Tosedostat (CHR2797)

Cat. No.: A4355
CAS No.: 238750-77-1
Formula: C21H30N2O6
M.Wt: 406.47

Synonyms:
Target: Metabolism
Pathway: Aminopeptidase
Storage: Store at -20°C

Solvent & Solubility

<table>
<thead>
<tr>
<th>Mass</th>
<th>1mg</th>
<th>5mg</th>
<th>10mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.4602 mL</td>
<td>12.3010 mL</td>
<td>24.6021 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4920 mL</td>
<td>2.4602 mL</td>
<td>4.9204 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2460 mL</td>
<td>1.2301 mL</td>
<td>2.4602 mL</td>
</tr>
</tbody>
</table>

Preparing Stock Solutions

≥40.6 mg/mL in DMSO; insoluble in H2O; ≥15.07 mg/mL in EtOH with ultrasonic

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

Biological Activity

Shortsummary: Aminopeptidase inhibitor
IC₅₀ & Target: 100 nM (LAP), 150 nM (PuSA), 220 nM (Aminopeptidase N)

Cell Viability Assay

Cell Line: Human multiple myeloma (MM) cells
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: 10 µM, 72 hours
Applications: CHR2797 showed antiproliferative and apoptotic effects against MM in vitro by inducing the AA deprivation response (AADR). Using MTS and CTG assays, CHR2797, at clinically achievable concentrations, decreased survival and proliferation in MM1S and IL-6-dependent ANBL6 cells, in the presence or absence of bone marrow stromal cells following 72 hours incubation. CHR2797 induced apoptosis in MM cells via activation of Caspase 3/7 and 9 but not Caspase 8. CHR2797 (10 μM) induced apoptosis in patient MM cells. Combined treatment with CHR2797 and LBH589 in MM cells (MM1S, ANBL6, and INA6) further reduced cell viability following 72 hour incubation when compared with CHR2797 treatment alone. CHR2797 (1 μM) in combination with LBH589 (1 nM) showed an increased growth arrest in G0/G1 cells in MM1R cells treated with both drugs versus CHR2797 alone after 24 hours. CHR2797 inhibited anti-apoptotic protein Mcl-1 in MM1R and U266 MM cells.

Animal experiment

| Dosage form: 60 mg to 180 mg, 28 days, capsules, orally after food each day |
| Applications: Oral once daily dosing with 130 mg tosedostat was well tolerated and had significant antileukemic activity. |
| 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


References


Caution

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NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.
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