BMS-1

Cat. No.: HY-19991
CAS No.: 1675201-83-8
Molecular Formula: C₂₉H₃₃NO₅
Molecular Weight: 475.58
Target: PD-1/PD-L1; Apoptosis
Pathway: Immunology/Inflammation; 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

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass (mg)</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>≥ 29 mg/mL</td>
<td>(60.98 mM)</td>
<td>≥ 29 mg/mL</td>
<td>(60.98 mM)</td>
</tr>
</tbody>
</table>

*“≥” means soluble, but saturation unknown.

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.1027 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4205 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2103 mL</td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Description
BMS-1 is an inhibitor of the PD-1/PD-L1 protein/protein interaction (IC₅₀ between 6 and 100 nM)[1][2].

IC₅₀ & Target
PD1-PDL1[1]

In Vitro
Since PD-1 mediated the exhaustion of natural killer (NK) cell by binding to its ligand PD-L1, BMS-1 (PD-1/PD-L1 inhibitor 1) (1 μM, 3 days) is used to disturb the interaction between PD-1 and PD-L1. Dexamethasone induced increase of PD-1 expression and decrease of cytotoxicity of the co-cultured NK92 cells are reversed by BMS-1[1]. BMS-1, a small-molecule immune checkpoint inhibitor of PD-1/PD-L1, can be used as a therapeutic strategy for tumor immunotherapy[2].

Cell Cytotoxicity Assay[1]

Cell Line: NK cells and HepG2 cells
Concentration: 1 μM
Incubation Time: 3 days
Result: Disturbed the interaction between PD-1 and PD-L1.

**In Vivo**

<table>
<thead>
<tr>
<th>BMS-1 (500 μg/mL; 100 μL; i.p.) significantly slows down tumor growth and prolongs the survival rates in BALB/c mice [3].</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Animal Model:</strong></td>
</tr>
<tr>
<td><strong>Dosage:</strong></td>
</tr>
<tr>
<td><strong>Administration:</strong></td>
</tr>
<tr>
<td><strong>Result:</strong></td>
</tr>
</tbody>
</table>

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**REFERENCES**

