AZ191

Cat. No.: HY-12277
CAS No.: 1594092-37-1
Molecular Formula: C₂₄H₂₇N₇O
Molecular Weight: 429.52
Target: DYRK
Pathway: Protein Tyrosine Kinase/RTK
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 (69.85 mM)
H₂O: < 0.1 mg/mL (insoluble)
* "≥" means soluble, but saturation unknown.

<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></td>
<td>1 mM</td>
<td>2.3282 mL</td>
<td>11.6409 mL</td>
<td>23.2818 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.4656 mL</td>
<td>2.3282 mL</td>
<td>4.6564 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.2328 mL</td>
<td>1.1641 mL</td>
<td>2.3282 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 (5.82 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.82 mM); Suspended solution; Need ultrasonic

BIOLICAL ACTIVITY

Description
AZ191 is a potent inhibitor that selectively inhibits DYRK1B with IC₅₀ of 17 nM[1].

IC₅₀ & Target
IC₅₀: 17 nM (DYRK1B)[1]

In Vitro
AZ191 (0.01-60 μM; 5 days) inhibits SW872 and SW982 cell lines in dose-dependent manner with IC₅₀s of 3.183 μM and 1.279 μM, respectively[2].
AZ191 (1-5 μM; 48 hours) down-regulates three anti-apoptotic proteins (Bcl-2, p21, and survivin) at higher
Concentrations\(^2\).

**Cell Proliferation Assay\(^2\)**

<table>
<thead>
<tr>
<th>Cell Line:</th>
<th>SW872, SW982 liposarcoma cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration:</td>
<td>0.01, 0.03, 0.1, 0.3, 0.6, 1, 3, 6, 10, 20, 60 μM</td>
</tr>
<tr>
<td>Incubation Time:</td>
<td>5 days</td>
</tr>
<tr>
<td>Result:</td>
<td>Dose-dependent growth inhibition with IC(_{50})s of 3.183 μM and 1.279 μM for SW872 and SW982 cell lines, respectively.</td>
</tr>
</tbody>
</table>

**Western Blot Analysis\(^2\)**

<table>
<thead>
<tr>
<th>Cell Line:</th>
<th>SW872, SW982 liposarcoma cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration:</td>
<td>1, 2, 3, 4, 5 μM</td>
</tr>
<tr>
<td>Incubation Time:</td>
<td>48 hours</td>
</tr>
<tr>
<td>Result:</td>
<td>Down-regulated three anti-apoptotic proteins (Bcl-2, p21, and survivin) at higher concentrations.</td>
</tr>
</tbody>
</table>

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**REFERENCES**


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

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