Nimustine hydrochloride

**Cat. No.:** HY-13703A  
**CAS No.:** 55661-38-6  
**Molecular Formula:** C₉H₁₄Cl₂N₆O₂  
**Molecular Weight:** 309.15  
**Target:** DNA/RNA Synthesis; Apoptosis  
**Pathway:** Cell Cycle/DNA Damage; Apoptosis  
**Storage:** 4°C, protect from light  
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)

### SOLVENT & SOLUBILITY

#### In Vitro

DMSO: 62.5 mg/mL (202.17 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Mass</th>
<th>Solvent Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td></td>
<td>3.2347 mL</td>
<td>16.1734 mL</td>
<td>32.3468 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td></td>
<td>0.6469 mL</td>
<td>3.2347 mL</td>
<td>6.4694 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td></td>
<td>0.3235 mL</td>
<td>1.6173 mL</td>
<td>3.2347 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: ≥ 2.08 mg/mL (6.73 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.08 mg/mL (6.73 mM); Clear solution

3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.08 mg/mL (6.73 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**  
Nimustine hydrochloride (ACNU) is a DNA cross-linking and DNA alkylating agent, which induces DNA replication blocking lesions and DNA double-strand breaks and inhibits DNA synthesis, commonly used in chemotherapy for glioblastomas[1][2][3].

### REFERENCES

[1]. Tomicic MT, et al. Apoptosis induced by temozolomide and nimustine in glioblastoma cells is supported by JNK/c-Jun-mediated induction of the BH3-

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