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Frontier Specialty Chemicals, Inc. **Technical Data Sheet**  
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Catalog Number: **P14137**

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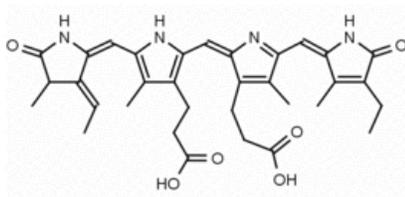
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**For research use only**

Not intended or approved for  
diagnostic or therapeutic use.

**Product Name: Phycocyanobilin**

**Catalog Number: P14137**



**Sizes Available:** 5 mg, 25 mg, 50 mg, and larger sizes available

**Molecular weight:** 586.68 g/mol

**Molecular Formula:**  $C_{33}H_{38}N_4O_6$

**CAS Number:** 20298-86-6

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

**Synonyms:** phycocyanobilin, CTK6D0370, 20298-86-6, NCI60\_011911, FT-0673886,

**Field of Interest:** Natural Products From Algae, Light Harvesting Proteins,  
Photochromes and Photosynthesis sensing

**Background: Phycocyanobilin** is a linear pyrrole based natural product found in *Spirulina* species that acts a photosensor in light harvesting arrays in photosynthesis<sup>1,2</sup> It also is a potent peroxy radical scavenger and is indicative of specific algae species as fluorometric markers of different photosynthetic antenna pigments.<sup>3,4</sup>

## References:

- 1) Levskaya, Anselm; Weiner, Orion D.; Lim, Wendell A.; Voigt, Christopher A., Spatiotemporal control of cell signalling using a light-switchable protein interaction Nature (London, United Kingdom) (2009), 461(7266), 997-1001. DOI:10.1038/nature08446.
- 2) Hughes, Jon; Lamparter, Tilman; Mittmann, Franz; Hartmann, Elmar; Wilde, Annegret; Borner, Thomas A prokaryotic phytochrome , Nature (London) (1997), 386(6626), 663, DOI:10.1038/386663a0.
- 3) Bhat, Vadiraja B.; Madyastha, K. M., C-phycocyanin: a potent peroxy radical scavenger in vivo and in vitro, Biochemical and Biophysical Research Communications (2000), 275(1), 20-25. DOI:10.1006/bbrc.2000.3270.
- 4) Beutler, M.; Wiltshire, K. H.; Meyer, B.; Moldaenke, C.; Luering, C.; Meyerhoefer, M.; Hansen, U.-P.; Dau, H., A fluorometric method for the differentiation of algal populations in vivo and in situ, Photosynthesis Research (2002), 72(1), 39-53.

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