Fosbretabulin disodium

Cat. No.: HY-17449

CAS No.: 168555-66-6

Molecular Formula: $C_{18}H_{19}Na_2O_8P$

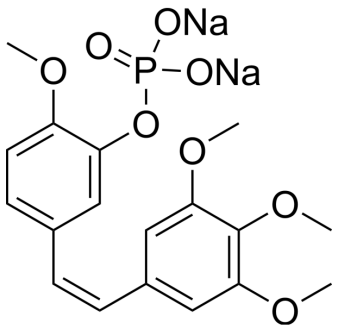
Molecular Weight: 440.29

Target: Microtubule/Tubulin; Apoptosis

Pathway: Cell Cycle/DNA Damage; Cytoskeleton; 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 : 4.5 mg/mL (10.22 mM; Need ultrasonic and warming)

DMF : < 1 mg/mL (insoluble)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	2.2712 mL	11.3562 mL	22.7123 mL
5 mM	0.4542 mL	2.2712 mL	4.5425 mL
10 mM	0.2271 mL	1.1356 mL	2.2712 mL

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

In Vivo

1. Add each solvent one by one: PBS

Solubility: 14.29 mg/mL (32.46 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

Fosbretabulin disodium (CA 4DP) is a tubulin destabilizing agent. Fosbretabulin disodium is the Combretastatin A4 proagent that selectively targets endothelial cells, induces regression of nascent tumour neovessels, reduces tumour blood flow and causes central tumour necrosis[1][3].

IC_{50} & Target

tubulin[1]

In Vitro

Fosbretabulin disodium inhibits growth of leukemia P-388, pancreas BXPC-3,?neuroblast SK-N-SH, thyroid SW1736, lung-NSC NCI-H460, prostate DU-145, an pharynx FADU, with EC_{50}s of 0.0029, 0.23, 0.00025, 0.00061, 0.00035, 0.00072, and 0.00045 μg/mL, respectively[2].

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

In Vivo

Fosbretabulin disodium (100 mg/kg; i.p.) increases the mean arterial blood pressure (MABP) at 1 and 6 h after administration and decreases the tumor blood flow in rats[3].

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

Animal Model:	Male BD9 rats (7-9 weeks) bearing the s.c. implanted P22 tumor[3]
Dosage:	100 mg/kg
Administration:	A single i.p. injections
Result:	Significantly raised the MABP by about 30%, and reduced the heart rate at 1 h after administration. Reduced the blood flow in the tumor.

REFERENCES

[1]. Shen CH, et, al. Combretastatin A-4 inhibits cell growth and metastasis in bladder cancer cells and retards tumour growth in a murine orthotopic bladder tumour model. Br J Pharmacol. 2010 Aug;160(8):2008-27.

[2]. Pettit GR, et, al. Antineoplastic agents. 445. Synthesis and evaluation of structural modifications of (Z)- and (E)-combretastatin A-41. J Med Chem. 2005 Jun 16;48(12):4087-99.

[3]. Tozer GM, et, al. Combretastatin A-4 phosphate as a tumor vascular-targeting agent: early effects in tumors and normal tissues. Cancer Res. 1999 Apr 1;59(7):1626-34.

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