WAY-200070

Cat. No.: HY-101271
CAS No.: 440122-66-7
Molecular Formula: C₁₃H₈BrNO₃
Molecular Weight: 306.11
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

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass (µL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>1 mg</td>
</tr>
<tr>
<td></td>
<td>5 mg</td>
</tr>
<tr>
<td></td>
<td>10 mg</td>
</tr>
<tr>
<td>1 mM</td>
<td>3.2668</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6534</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3267</td>
</tr>
</tbody>
</table>

DMSO: ≥ 31 mg/mL (101.27 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 10 mg/mL (32.67 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 10 mg/mL (32.67 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
WAY-200070 is a selective estrogen receptor β (ERRβ) agonist with an IC₅₀ of 2.3 nM.

IC₅₀ & Target
IC₅₀: 2.3 nM (ERRβ), 155 nM (ERRα)[¹]

In Vivo
Administration of WAY-200070 (30 mg/kg s.c.) causes nuclear translocation of ERRβ receptors in WT mice.
Administration of WAY-200070 (30 mg/kg s.c.) produces a delayed 50% increase in dopamine in the striatum of wild type mice. WAY-200070 (30 mg/kg s.c.) reduces immobility time in the mouse tail suspension test indicating an antidepressant-like effect[²]. In gonadally intact male and female mice WAY-200070 increases agonistic behaviors.
such as pushing down and aggressive grooming, while leaving attacks unaffected\[2\]. Ovariectomized (ovx) mice treated with PPT fail to learn the socially acquired preference, while WAY-200070-treated ovx mice shows a two-fold prolonged preference for the food eaten by their demonstrator\[3\]. WAY-200070, shows significantly decreased anxiety-like behaviors in both the open-field and elevated plus maze and significantly less depressive-like behaviors in the forced swim test\[4\].

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

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### PROTOCOL

#### Animal Administration \[1\]-\[4\]

**Rats:** Beginning 1 wk after ovariectomy, animals are given a single daily sc injection of hydroxypropyl betacyclodextran [vehicle; 27% (wt/vol) in saline; DPN (2.0 mg/kg), S-DPN (2.0 mg/kg), R-DPN (2.0 mg/kg), WAY-200070-3 (2.0 mg/kg), or PPT (1.0 mg/kg) in a total volume of 0.2 mL. Three hours after the daily treatment injection on d 4-7, animals undergo behavioral testing\[4\].

**Mice:** WAY-200070 is dissolved in a 10% ethanol/90% miglyol solution. WAY-200070 or vehicle is injected subcutaneously at a volume of 10 mL/kg body weight. Male ERβKO, ERαKO (both in C57BL/6 background) and WT C57BL/6 mice are injected with vehicle or WAY-200070 (30 mg/kg s.c.). After 15 min, the animals are sacrificed and the striatum is dissected and quickly frozen in liquid nitrogen and stored at -70°C for subsequent assay\[1\].

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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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