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Frontier Specialty Chemicals, Inc. **Technical Data Sheet**  
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Catalog Number: **B7**

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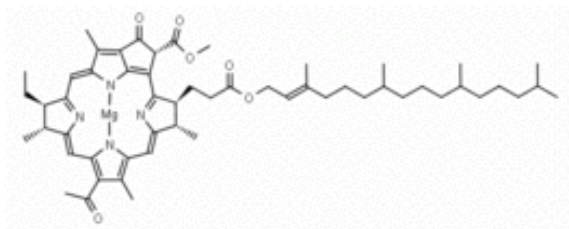
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**For research use only**

Not intended or approved for  
diagnostic or therapeutic use.

## Product Name: Bacteriochlorophyll a from Rhodopseudomonas sphaeroides

Catalog Number: B7



**Sizes Available:** 1 mg, 5 mg, and larger sizes available

**Molecular weight:** 911.50 g/mol

**Molecular Formula:** C<sub>55</sub>H<sub>74</sub>MgN<sub>4</sub>O<sub>6</sub>

**CAS Number:** 17499-98-8

**Storage:** Store at 0 - 4 °C, protect from light

**Synonyms:** Bacteriochlorophyll, bacteriochlorophyll a, 17499-98-8

**Field of Interest:** Natural Products, Light Harvesting Antennae, Chlorophyll, Photosynthetic Bacteria

**Background: Bacteriochlorophyll** is a phytol chain-based porphyrin natural product that intertwines with caroteneoids in light harvesting antennae complexes found in photosynthetic bacteria.<sup>1,2</sup> The compound is studied as the reactive center of photosynthesis and in studies of electron transfer directionality in photosynthetic reactions. The phytol chain is thought to confer protective qualities while interacting with carotenoids in highly reactive electron environments.<sup>3,4</sup>

#### References:

- 1) McDermott, G.; Prince, S. M.; Freer, A. A.; Hawthornthwaite-Lawless, A. M.; Papiz, M. Z.; Cogdell, R. J.; Isaacs, N. W., Crystal structure of an integral membrane light-harvesting complex from photosynthetic bacteria, *Nature (London)* (1995), 374(6522), 517-21. DOI:10.1038/374517a0.
- 2) Sauer, Kenneth; Cogdell, Richard J.; Prince, Steve M.; Freer, Andy; Isaacs, Neil W.; Scheer, Hugo, Structure-based calculations of the optical spectra of the LH2 bacteriochlorophyll-protein complex from *Rhodospseudomonas acidophila*, *Photochemistry and Photobiology* (1996), 64(3), 564-576. DOI:10.1111/j.1751-1097.1996.tb03106.x
- 3) Gunner, M. R.; Nicholls, Anthony; Honig, Barry, Electrostatic potentials in *Rhodospseudomonas viridis* reaction centers: implications for the driving force and directionality of electron transfer *Journal of Physical Chemistry* (1996), 100(10), 4277-91. DOI:10.1021/jp9519070
- 4) Roszak, Aleksander W.; Howard, Tina D.; Southall, June; Gardiner, Alastair T.; Law, Christopher J.; Isaacs, Neil W.; Cogdell, Richard J., Crystal Structure of the RC-LH1 Core Complex from *Rhodospseudomonas palustris*, *Science (Washington, DC, United States)* (2003), 302(5652), 1969-1972. DOI:10.1126/science.1088892,

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