Neriifolin

**Cat. No.:** HY-N8441  
**CAS No.:** 466-07-9  
**Molecular Formula:** \(C_{30}H_{46}O_{8}\)  
**Molecular Weight:** 534.68  
**Target:** Na+/K+ ATPase; Apoptosis  
**Pathway:** Membrane Transporter/Ion Channel; Apoptosis  
**Storage:**  
- Powder: -20°C 3 years  
- In solvent: -80°C 6 months  
- In solvent: -20°C 1 month

### SOLVENT & SOLUBILITY

#### In Vitro

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.8703 mL</td>
<td>9.3514 mL</td>
<td>18.7028 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3741 mL</td>
<td>1.8703 mL</td>
<td>3.7406 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1870 mL</td>
<td>0.9351 mL</td>
<td>1.8703 mL</td>
</tr>
</tbody>
</table>

In solvent:  
- DMSO: 100 mg/mL (187.03 mM; Need ultrasonic)  

**In Vivo**  
1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (4.68 mM); Clear solution  
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (4.68 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**  
Neriifolin, a CNS-penetrating cardiac glycoside, is an inhibitor of the Na⁺, K⁺-ATPase. Neriifolin can target beclin 1, inhibits the formation of LC3-associated phagosomes and ameliorates experimental autoimmune encephalomyelitis (EAE) development. Neriifolin induces cell cycle arrest and apoptosis in human hepatocellular carcinoma HepG2 cells\(^1\)\(^2\).

**In Vitro**  
Neriifolin (0.1μg/mL; 48 hours) induces apoptosis in HepG2 cells. Neriifolin (0-8 μg/mL; 72 hours) reduces viability of HepG2 cells. Neriifolin also induces S and G2/M phase arrests of the cell cycle and stimulates apoptosis of HepG2 cells. Stimulation of HepG2 cells with Neriifolin induced activation of caspase-3, -8, and -9, and up-regulated expression of Fas and FasL proteins\(^1\).

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