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- Trockeneiszuschlag
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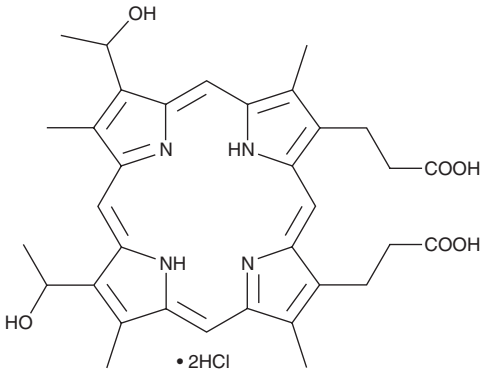
PRODUCT INFORMATION

Hematoporphyrin (hydrochloride)

Item No. 28287

CAS Registry No.:	17696-69-4
Formal Name:	7,12-*bis*(1-hydroxyethyl)-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoic acid, dihydrochloride
Synonyms:	Haematoporphyrin, Hematoporphyrin IX
MF:	$C_{34}H_{38}N_4O_6$ • 2HCl
FW:	671.6
Purity:	≥90% (mixture of isomers)
UV/Vis.:	λ_{max}: 392 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Hematoporphyrin (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the hematoporphyrin (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Hematoporphyrin (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of hematoporphyrin (hydrochloride) in ethanol is approximately 2 mg/ml and approximately 5 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of hematoporphyrin (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of hematoporphyrin (hydrochloride) in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Hematoporphyrin is a photosensitizer.[1] Hematoporphyrin (3 µM) increases oxygen consumption and decreases the respiratory control ratio (RCR) in irradiated isolated rat liver mitochondria.[2] It induces DNA breaks in cell-free assays, but not in human HeLa cervical cancer cells, in a light-dependent manner when used at a concentration of 6 µM.[3] Hematoporphyrin (12 µM) decreases the survival of irradiated, but not non-irradiated, HeLa cells. Hematoporphyrin (5 mg/kg) decreases growth of subcutaneous Yoshida AH-130 hepatoma tumors in rats when administered with radiation.[4]

References

1. Kessel, D. Hematoporphyrin and HPD: Photophysics, photochemistry and phototherapy. *Photochem. Photobiol.* **39(6)**, 851-859 (1984).
2. Salet, C. and Moreno, G. Photodynamic effects of haematoporphyrin on respiration and calcium uptake in isolated mitochondria. *Int. J. Radiat. Biol. Relat. Stud. Phys. Chem. Med.* **39(2)**, 227-230 (1981).
3. Egyeki, M., Tóth, K., Waldeck, W., *et al.* DNA damaging capability of hematoporphyrin towards DNAs of various accessibilities. *J. Photochem. Photobiol. B.* **84(2)**, 119-127 (2006).
4. Tomio, L., Zorat, P.L., Corti, L., *et al.* Effect of hematoporphyrin and red light on AH-130 solid tumors in rats. *Acta. Radiol. Oncol.* **22(1)**, 49-53 (1983).

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