Domperidone

Cat. No.: HY-B0411
CAS No.: 57808-66-9
Molecular Formula: C₂₂H₂₄ClN₅O₂
Molecular Weight: 425.91
Target: Dopamine Receptor
Pathway: GPCR/G Protein; Neuronal Signaling
Storage:
- Powder -20°C 3 years
  4°C 2 years
- In solvent -80°C 6 months
  -20°C 1 month

SOLVENT & SOLUBILITY

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>50 mg/mL (117.40 mM; Need ultrasonic)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H₂O</td>
<td>&lt; 0.1 mg/mL (insoluble)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>1 mM</th>
<th>5 mM</th>
<th>10 mM</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 mM</td>
<td>2.3479 mL</td>
<td>11.7396 mL</td>
<td>23.4791 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4696 mL</td>
<td>2.3479 mL</td>
<td>4.6958 mL</td>
</tr>
<tr>
<td>1 mM</td>
<td>0.2348 mL</td>
<td>1.1740 mL</td>
<td>2.3479 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: ≥ 2.75 mg/mL (6.46 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.75 mg/mL (6.46 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.75 mg/mL (6.46 mM); Clear solution

BIOLOGICAL ACTIVITY

Domperidone is a dopamine blocker and an antidopaminergic reagent. Target: Dopamine Receptor
Domperidone is a useful alternative to metoclopramide for treatment of gastroparesis due to better tolerability. Effectiveness and side-effects from domperidone may be influenced by patient-related factors including polymorphisms in genes encoding drug-metabolizing enzymes, drug transporters, and domperidone targets [1]. Domperidone is a dopamine D(2) receptor antagonist, which has been used as antiemetic agent in human beings. The percentage recovery of
Domperidone from wastewater was 95.0%. Celiprolol was used as the internal standard to access the percentage extraction of domperidone from wastewater [2]. Domperidone, a dopamine antagonist that does not easily cross the blood-brain barrier, is considered the gold standard for treating gastrointestinal symptoms in patients with Parkinson's disease (PD) because the risk of developing extrapyramidal adverse effects is considered minimal [3].

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**REFERENCES**

