Mangafodipir trisodium

Cat. No.: HY-B0993

CAS No.: 140678-14-4

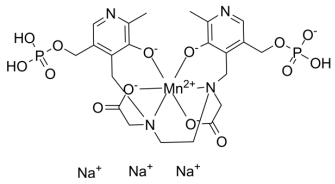
Molecular Formula: $C_{22}H_{27}MnN_4Na_3O_{14}P_2$

Molecular Weight: 757.32

Target: Apoptosis

Pathway: Apoptosis

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 : 33.33 mg/mL (44.01 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3204 mL	6.6022 mL	13.2045 mL
	5 mM	0.2641 mL	1.3204 mL	2.6409 mL
	10 mM	0.1320 mL	0.6602 mL	1.3204 mL

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

In Vivo

1. Add each solvent one by one: PBS
Solubility: 100 mg/mL (132.04 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Mangafodipir trisodium (MnDPDP), hepatocellular-specific contrast agent, is an efficacious inhibitor of CIPN (chemotherapy-induced peripheral neuropath) and other conditions caused by cellular oxidative stress. Mangafodipir trisodium shows no negative interference with the tumoricidal activity of chemotherapy[1][2].

In Vitro

Mangafodipir trisodium (40, 200 and 1000 μM) inhibits the effect of HGrC cell viability caused by H_2O_2[3].
Mangafodipir trisodium (200 and 1000 μM) attenuats the apoptosis caused by cisplatin in HGrC cells[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Mangafodipir trisodium (10 mg/kg; i.p., once) shows protective effects against ovarian damage caused by cisplatin and paclitaxel in mice[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female CD-1(ICR) Mice with cisplatin- and paclitaxel-induced ovarian damage[3]
Dosage:	10 mg/kg
Administration:	Intraperitoneal injection; 10 mg/kg, once
Result:	Attenuated the loss of primordial follicles, reduction of secondary follicles and increase of antral follicles. Prevented the change of primary follicles caused by cisplatin and paclitaxel. Reduced the increasing of cleaved caspase-3 levels caused by cisplatin and paclitaxel.

REFERENCES

[1]. Karlsson JOG, et al. Mangafodipir a Selective Cytoprotectant - with Special Reference to Oxaliplatin and Its Association to Chemotherapy-Induced Peripheral Neuropathy (CIPN). Transl Oncol. 2017 Aug;10(4):641-649.

[2]. Wang C. Mangafodipir trisodium (MnDPDP)-enhanced magnetic resonance imaging of the liver and pancreas. Acta Radiol Suppl. 1998;415:1-31.

[3]. Qin Y, et al. Protective effects of mangafodipir against chemotherapy-induced ovarian damage in mice. Reprod Biol Endocrinol. 2018 Oct 27;16(1):106.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA