Coproporphyrin III

**Cat. No.:** HY-101398  
**CAS No.:** 14643-66-4  
**Molecular Formula:** C₃₆H₃₈N₄O₈  
**Molecular Weight:** 654.71

**Target:** Endogenous Metabolite  
**Pathway:** Metabolic Enzyme/Protease

**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: ≥ 83.3 mg/mL (127.23 mM)  
* "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<th>Solvent Concentration</th>
<th>Mass (1 mg)</th>
<th>Mass (5 mg)</th>
<th>Mass (10 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>1.5274 mL</td>
<td>7.6370 mL</td>
<td>15.2739 mL</td>
</tr>
<tr>
<td>5 mM</td>
<td>0.3055 mL</td>
<td>1.5274 mL</td>
<td>3.0548 mL</td>
</tr>
<tr>
<td>10 mM</td>
<td>0.1527 mL</td>
<td>0.7637 mL</td>
<td>1.5274 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: ≥ 2.5 mg/mL (3.82 mM); Clear solution

2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
   Solubility: ≥ 2.5 mg/mL (3.82 mM); Clear solution

### BIOLOGICAL ACTIVITY

**Description**  
Coproporphyrin III (Zincphyrin) is a naturally occurring porphyrin derivative that is mainly found in urine\(^1\)[\(^2\)].

**IC₅₀ & Target**  
Human Endogenous Metabolite

**In Vitro**  
Coproporphyrin III methyl ester is repeatedly isolated in considerable amount from both feces and urine. A great increase of coproporphyrin III excretion is unaccompanied by symptoms or signs of porphyria, metal or chemical poisoning or liver disease\(^1\). Primary cultures of chick embryo hepatocytes have been used to study the mechanism by which chemicals cause accumulation of intermediates of the heme synthetic pathway. In the presence of the porphyrin precursor, 5-aminolevulinate (ALA), addition of insulin causes a striking increase in accumulation of uroporphyrin I and coproporphyrin
III. Antioxidants abolishes the uroporphyrin I accumulation and increases coproporphyrin III\(^2\).

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

| In Vivo | Urinary DMA and porphyrin profile can be used as an early warning biomarker for chronic MMA exposure before the onset of cancer. After 4 weeks the level of coproporphyrin III concentration significantly increases in all the treatment groups compared to the control\(^3\).
MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

REFERENCES


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