MnTE-2-PyP chloride

Cat. No.: HY-130574

CAS No.: 219818-60-7

Molecular Formula: $C_{48}H_{44}Cl_5MnN_8$

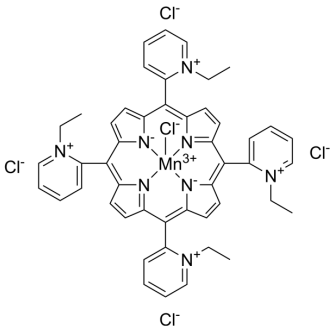
Molecular Weight: 965.12

Target: Reactive Oxygen Species

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 12.5 mg/mL (12.95 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.0361 mL	5.1807 mL	10.3614 mL
	5 mM	0.2072 mL	1.0361 mL	2.0723 mL
	10 mM	0.1036 mL	0.5181 mL	1.0361 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

MnTE-2-PyP (BMX-010) chloride is a ROS scavenger and potent radioprotector. MnTE-2-PyP also is a manganese porphyrin, protects normal prostate tissue from radiation damage. MnTE-2-PyP can be used for the research of diabetic prostate cancer [1].

In Vitro

MnTE-2-PyP (30 μM) protects against hyperglycemiainduced cell death after radiation[1].

MnTE-2-PyP (30 μM) decreases expression of NOX4 and a-SMA, one of the major oxidative enzymes and pro-fibrotic molecules respectively[1].

MnTE-2-PyP (30 μM, 5 days) obstructs NF-kB activity by decreasing DNA binding of the p50-p50 homodimer in the irradiated hyperglycemic environment[1].

MnTE-2-PyP (30 μM) increases NRF2 mediated cytoprotection by increasing NRF2 protein expression and DNA binding[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	PC-3 cells and LNCaP cells
Concentration:	30 μM

Incubation Time:	
Result:	Enhanced prostate cancer cell death.

RT-PCR[1]

Cell Line:	Human prostate fibroblast cells
Concentration:	30 μM
Incubation Time:	5 days
Result:	Significantly decreased NOX4 mRNA expression.

Western Blot Analysis[1]

Cell Line:	Human prostate fibroblast cells
Concentration:	30 μM
Incubation Time:	24 h
Result:	Inhibited NOX4 expression and restored NOX2 expression after radiation.

Immunofluorescence[1]

Cell Line:	Human prostate fibroblast cells
Concentration:	30 μM
Incubation Time:	5 days
Result:	Enhanced NRF2 levels.

In Vivo

MnTE2-PyP decreases tumor volume and increases survival in vivo mouse model of prostate cancer[1].
MnTE-2-PyP reduces blood glucose and inhibits pro-fibrotic signaling in a diabetic model[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Arpita Chatterjee, et al. MnTE-2-PyP, a manganese porphyrin, reduces cytotoxicity caused by irradiation in a diabetic environment through the induction of endogenous antioxidant defenses. Redox Biol. 2020 Jul;34:101542.

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