

## Protoporphyrin IX

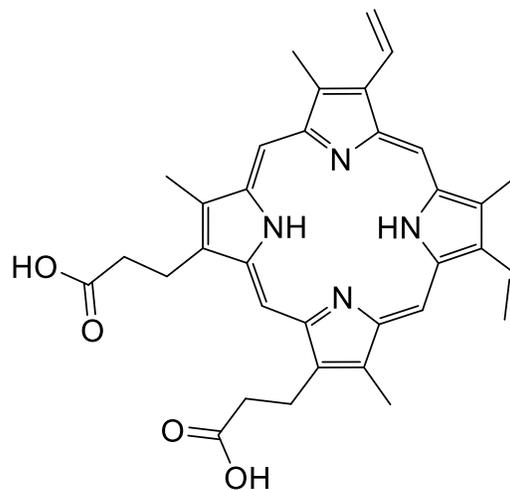
Catalog number: F-H050

Molecular Formula:  $C_{34}H_{34}N_4O_4$

MW: 562.66

CAS: 533-12-8

Solubility: Chloroform, glacial acetic acid or conc. HCl



**Storage and Handling:** Protoporphyrin IX is stable for at least one year when stored as a solid, protected from moisture, at  $-20^{\circ}\text{C}$ . Protect from light.

**Background:** Protoporphyrin IX is an intermediate in the Heme synthesis pathway and is formed from Protoporphyrinogen III in a reaction catalyzed by the enzyme Protoporphyrin III oxidase. Iron in the ferrous state is added to Protoporphyrin IX to form heme in a reaction catalyzed by the enzyme ferrochelatase. Protoporphyrin IX has been found to activate guanylate cyclase<sup>1</sup> and has been found to induce apoptosis in HeLa cells<sup>2</sup>.

**References:** 1) Ignarro, L. J.; Wood, K. S.; Wolin, M. S. Activation of purified soluble guanylate cyclase by protoporphyrin IX. *Proc Natl Acad Sci U S A* 1982, 79, 2870-3. 2) Bednarz, N.; Zawacka-Pankau, J.; Kowalska, A. Protoporphyrin IX induces apoptosis in HeLa cells prior to photodynamic treatment. *Pharmacol Rep* 2007, 59, 474-9.

**Hazardous Properties and Cautions:** The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, 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.

**Warranty and Disclaimer:** Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.

