Proxyphylline

Cat. No.: HY-B1742
CAS No.: 603-00-9
Molecular Formula: C₁₀H₁₄N₄O₃
Molecular Weight: 238.24
Target: Adenosine Receptor
Pathway: GPCR/G Protein
Storage: Powder -20°C 3 years
4°C 2 years
In solvent -80°C 2 years
-20°C 1 year

SOLVENT & SOLUBILITY

In Vitro
DMSO: ≥ 100 mg/mL (419.74 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>Mass 1 mg</th>
<th>Mass 5 mg</th>
<th>Mass 10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>4.1974 mL</td>
<td>20.9872 mL</td>
<td>41.9745 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.8395 mL</td>
<td>4.1974 mL</td>
<td>8.3949 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.4197 mL</td>
<td>2.0987 mL</td>
<td>4.1974 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: ≥ 2.5 mg/mL (10.49 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
Proxyphylline is a methylxanthine derivative used as a cardiac stimulant, vasodilator and bronchodilator.[1]

In Vitro
Proxyphylline has shown vasodilatory and cardiac stimulatory effects. Proxyphylline produces an increase in the coronary flow associated with a definite positive inotropic effect[1]. Proxyphylline inhibits tracheal PDE-activity and half-maximum relaxation of tracheal smooth muscle is obtained with 100 μg/mL proxyphylline[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo

Proxyphylline exhibits bronchodilatory effect\(^3\). Proxyphylline inhibits cAMP and cGMP hydrolysis in human lung tissue. The apparent inhibition constant of proxyphylline is 0.06-0.7 mM at low cAMP concentrations and it is 1.0 mM at high cAMP concentrations\(^3\).

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

REFERENCES


