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 3 years, 4°C 2 years
- In solvent: -80°C 6 months, -20°C 1 month

Solvent & Solubility

In Vitro
- Preparing Stock Solutions
  - DMSO: ≥ 83.3 mg/mL (127.23 mM)
  - "≥" means soluble, but saturation unknown.

<table>
<thead>
<tr>
<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>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 is a porphyrin derivative.

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. 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].

**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].

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**REFERENCES**

