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Frontier Specialty Chemicals, Inc. **Technical Data Sheet**
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Catalog Number: **Zn625-9**

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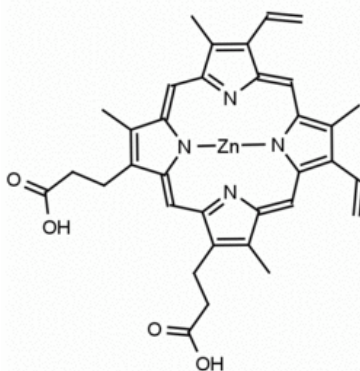
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For research use only

Not intended or approved for
diagnostic or therapeutic use.

Product Name: Zn(II) Protoporphyrin IX

Catalog Number: Zn625-9



Sizes Available: 25 mg, 100 mg, 250 mg, 1g, and larger sizes available

Molecular weight: 626.03 g/mol

Molecular Formula: C₃₄H₃₂N₄O₄Zn

CAS Number: 15442-64-5

Storage: Store at room temperature, protect from light

Synonyms: Zinc protoporphyrin, PROTOPORPHYRIN IX CONTAINING ZN, Zinc protoporphyrin-9, Zn(ppIX), zinc-protoporphyrin IX

Field of Interest: Natural Products Catabolism, Heme Oxygenase Inhibitor, Carbon Monoxide, Nitric Oxide, Gasosensors

Background: Zn(II) Protoporphyrin IX is a porphyrin based natural product that acts as a heme oxygenase inhibitor (HO-1) and is used to show retrograde messaging for long term potentiation

in the hippocampus and the roles of nitric oxide and carbon monoxide in cell signaling. ^{1,2} It is also a high affinity ligand for soluble guanylate cyclases and affect the physiology of vasodilation and cardiovascular tissue. ^{3,4}

References:

- 1) Hayashi, Shinobu, Takamiya, Rina, Yamaguchi, Tokio, Matsumoto, Kenji, Tojo, Shinichiro J., Tamatani, Takuya, Kitajima, Masaki, Makino, Nobuya, Ishimura, Yuzuru, Suematsu, Makoto, Induction of heme oxygenase-1 suppresses venular leukocyte adhesion elicited by oxidative stress: role of bilirubin generated by the enzyme, *Circulation Research* (1999), 85(8), 663-671, DOI:10.1161/01.RES.85.8.663.
- 2) Zhuo, Min, Small, Scott A., Kandel, Eric R., Hawkins, Robert D., Nitric oxide and carbon monoxide produce activity-dependent long-term synaptic enhancement in hippocampus, *Science* (Washington, DC, United States) (1993), 260(5116), 1946-50. DOI:10.1126/science.8100368.
- 3) Stasch, Johannes-Peter, Schmidt, Peter M., Nedvetsky, Pavel I., Nedvetskaya, Tatiana Y., Arun, Kumar H. S., Meurer, Sabine, Deile, Martin, Taye, Ashraf, Knorr, Andreas, Lapp, Harald, et al, Targeting the heme-oxidized nitric oxide receptor for selective vasodilatation of diseased blood vessels, *Journal of Clinical Investigation* (2006), 116(9), 2552-2561. DOI:10.1172/JCI28371.
- 4) Wang, Rui, Wang, Zunzhe, Wu, Lingyun, Carbon monoxide-induced vasorelaxation and the underlying mechanisms, *British Journal of Pharmacology* (1997), 121(5), 927-934. DOI:10.1038/sj.bjp.0701222.

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