Tin protoporphyrin IX dichloride

Cat. No.: HY-101194

CAS No.: 14325-05-4

Molecular Formula: $C_{34}H_{32}Cl_2N_4O_4Sn$

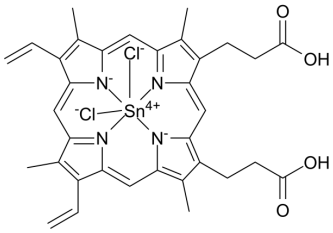
Molecular Weight: 750.26

Target: Reactive Oxygen Species

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

Storage: -20°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

0.1 M NaOH : 14.29 mg/mL (19.05 mM; ultrasonic and adjust pH to 12 with NaOH)
1M NaOH : 5 mg/mL (6.66 mM; Need ultrasonic)
DMF : 1 mg/mL (1.33 mM; Need ultrasonic and warming)
DMSO : 0.5 mg/mL (0.67 mM; Need ultrasonic and warming)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.3329 mL	6.6644 mL	13.3287 mL
5 mM	0.2666 mL	1.3329 mL	2.6657 mL
10 mM	0.1333 mL	0.6664 mL	1.3329 mL

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

BIOLOGICAL ACTIVITY

Description

Tin protoporphyrin IX dichloride (SnPPIX) is a potent Heme oxygenase-1 (HO-1) inhibitor. Tin protoporphyrin IX dichloride sensitizes pancreatic ductal adenocarcinoma (PDAC) tumors to chemotherapy in mice model[1].

IC_{50} & Target

IC50: Heme oxygenase-1 (HO-1)[1]

In Vitro

Tin protoporphyrin IX dichloride (20 μM, 50 μM; 24 hours) significantly suppressed the proliferation of Capan-1 and CD18/HPAF cells. In contrast, Tin protoporphyrin IX dichloride has no significant effect on PDAC cells proliferation at all exposures except at 50 μM[1].

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

Cell Viability Assay[1]

Cell Line:	Capan-1, CD18/HPAF, PDAC cells

Concentration:	20 μM, 50 μM
Incubation Time:	24 or 72 hours
Result:	Inhibited Capan-1 and CD18/HPAF cells proliferation and inhibits PDAC cells growth at 50μM.

In Vivo

Tin protoporphyrin IX dichloride (intraperitoneal injection; 5 mg/kg; at 0, 7, 15, and 20 days) alone or combines with Gemcitabine significantly reduced the weight of pancreatic tumors ($P < 0.05$), decreases metastasis and improved the efficacy of Gemcitabine treatment[1].

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

Animal Model:	Male and female athymic nude mice with PDAC cell-derived xenograft tumors[1]
Dosage:	5 mg/kg
Administration:	Intraperitoneal injection; at days 1, 4, 6, 8, 11, 13, 15, 18, and 20
Result:	Inhibited tumor growth and sensitized tumors to chemotherapy (Gemcitabine).

CUSTOMER VALIDATION

- Antioxidants (Basel). 2022, 11(10), 2012.
- Biochim Biophys Acta Mol Basis Dis. 2023 May 27;166761.
- Int Immunopharmacol. 2023 Jul 11;122:110571.
- Int Immunopharmacol. 2023 Jul, 120, 110282.
- J Funct Foods. August 2022, 105191.

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REFERENCES

[1]. Abdalla MY,et al.Enhancing responsiveness of pancreatic cancer cells to gemcitabine treatment under hypoxia by heme oxygenase-1 inhibition.Transl Res. 2019 May;207:56-69.

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

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