DAPT (GSI-IX)

Cat. No.: A8200
CAS No.: 208255-80-5
Formula: C23H26F2N2O4
M.Wt: 432.46
Synonyms: gamma-Secretase Inhibitor IX, DAPT, GSI-IX
Target: Neuroscience
Pathway: Amyloid β
Storage: Store at -20°C

Solvent & Solubility

≥21.62 mg/mL in DMSO; insoluble in H2O; ≥16.36 mg/mL in EtOH with ultrasonic

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Mass</th>
<th>1mg</th>
<th>5mg</th>
<th>10mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Concentration</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>1 mM</td>
<td>2.3124 mL</td>
<td>11.5618 mL</td>
<td>23.1235 mL</td>
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<tr>
<td></td>
<td>5 mM</td>
<td>0.4625 mL</td>
<td>2.3124 mL</td>
<td>4.6247 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.2312 mL</td>
<td>1.1562 mL</td>
<td>2.3124 mL</td>
</tr>
</tbody>
</table>

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

Biological Activity

Shortsummary: γ-secretase inhibitor, potent and specific
IC₅₀ & Target: 20 nM (Aβ)

Cell Viability Assay

| Preparation method: | The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months. |
| Reacting conditions: | 5d; 1.0 μM |
Applications:

Cell viability in each group was detected by MTT. Compared with those in group A (control), proliferation of SHG-44 cells in group B (0.5 μM), C (1μM), D (5 μM) and E (10 μM) were inhibited by DAPT. For group B and A, the results were significantly different (P<0.05). It indicated that DAPT is a concentration-dependent inhibitor that may obviously inhibit SHG-44 cells proliferation. As concentration of DAPT higher than 1.0 μmol/L showed no more obvious disparities in cell inhibition, concentration of 1.0 μmol/L was our priority.

Animal experiment

<table>
<thead>
<tr>
<th>Animal models</th>
<th>Male Balb/C mice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage form</td>
<td>10 mg/kg/day; subcutaneously injected</td>
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</tbody>
</table>

Applications:

CT26 colon adenocarcinoma cells (5 × 10^5 cells) in 500 μL of Phosphate buffer solution (PBS) were inoculated subcutaneously into the dorsum of all mice. Administration of DAPT significantly reduced serum sVEGFR1, while could not change serum VEGF concentration in control mice. Immunohistochemical study of the tumors showed that CD31 positive cells were reduced after DAPT administration (280.6 ± 81 vs. 386 ± 59.9 CD31 positive cells/mm^2), although it was not statistically significant.

Other notes:

Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations


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References


Caution

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