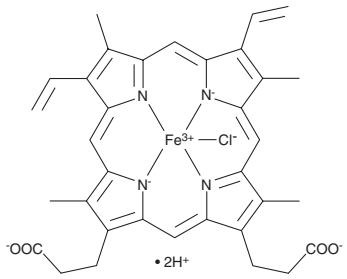
PRODUCT INFORMATION

Hemin chloride

Item No. 16487

CAS Registry No.: 16009-13-5
Formal Name: (SP-5-13)-chloro[7,12-diethenyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,8-dipropanoato(4-)-κN^{21}, κN^{22}, κN^{23}, κN^{24}]-ferrate(2-), dihydrogen
MF: $C_{34}H_{30}ClFeN_4O_4 \bullet 2H$
FW: 652.0
Purity: ≥96%
UV/Vis.: λ_{max}: 397 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Hemin chloride is supplied as a crystalline solid. A stock solution may be made by dissolving the hemin chloride in the solvent of choice, which should be purged with an inert gas. Hemin chloride is soluble in diluted ammonia water and 0.1-1.0 N NaOH.

Description

Hemin chloride is an oxidized form of heme that inhibits eukaryotic translation initiation factor 2α kinase 1 (eIF2αK1), a repressor of eIF-2α.[1] This alters the initiation of mRNA translation, evoking a wide array of cellular effects. Hemin chloride is used experimentally to induce the expression of heme oxygenase-1 in cells and in animals.[2-4] Heme extracted from blood is usually oxidized to hemin chloride.[5,6] In porphyria, disorders resulting from an increase in porphyrins, hemin chloride serves to activate feedback inhibition of δ-aminolevulinic acid synthase, reducing heme biosynthesis.[6]

References

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3. Lindenblatt, N., Bordel, R., Schareck, W., *et al.* Vascular heme oxygenase-1 induction suppresses microvascular thrombus formation in vivo. *Arterioscler. Thromb. Vasc. Biol.* **24(3)**, 601-606 (2004).
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5. Labbé, R.F., Finch, C.A., Smith, N.J., *et al.* Erythrocyte protoporphyrin/heme ratio in the assessment of iron status. *Clin. Chem.* **25(1)**, 87-92 (1979). **32366**
6. Bissell, D.M. and Wang, B. Acute hepatic porphyria. *J. Clin. Transl. Hepatol.* **3(1)**, 17-26 (2015).

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