

FRONTIER
SPECIALTY CHEMICALS
Pure and (not so) simple

Frontier Specialty Chemicals, Inc. **Technical Data Sheet**
P.O. Box 31
Logan, UT 84323-0031
Phone: 1-435-753-1901

Catalog Number: **NMM580**

www.frontiersci.com

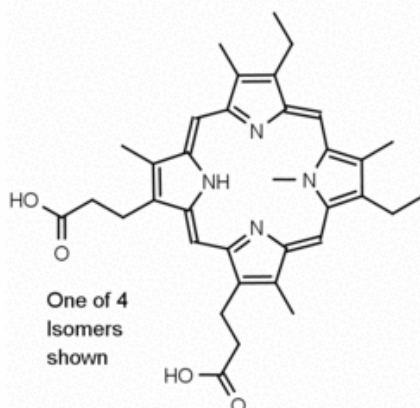
sales@frontiersci.com

For research use only

Not intended or approved for
diagnostic or therapeutic use.

Product Name: N-Methyl Mesoporphyrin IX

Catalog Number: **NMM580**



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

Molecular weight: 580.72 g/mol

Molecular Formula: C₃₅H₄₀N₄O₄

CAS Number: 142234-85-3

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

Synonyms: N-methyl mesoporphyrin IX, 3-[18-(2-carboxyethyl)-7,12-diethyl-3,8,13,17,22-pentamethyl-23H-porphyrin-2-yl]propanoic acid, SCHEMBL13325428, SCHEMBL18428599, DTXSID70349630

Field of Interest: Natural Products Synthesis, Anionic porphyrins and DNA aptamers, Quadruplex Binding, Nucleic Acid Binding

Background: N-Methyl Mesoporphyrin IX is a porphyrin based natural product that exhibits selectivity for DNA binding, DNA aptamers and G-quadruplexes.^{1,2} The compound also binds to telomeric DNA and acts as a fluorescence sensor for lead ions.^{3,4}

References:

- 1) Ren, Jinsong; Chaires, Jonathan B., Sequence and Structural Selectivity of Nucleic Acid Binding Ligands, *Biochemistry* (1999), 38(49), 16067-16075.
- 2) Li, Yingfu; Geyer, C. Ronald; Sen, Dipankar, High-Specificity Recognition of Anionic Porphyrins by DNA Aptamers, *Biochemistry* (1996), 35(21), 6911-6922.
- 3) J Nicoludis, John M.; Barrett, Steven P.; Mergny, Jean-Louis; Yatsunyk, Liliya A., Interaction of human telomeric DNA with N-methyl-mesoporphyrin IX, *Nucleic Acids Research* (2012), 40(12), 5432-5447.
- 4) Guo, Liangqia; Nie, Dandan; Qiu, Chunyan; Zheng, Qishan; Wu, Haiyan; Ye, Peirong; Hao, Yanli; Fu, FengFu; Chen, Guonan, A G-quadruplex based label-free fluorescent biosensor for lead ion, *Biosensors & Bioelectronics* (2012), 35(1), 123-127.

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