Methylproamine

**Cat. No.:** HY-15620  
**CAS No.:** 188247-01-0  
**Molecular Formula:** C₂₈H₃₁N₇  
**Molecular Weight:** 465.59  
**Target:** DNA/RNA Synthesis  
**Pathway:** Cell Cycle/DNA Damage  
**Storage:**  
- Powder: -20°C, 3 years  
- Powder: 4°C, 2 years  
- In solvent: -80°C, 2 years  
- In solvent: -20°C, 1 year

### SOLVENT & SOLUBILITY

**In Vitro**  
DMSO: ≥ 41 mg/mL (88.06 mM)  
* "≥" means soluble, but saturation unknown.

#### Preparing Stock Solutions

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>2.1478 mL</td>
<td>10.7391 mL</td>
<td>21.4781 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4296 mL</td>
<td>2.1478 mL</td>
<td>4.2956 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2148 mL</td>
<td>1.0739 mL</td>
<td>2.1478 mL</td>
<td></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: ≥ 0.62 mg/mL (1.33 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 0.62 mg/mL (1.33 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**  
Methylproamine is a DNA-binding radioprotector, acts by repair of transient radiation-induced oxidative species on DNA.  
Methylproamine also protects against ionizing radiation by preventing DNA double-strand breaks[^1].

**In Vitro**  
Methylproamine also protects against ionizing radiation by preventing DNA double-strand breaks[^1].  
Methylproamine can protect bystander cells from radiation-induced DNA damage[^2].  
Methylproamine has a concentration-dependent radioprotective effect[^3].

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

[^1]: Cell Cytotoxicity Assay[^3]
[^2]: Cell Cytotoxicity Assay[^3]
[^3]: Cell Cytotoxicity Assay[^3]
<table>
<thead>
<tr>
<th>Cell Line:</th>
<th>Keratinocytes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration:</td>
<td>10, 20 μM</td>
</tr>
<tr>
<td>Incubation Time:</td>
<td>60 min</td>
</tr>
<tr>
<td>Result:</td>
<td>Did not show any detectable cytotoxicity at 10 μM and had appreciable cytotoxicity at 20 μM.</td>
</tr>
</tbody>
</table>

**REFERENCES**


