Cinobufagin

**Cat. No.:** HY-N0421  
**CAS No.:** 470-37-1  
**Molecular Formula:** C₂₆H₃₄O₆  
**Molecular Weight:** 442.54  
**Target:** Autophagy; Apoptosis  
**Pathway:** Autophagy; Apoptosis  
**Storage:**  
- Powder: -20°C for 3 years, 4°C for 2 years  
- In solvent: -80°C for 6 months, -20°C for 1 month

**SOLVENT & SOLUBILITY**

**In Vitro**  
DMSO: ≥ 100 mg/mL (225.97 mM)  
*"≥" means soluble, but saturation unknown.*

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concentration</strong></td>
<td>1 mg</td>
</tr>
<tr>
<td>1 mM</td>
<td>2.2597 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.4519 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.2260 mL</td>
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</table>

Preparing Stock Solutions

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 (5.65 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.5 mg/mL (5.65 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil  
   Solubility: ≥ 2.5 mg/mL (5.65 mM); Clear solution

**BIOLOGICAL ACTIVITY**

**Description**

Cinobufagin, a kind of Chinese materia medica with antitumor effect, is widely used in clinical practice, especially in antiliver cancer. JC50 value: Target in vitro: Cinobufagin inhibited proliferation of cancer cells at doses of 0.1, 1, or 10 μM after 2–4 days of culture. Cytotoxicity of cinobufagin on the DU145 and LNCaP cells was dose-dependent. Cinobufagin increased [Ca²⁺]i and apoptosis in cancer cells after a 24-hr culture as well as caspase 3 activities in DU145 and PC3 cells and caspase 9 activities in LNCaP cells [1]. Cinobufagin suppresses cell proliferation and causes apoptosis in prostate cancer cells via a sequence of apoptotic modulators, including Bax, cytochrome c and caspases [2]. In vivo:
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REFERENCES


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

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