APNEA

Cat. No.: HY-18687
CAS No.: 89705-21-5
Molecular Formula: C₁₈H₂₂N₆O₄
Molecular Weight: 386.41
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

<table>
<thead>
<tr>
<th>In Vitro</th>
<th>DMSO : 50 mg/mL (129.40 mM; Need ultrasonic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing Stock Solutions</td>
<td>Solvent Concentration</td>
</tr>
<tr>
<td>1 mM</td>
<td>2.5879 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.5176 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2588 mL</td>
</tr>
</tbody>
</table>

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

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.47 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.47 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.47 mM); Clear solution

BIOLOGICAL ACTIVITY

Description
APNEA is a potent, non-selective A3 adenosine receptor agonist.

IC₅₀ & Target
Adenosine receptor[1].

In Vitro
APNEA is a non-selective agonist of the adenosine A3 receptors, at the subprotective dose of 1 mg/kg against electroconvulsions, significantly potentiates the anticonvulsive action of phenobarbital, diphenylhydantoin and
valproate against maximal electroshock, being ineffective at lower doses. APNEA (0.0039-1 mg/kg) also enhances the protective activity of carbamazepine. APNEA at low doses potentiates the protective activity of Carbamazepine most likely through the A subtype of adenosine receptors. At higher doses, APNEA seems to enhance the anticonvulsive effect of other antiepileptics via adenosine A1 receptors[1].

<table>
<thead>
<tr>
<th>In Vivo</th>
</tr>
</thead>
<tbody>
<tr>
<td>APNEA (2-4 mg/kg) has no significant effect on seizure parameters (seizure severity, seizure duration and afterdischarge duration) in amygdala-kindled rats. N6-[2-(4-Aminophenyl)ethyl]adenosine is combined with antiepileptic drugs administered at doses ineffective in fully kindled rats[1].</td>
</tr>
</tbody>
</table>

REFERENCES
