Product Name: Hemin

Catalog Number: H651-9

Sizes Available: 1 g, 5 g, and larger sizes available

Molecular weight: 651.95 g/mol

Molecular Formula: C_{34}H_{32}ClFeN_{4}O_{4}

CAS Number: 16009-13-5

Storage: Store at room temperature, protected from light

Synonyms: Ferric Hemin, ferric iron pplIX chloride, ferriheme, Ferriporphyrin Chloride, Ferriprotoporpyrin, Ferriprotoporpyrin ix, Ferriprotoporpyrin IX chloride, haemin
Field of Interest: Natural Products Synthesis, Heme Containing Proteins, Hemoglobin, Myoglobin, Cytochrome C pathology, Complexes, Heme oxygenase

Background: Hemin is an iron-based porphyrin based natural product has a myriad of bioactivities where cells up-regulate heme oxygenase 1 (Hmox1, EC 1.14.99.3), which catabolizes heme to biliverdin, carbon monoxide, and free iron, and results in oxidative stress and cellular injury. 1,2 Aptamer-hemin complexes and other conjugates are found to mimic peroxidases and hemin is used in catalytic nanomaterials. 3,4,5

References:

1) Poss, Kenneth D., Tonegawa, Susumu, Reduced stress defense in heme oxygenase 1-deficient cells Proceedings of the National Academy of Sciences of the United States of America (1997), 94(20), 10925-10930.


3) Travascio, Paola, Li, Yingfu, Sen, Dipankar, DNA-enhanced peroxidase activity of a DNA aptamer-hemin complex, Chemistry & Biology (1998), 5(9), 505-517. DOI:10.1016/S1074-5521(98)90006-0.

4) Lin, Youhui, Ren, Jinsong, Qu, Xiaogang, Catalytically active nanomaterials: A promising candidate for artificial enzymes, Catalytically active nanomaterials: A promising candidate for artificial enzymes, Accounts of Chemical Research (2014), 47(4), 1097-1105. DOI:10.1021/ar400250z


Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the SDS on request. Hemin is manufactured, shipped according to standard practices, and intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

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