Coproporphyrin III

Cat. No.: HY-101398

CAS No.: 14643-66-4

Molecular Formula: $C_{36}H_{38}N_4O_8$

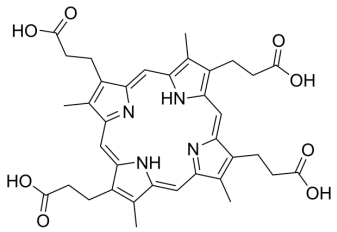
Molecular Weight: 654.71

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (190.92 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.5274 mL	7.6370 mL	15.2739 mL
	5 mM	0.3055 mL	1.5274 mL	3.0548 mL
	10 mM	0.1527 mL	0.7637 mL	1.5274 mL

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].

IC_{50} & 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

[1]. Watson CJ, et al. Studies of coproporphyrin. iii. idiopathic coproporphyrinuria; a hitherto unrecognized form characterized by lack of symptoms in spite of the excretion of large amounts of coproporphyrin. J Clin Invest. 1949 May;28(3):465-8.

[2]. Trask HW, et al. Effect of insulin and glucagon on accumulation of uroporphyrin and coproporphyrin from 5-aminolevulinate in hepatocyte cultures. Arch Biochem Biophys. 2005 Jul 1;439(1):1-11.

[3]. Krishnamohan M, et al. Urinary arsenic and porphyrin profile in C57BL/6J mice chronically exposed to monomethylarsonous acid (MMAIII) for two years. Toxicol Appl Pharmacol. 2007 Oct 1;224(1):89-97.

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