SAR439859

Cat. No.: HY-133017
CAS No.: 2114339-57-8
Molecular Formula: C₃₁H₃₀Cl₂FNO₃
Molecular Weight: 554.48
Target: Estrogen Receptor/ERR
Pathway: Others
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: 125 mg/mL (225.44 mM; Need ultrasonic)

<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>1.8035 mL</td>
<td>9.0175 mL</td>
<td>18.0349 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.3607 mL</td>
<td>1.8035 mL</td>
<td>3.6070 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.1803 mL</td>
<td>0.9017 mL</td>
<td>1.8035 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: ≥ 2.08 mg/mL (3.75 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (3.75 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (3.75 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
SAR439859 (compound 43d) is an orally active, nonsteroidal and selective estrogen receptor degrader (SERD). SAR439859 is a potent ER antagonist and has ER degrading activity with an EC₅₀ of 0.2 nM for ERα degradation[^1]. SAR439859 demonstrates robust antitumor efficacy and limited cross-resistance in ER⁺ breast cancer[^2].

IC₅₀ & Target
ERα
0.2 nM (EC50)
### In Vitro
SAR439859 (compound 43d) induces strong in vivo antitumor activity against a variety of BC cell lines and patient-derived xenografts, including models that harbor ERα mutations\[1\].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### In Vivo
SAR439859 (compound 43d; orally; 2.5-25 mg/kg; twice daily for 30 days) exhibits substantial tumor-growth inhibition and displays tumor regression at the dose of 25 mg/kg/BID\[1\].

SAR439859 (3 mg/kg for iv and 10 mg/kg for po) shows a low to moderate clearance in the three animal species tested (0.03-1.92 L/h•kg), low to moderate volume of distribution ($V_{ss} = 0.5-6.1 \text{ L/kg}$), and good bioavailability (54-76%) across species. It is noticed that $T_{1/2}$ was variable across species (1.98 h in mouse, 4.13 h in rat and 9.80 h in dog)\[1\].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

<table>
<thead>
<tr>
<th>Animal Model:</th>
<th>Nu/nu mouse with MCF7 tumor xenograft model[1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage:</td>
<td>2.5, 5, 12.5, 25 mg/kg</td>
</tr>
<tr>
<td>Administration:</td>
<td>Orally; twice daily for 30 days</td>
</tr>
<tr>
<td>Result:</td>
<td>Exhibited substantial tumor-growth inhibition and displayed tumor regression at the dose of 25 mg/kg/BID.</td>
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<tr>
<th>Animal Model:</th>
<th>Mouse, rat and dog[1]</th>
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<tr>
<td>Dosage:</td>
<td>3 mg/kg (iv) and 10 mg/kg (po) (Pharmacokinetic Analysis)</td>
</tr>
<tr>
<td>Administration:</td>
<td>Iv or po</td>
</tr>
<tr>
<td>Result:</td>
<td>Showed a low to moderate clearance in the three animal species tested (0.03-1.92 L/h•kg), low to moderate volume of distribution ($V_{ss} = 0.5-6.1 \text{ L/kg}$), and good bioavailability (54-76%) across species.</td>
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### REFERENCES