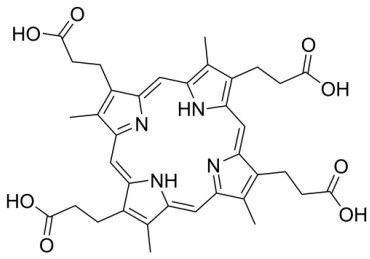
Data Sheet

Product Name:	Coproporphyrin III
Cat. No.:	CS-6385
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
Solubility:	DMSO : 125 mg/mL (ultrasonic)



BIOLOGICAL ACTIVITY:

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

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.

CAIndexNames:

21H,23H-Porphine-2,7,12,18-tetrapropanoic acid, 3,8,13,17-tetramethyl-

SMILES:

O=C(O)CCC1=C2/C=C3C(CCC(O)=O)=C(C)C(/C=C(N/4)/C(C)=C(CCC(O)=O)C4=C\C5=N/C(C(CCC(O)=O)=C5C)=C\C(N2)=C1C)=N/3

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

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