Cutamesine

Cat. No.: HY-14813
CAS No.: 165377-43-5
Molecular Formula: C₂₃H₃₂N₂O₂
Molecular Weight: 368.51
Target: Sigma Receptor
Pathway: GPCR/G Protein
Storage: Please store the product under the recommended conditions in the COA.

Solvent & Solubility

In Vitro
10 mM in DMSO

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>2.7136 mL</td>
<td>13.5682 mL</td>
<td>27.1363 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.5427 mL</td>
<td>2.7136 mL</td>
<td>5.4273 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.2714 mL</td>
<td>1.3568 mL</td>
<td>2.7136 mL</td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Description
SA4503(AGY-94806; Cutamesine) is a selective sigma 1 receptor(σ1R) agonist; high affinity for the sigma 1 receptor subtype labeled by (+)-[3H]pentazocine (IC50 = 17.4 +/- 1.9 nM); 100-fold less affinity for the sigma 2 receptor IC50 value: 17.4 nM [1]Target: σ1R agonist
in vitro: SA4503 showed little affinity for 36 other receptors, ion channels and second messenger systems. SA4503 significantly increased the KD value, but did not affect the Bmax value for specific (+)-[3H]pentazocine binding. SA4503 is a potent and selective agonist for the sigma 1 receptor subtype in the brain [1]. At concentrations of 1-10μM, SA4503 reduced SOD1(G93A)-induced cell death in a concentration-dependent manner [3].
in vivo: The intravenous administration of SA4503 (0.01-1.28 mg/kg) did not significantly alter the firing rate or pattern of spontaneously active DA neurons in either the SNC or VTA. A single injection of either 0.1 or 0.3 mg/kg i.p. of SA4503 did not alter the number of spontaneously active SNC and VTA DA neurons. In contrast, a single injection of 1 mg/kg i.p. of SA4503 produced a significant decrease and increase in the number of spontaneously active SNC and VTA DA neurons, respectively[2]. SA4503 suppressed the progression of ALS in an SOD1(G93A) ALS mouse model. SA4503 did not affect the onset time of ALS. However, it significantly extended the survival time in the SOD1(G93A) mice compared with a vehicle-treated group [3].

REFERENCES
