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Frontier Specialty Chemicals, Inc. **Technical Data Sheet**  
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Phone: 1-435-753-1901  
Catalog Number: **P562-9**

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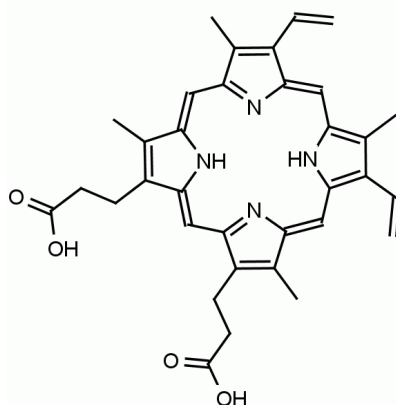
[sales@frontiersci.com](mailto:sales@frontiersci.com)

**For research use only**

Not intended or approved for  
diagnostic or therapeutic use.

**Product Name: Protoporphyrin IX**

**Catalog Number: P562-9**



**Sizes Available:** 5 gram and larger sizes available, Bulk pricing available

**Molecular weight:** 562.658 g/mol

**Molecular Formula:** C<sub>34</sub>H<sub>34</sub>N<sub>4</sub>O<sub>4</sub>

**CAS Number:** 553-12-8

**Storage:** Store at room temperature, protect from light

**Synonyms:** ChEMBL267548, 2,18-Porphinedipropionic acid, 3,8,13,17-tetramethyl-7,12-divinyl-, 21H,23H-Porphine-2,18-dipropanoic acid, 7,12-diethenyl-3,8,13,17-tetramethyl-, 3,3'-(3,7,12,17-Tetramethyl-8,13-divinylporphin-2,18-diyl)di(propionsaure), 3,3'-(3,7,12,17-tetramethyl-8,13-divinylporphine-2,18-diyl)di(propionic acid), Acide 3,3'-(3,7,12,17-tetramethyl-8,13-divinylporphine-2,18-diyl)dipropionique, acido 3,3'-(3,7,12,17-tetrametil-8,13-divinilporfina-2,18-diil)dipropionico, Kammerer's porphyrin, NSC 177389, NSC 2632, Ooporphyrin, Protoporphyrin, Protoporphyrin IX

**Field of Interest: Heme, Cytochrome C and Chlorophyll Biosynthesis, Inflammation activity, Photosynthesis and Chlorophyll degradation product**

**Background: Protoporphyrin IX** is active as a photosensitizer and is a component of nitric oxide synthase for NOS generation.<sup>1,2</sup> It is a substrate for heme oxygenases affording cellular protection and producing biliverdin and CO, a secondary messenger in cells, and metallated (Fe) versions of heme is one of the most ubiquitous metalloporphyrins in the biosphere<sup>3,4</sup>

**References:**

- 1) Castano, Ana P.; Demidova, Tatiana N.; Hamblin, Michael R., Mechanisms in photodynamic therapy: part one-photosensitizers, photochemistry and cellular localization, Photodiagnosis and Photodynamic Therapy (2005), Volume Date2004, 1(4), 279-293.
- 2) Alderton, Wendy K.; Cooper, Chris E.; Knowles, Richard G., Nitric oxide synthases: structure, function and inhibition, Biochemical Journal (2001), 357(3), 593-615.
- 3) Gozzelino, Raffaella; Jeney, Viktoria; Soares, Miguel P., Mechanisms of cell protection by heme oxygenase-1, Annual Review of Pharmacology and Toxicology (2010), 50, 323-354.
- 4) Poulos, Thomas L., Heme Enzyme Structure and Function, Chemical Reviews (Washington, DC, United States) (2014), 114(7), 3919-3962.

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