Reboxetine mesylate

Cat. No.: HY-14560C
CAS No.: 98769-84-7
Molecular Formula: C₂₀H₂₇NO₆S
Molecular Weight: 409.5
Target: Others
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 (305.25 mM; Need ultrasonic)
H₂O: 50 mg/mL (122.10 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Concentration</td>
<td></td>
<td>1 mg</td>
<td>5 mg</td>
<td>10 mg</td>
</tr>
<tr>
<td></td>
<td>1 mM</td>
<td></td>
<td>2.4420 mL</td>
<td>12.2100 mL</td>
<td>24.4200 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td></td>
<td>0.4884 mL</td>
<td>2.4420 mL</td>
<td>4.8840 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td></td>
<td>0.2442 mL</td>
<td>1.2210 mL</td>
<td>2.4420 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 (5.08 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.08 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.08 mM); Clear solution
4. Add each solvent one by one: PBS
   Solubility: 110 mg/mL (268.62 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description
Reboxetine mesylate is a norepinephrine reuptake inhibitor used in the treatment of unipolar depression. Target: Others
Reboxetine is a drug of the norepinephrine reuptake inhibitor class. Reboxetine dose-dependently and potently inhibits locus coeruleus neuronal firing in rats with ED50 of 191 μg/kg. Reboxetine inhibition of the locus coeruleus neurons is reversible by the α2 antagonist piperoxan (1.5 mg/kg, IV). Reboxetine dose-dependently reverses reserpine-induced
blepharospasm and hypothermia in the mouse. Reboxetine is also found to antagonize clonidine-induced hypothermia dose-dependently in mice. Reboxetine reverses reserpine-induced blepharospasm and hypothermia in rats with ED50 of 10 mg/kg and 3 mg/kg (p.o.), respectively [1]. Reboxetine is associated with a markedly lower relapse rate than placebo (22% vs. 56%) and a greater cumulative probability of a maintained response during long-term treatment in patients with recurrent DSM-III-R major depression. Reboxetine effectively prevents recurrence of depressive symptoms following episode resolution [2]. Acute systemic administration of Reboxetine (0.3 mg/kg-20 mg/kg) dose-dependently increases extracellular norepinephrine in the rat frontal cortex while having no effect on extracellular serotonin. Reboxetine (20 mg/kg) also increases extracellular dopamine in the rat frontal cortex. Chronic administration of Reboxetine for 14 days results in elevated basal concentrations of extracellular norepinephrine and dopamine and a greater net increase of extracellular norepinephrine and dopamine, but not serotonin in the rat frontal cortex [3].

REFERENCES

