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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Tubulysin A

Cat. No.: HY-15995

CAS No.: 205304-86-5

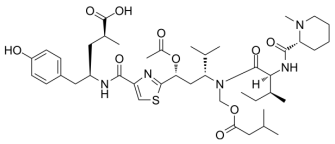
Molecular Formula: $C_{43}H_{65}N_5O_{10}S$

Molecular Weight: 844.07

Target: ADC Cytotoxin; Microtubule/Tubulin; Antibiotic

Pathway: Antibody-drug Conjugate/ADC Related; Cell Cycle/DNA Damage; Cytoskeleton; Anti-infection

Storage: -20°C, protect from light, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (118.47 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1847 mL	5.9237 mL	11.8474 mL
	5 mM	0.2369 mL	1.1847 mL	2.3695 mL
	10 mM	0.1185 mL	0.5924 mL	1.1847 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (2.96 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.96 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.96 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tubulysin A (TubA) is an anticancer and antiangiogenic agent with anti-microtubule, anti-mitosis and anti-proliferative activity against a variety of cancer cells with IC_{50} values in the pmol range. It can induce apoptosis of cancer cells and has no effect on normal cells. Tubulysins are a group of potent cytotoxins consisting of nine members (A-I). Tubulysin A can synthesize ADC as ADC Cytotoxin< b>ADC Cytotoxin[1][2][3][4].

IC_{50} & Target

Traditional Cytotoxic Agents

In Vitro

The IC_{50} values of Tubulysin A in the NCI-H1299 (lung), HT-29 (colon) and A2780 (ovary) cell lines are 3, 1 and 2 nmol/L, respectively[4].
The IC_{50} values of Tubulysin A against L929 (mouse fibroblast) and KB-V1 (human cervical cancer multidrug resistant cell line) cells were 0.07 and 1.4 ng/ml, respectively[1].
Tubulysin A (1 nM, 10 nM; 24h) has an antiangiogenic effect in HUVEC cells with IC_{50} values of 2.07-2.97 nM[1].
Tubulysin A (5h) can inhibit cell migration in HUVEC cells with IC_{50} value of 2.26 nM[1].
Tubulysin A (72h) can inhibit cell growth in HUVEC cells with GI_{50} value of 0.34 nM[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Apoptosis Analysis[1]

Cell Line:	HL-60 cells
Concentration:	0-100 nM
Incubation Time:	24/48h
Result:	Had a strong pro-apoptotic effect on HL-60 tumor cell line, but had no significant effect on HUVEC cell line.

Cell Line:	
Concentration:	
Incubation Time:	
Result:	

In Vivo

Tubulysin A (0.04 mg/kg, 0.06 mg/kg; Intraperitoneal (i.p.); once daily for 4 days) can inhibit the growth of tumor cells in mouse xenotransplantation model[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mouse xenotransplantation model[1]
Dosage:	0.04 and 0.06 mg/kg
Administration:	Intraperitoneal (i.p.)
Result:	Inhibited the growth of tumor cells.

CUSTOMER VALIDATION

- Folia Histochem Cytobiol. 2023 Mar 7.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Schluep T, et al. Polymeric tubulysin-peptide nanoparticles with potent antitumor activity. Clin Cancer Res. 2009 Jan 1;15(1):181-9.

[2]. Kaur G, et al. Biological evaluation of tubulysin A: a potential anticancer and antiangiogenic natural product. Biochem J. 2006 Jun 1;396(2):235-42.

[3]. Sasse F, et al. Tubulysins, new cytostatic peptides from myxobacteria acting on microtubuli. Production, isolation, physico-chemical and biological properties. J Antibiot (Tokyo). 2000 Sep;53(9):879-85.

[4]. Khalil MW, et al. Mechanism of action of tubulysin, an antimitotic peptide from myxobacteria. Chembiochem. 2006 Apr;7(4):678-83.

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