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Frontier Specialty Chemicals, Inc. **Technical Data Sheet**
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Catalog Number: **C40967**

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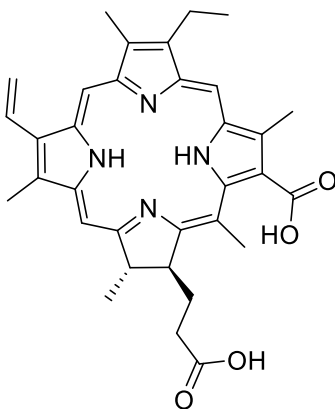
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For research use only

Not intended or approved for
diagnostic or therapeutic use.

Product Name: Chlorin e4

Catalog Number: C40967



Sizes Available: 10, 50, 100, 500 mg, and 1 gram and larger sizes available, Bulk pricing available

Molecular weight: 552.7 g/mol

Molecular Formula: C₃₃H₃₆N₄O₄

CAS Number: 550-52-7

Storage: Store at -20 °C, protect from light.

Synonyms: SCHEMBL14039063, 21H,23H-porphine-7-propanoic acid, 3-carboxy-13-ethenyl-18-ethyl-7,8-dihydro-2,5,8,12,17-pentamethyl-, (7S,8S)-, J2.069.722I (7S,*S)-3-Carboxy-13-ethenyl-18-ethyl-7,8-dihydro-2,5,8,12,17-pentamethyl-21H,23H-porphyrin-7-propanoic acid

Field of Interest: Natural Product Synthesis, Inflammation Activity, Solar Cells

Background: Chlorin e4 is a porphyrin based natural product and fine chemical that possesses photophysical properties while cytoprotective in mammalian cells^{1,2}. This compound is found in chlorophyllin extracts, and may add to its chemoprevention properties, and have high membrane affinity compared to porphyrins^{3,4}.

References:

- 1) Wang, Xiao-Feng; Kitao, Osamu, Natural chlorophyll-related porphyrins and chlorins for dye-sensitized solar cells, *Molecules* (2012), 17, 4484-4497.
- 2) Fahey Jed W; Stephenson KatherineK; Dinkova-Kostova Albena T; Egner Patricia A; Kensler Thomas W; Talalay Paul, Chlorophyll, chlorophyllin and related tetrapyrroles are significant inducers of mammalian phase 2 cytoprotective genes, *Carcinogenesis* (2005), 26(7), 1247-55.
- 3) Egner, Patricia A.; Stansbury, Kevin H.; Snyder, Edward P.; Rogers, Mark E.; Hintz, Paul A.; Kensler, Thomas W., Identification and Characterization of Chlorin e4 Ethyl Ester in Sera of Individuals Participating in the Chlorophyllin Chemoprevention Trial, *Chemical Research in Toxicology* (2000), 13(9), 900-906.
- 4) Vermathen, Martina; Marzorati, Mattia; Bigler., Self-Assembling Properties of Porphyrinic Photosensitizers and Their Effect on Membrane Interactions Probed by NMR Spectroscopy, *Journal of Physical Chemistry B* (2013), 117(23), 6990-7001.

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the SDS on request. **Chlorin e4** 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.

Warranty and Disclaimer: Frontier Specialty Chemicals, Inc. warrants the product conforms to the specifications stated herein. In the event of nonconformity, Frontier will replace products or refund purchase price, at its sole option, and Frontier shall not be responsible for any other loss or damage, whether known or foreseeable to Frontier. 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 Frontier assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.