Meclofenoxate hydrochloride

Cat. No.: HY-17555
CAS No.: 3685-84-5
Molecular Formula: C₁₂H₁₇Cl₂NO₃
Molecular Weight: 294.17
Target: nAChR; iGluR
Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling
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: ≥ 50 mg/mL (169.97 mM)
- H₂O: 33.33 mg/mL (113.30 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions:

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>Mass of 1 mg</th>
<th>Mass of 5 mg</th>
<th>Mass of 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.3994 mL</td>
<td>16.9970 mL</td>
<td>33.9939 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6799 mL</td>
<td>3.3994 mL</td>
<td>6.7988 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3399 mL</td>
<td>1.6997 mL</td>
<td>3.394 mL</td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Description:
Meclofenoxate hydrochloride, an ester of dimethylethanolamine (DMAE) and 4-chlorophenoxyacetic acid (pCPA), has been shown to improve memory, have a mentally stimulating effect, and improve general cognition. IC50 value:
Target: nootropic
Meclofenoxate, administered in a dose of 50 mg/kg twice daily for 7 days using the maze-training method, increased the number of responses to the conditioned stimulus, when retention tests were made 24 hours and 7 days after training, whereas citicholine, applied in the same way in a dose of 10 mg/kg, shortened the latency of the responses with reinforcement during the training and increased the number of correct responses to the conditioned stimulus in retention tests 7 days after the training [1]. Meclofenoxate appears to increase the consolidation of new information into long-term memory, but does not affect other aspects of remembering [2].

REFERENCES