Proxyphylline

Cat. No.: HY-B1742
CAS No.: 603-00-9
Molecular Formula: \( \text{C}_{10}\text{H}_{14}\text{N}_{4}\text{O}_{3} \)
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: 6 months
-20°C: 1 month

Solvent & Solubility

In Vitro
10 mM in DMSO

<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.

BIOLOGICAL ACTIVITY

Description
Proxyphylline is a methylxanthine derivative clinical used as cardiac stimulant, vasodilator and bronchodilator.

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\(^{[2]}\).

In Vivo
In a double-blind cross-over study, 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\(^{[3]}\).

REFERENCES

\(^{[1]}\) Takeda K, et al. Effects of aminophylline, proxyphylline and a proxyphylline-Melilotus extract-rutin mixture(theoesberiven) on the heart and the coronary


Caution: Product has not been fully validated for medical applications. For research use only.
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