

Product Data Sheet

Product Name: Mn(III)TMPyP

Cat. No.: GC44239

Chemical Properties

Cas. No.

Chemical Name Mn(III)tetrakis(1-methyl-4-pyridyl)porphyrin pentachloride

SMILES C[n+]1ccc(cc1)C1=C2C=CC3C(=C4C=CC5=C(C6CC[n+](C)CC6)C6CCC7=C(C8CC[n+](C)CC8)C8CCC1N8[Mn]([n-]23)([n-]67)n45)c1cc[n+](C)cc1

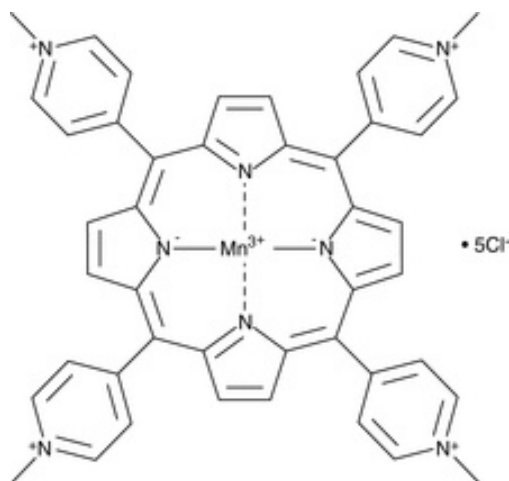
Formula $C_{44}H_{36}MnN_8 \cdot 5Cl$ M.Wt 909

Solubility Soluble at concentration of at least 50mg/mL in 0.1 M Tris-HCl buffer (1 mM EDTA, pH 9.0), and 4mg/mL in PBS (pH 7.2) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Mn(III)TMPyP is a manganese-porphyrin which acts as a superoxide dismutase (SOD) mimetic and

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peroxynitrite decomposition catalyst. SOD mimetics described to date are unstable and are capable of catalyzing undesired side-reactions in addition to the dismutation of the superoxide radical (O_2^-). Mn(III)TMPyP is an SOD mimetic with increased stability to pH and hydrogen peroxide. The rate constant for superoxide dismutation and peroxynitrite decomposition are $3.9 \times 10^7 \text{ M}^{-1}\text{s}^{-1}$ and $\sim 2 \times 10^6 \text{ M}^{-1}\text{s}^{-1}$, respectively. Mn(III)TMPyP protected and enhanced the growth of SOD null E. coli with a doubling time of 60 minutes (as compared to 240 minutes of the control) at $25 \mu\text{M}$.

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