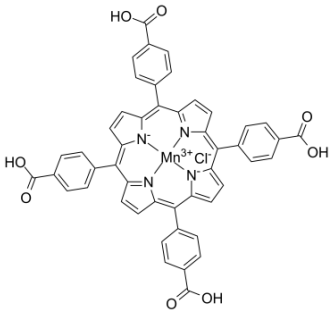
MnTBAP chloride

Cat. No.:	HY-126397
CAS No.:	55266-18-7
Molecular Formula:	$C_{48}H_{28}ClMnN_4O_8$
Molecular Weight:	879.15
Target:	NF-κB
Pathway:	NF-κB
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	MnTBAP chloride is a superoxide dismutase (SOD) mimetic and peroxynitrite scavenger. MnTBAP chloride is a manganic porphyrin complex and has anti-oxidative property. MnTBAP chloride mediates anti-inflammatory effects through upregulation of BMPR-II and inhibition of the NFκB signaling. MnTBAP chloride has the potential for the fibrotic response in chronic kidney diseases (CKDs) research[1][2].
IC_{50} & Target	NFκB
In Vitro	MnTBAP chloride (pretreated 1.14 μM before TGF-β1 of 10 ng/mL) partially but significantly restores E-cadherin reduction and suppresses the induction of α-SMA and vimentin in immortalized mouse proximal tubular cells (mPTCs)[1]. MnTBAP chloride (50 μM; 6 hours) increases BMPR-II mRNA by 1.3-fold at 2 h, but does not affect protein expression of BMPR-II during a time course of 16 h in HUVECs. MnTBAP chloride increases phosphorylation of Smad 1/5, suggesting modulation of the BMP signaling pathway[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	MnTBAP chloride (10 mg/kg; IP; three times per week for twelve weeks) attenuates renal fibrosis in 5/6 Nx mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6J mice with 5/6 nephrectomy (Nx)[1]
Dosage:	10 mg/kg
Administration:	IP; three times per week for twelve weeks
Result:	Attenuated renal fibrosis in 5/6 Nx mice and reduced protein expressions of fibronectin, collagen III in remnant kidneys.

REFERENCES

[1]. Jing Yu, et al. MnTBAP Therapy Attenuates Renal Fibrosis in Mice With 5/6 Nephrectomy. Oxid Med Cell Longev. 2016;2016:7496930.

[2]. Qian Zhou, et al. MnTBAP Increases BMPR-II Expression in Endothelial Cells and Attenuates Vascular Inflammation. Vascul Pharmacol. 2016 Sep;84:67-73.

Caution: Product has not been fully validated for medical applications. For research use only.

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