 μM), and NCI-H929 (EC₅₀=1.6 μM), with generally high maximal effect (>80%). ML311 also displays activity
in a leukemia-derived cell line particularly reliant upon Bcl-2 function (Bcl2-1863, EC$_{50}$=1.1 μM). ML311 has strong growth inhibitory effects in many cell lines, with GI$_{50}$<900 nM for nine cell types (RPMI-8226, SR, NCI-H322M, NCI-H60, HCC-2998, KM12, SF-295, U251, PC-3 cell lines), and <2 μM for 14 additional types[1].

REFERENCES


Caution: Product has not been fully validated for medical applications. For research use only.
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