Indirubin

Cat. No.: HY-N0117
CAS No.: 479-41-4
Molecular Formula: \( \text{C}_{16}\text{H}_{10}\text{N}_{2}\text{O}_{2} \)
Molecular Weight: 262.26
Target: Apoptosis
Pathway: Apoptosis
Storage: Powder: -20°C 3 years, 4°C 2 years, In solvent: -80°C 6 months, -20°C 1 month

SOLVENT & SOLUBILITY

**In Vitro**

DMSO: 10 mg/mL (38.13 mM; Need ultrasonic)

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Concentration</th>
<th>Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>3.8130 mL</td>
<td>19.0650 mL</td>
<td>38.1301 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.7626 mL</td>
<td>3.8130 mL</td>
<td>7.6260 mL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.3813 mL</td>
<td>1.9065 mL</td>
<td>3.8130 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: ≥ 1 mg/mL (3.81 mM); Clear solution

BIOLOGICAL ACTIVITY

Indirubin (Couroupitine B) is a purple 3,2- bisindole and a stable isomer of indigo isolated from Indigo naturalis (Apiaceae); anti-inflammatory and anticancer activities. IC50 value:

**Target:**

**in vitro:** The activation of EGF receptor, known to be highly expressed in psoriatic lesions, was inhibited by indigo naturalis or indirubin. The cell proliferation and CDC25B expression of epidermal keratinocytes were induced by EGF alone and confirmed to be inhibited by indigo naturalis or indirubin [2]. Indirubin inhibited prostate tumor growth through inhibiting tumor angiogenesis. Indirubin inhibited angiogenesis in vivo. We also showed the inhibition activity of indirubin in endothelial cell migration, tube formation and cell survival in vitro [3].

**in vivo:** Indirubin treatment suppressed skin inflammation in DNCB-exposed mice. The skin lesions were significantly thinner in the Indirubin-treated group than in untreated controls, and the hyperkeratosis disappeared. Indirubin reduced the total serum IgE level and cytokines production. In addition, it normalized NF-κB, IκB-α and MAP kinase expression [1]. Indirubin dose-dependently inhibited intersegmental vessel formation in zebrafish embryos. It also inhibited HUVEC proliferation by the induction of
cellular apoptosis and cell-cycle arrest at the G0/G1 phase [4].

**REFERENCES**


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