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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Eribulin

Cat. No.: HY-13442

CAS No.: 253128-41-5

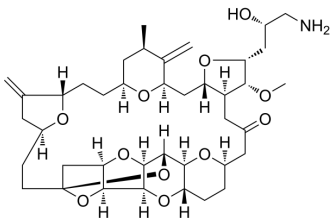
Molecular Formula: $C_{40}H_{59}NO_{11}$

Molecular Weight: 729.9

Target: Microtubule/Tubulin; Apoptosis; ADC Cytotoxin

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

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 : 200 mg/mL (274.01 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3701 mL	6.8503 mL	13.7005 mL
	5 mM	0.2740 mL	1.3701 mL	2.7401 mL
	10 mM	0.1370 mL	0.6850 mL	1.3701 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: ≥ 5 mg/mL (6.85 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5 mg/mL (6.85 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5 mg/mL (6.85 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Eribulin (E7389) is a microtubule targeting agent that is used for the research of metastatic breast cancer. Eribulin inhibits the proliferation of cancer cells by binding microtubule proteins and microtubules.

In Vitro

Eribulin (1-100 nM; 72 h) inhibits cells proliferation, with IC_{50}s of 22.8 and 21.5 nM for LM8 and Dunn cells, respectively[1].
Eribulin (10-50 nM; 12-72 h) increases early apoptosis significantly after 24 h treatment at the dose of 50 nM in LM8 cells[1].
Eribulin (10-50 nM; 12-72 h) induces G2/M arrest by 12 h treatment with at the dose of 50 nM, but not by long-term treatment (72 h) with 10 nM in LM8 cells[1].

Eribulin (1-50 nM; 12 h) does not induce senescence in LM8 cells[1].
Eribulin (1-10 nM; 16 h) induces morphological change and suppresses cell migration in a low concentration in LM8 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	LM8 cells and Dunn cells
Concentration:	0, 1, 10, 100 nM
Incubation Time:	72 hours
Result:	Inhibited cells proliferation in a dose-dependent manner.

Apoptosis Analysis[1]

Cell Line:	LM8 cells
Concentration:	0, 10, 50 nM
Incubation Time:	12, 24, 48, 72 hours
Result:	Induced early apoptosis after 12 h at the concentration of 50 nM. Not detected apoptosis at the concentration of 10 nM.

Cell Cycle Analysis[1]

Cell Line:	LM8 cells
Concentration:	0, 10, 50 nM
Incubation Time:	12, 24, 48, 72 hours
Result:	Induced G2/M arrest by 12 h treatment with 50 nM. No G2/M arrest was induced by10 nM treatment.

In Vivo

Eribulin (1 mg/kg; i.v. once a week for 2 weeks) reduces primary tumor growth and lung metastasis of osteosarcoma in mice [1].
Eribulin (1 mg/kg; once i.v.) suppresses circulating tumor cells (CTC) appearance in the low-concentration phase[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C3H/HeN mice (4-week-old) are injected LM8 cells[1]
Dosage:	1 mg/kg
Administration:	I.v. once a week for 2 weeks
Result:	Suppressed primary tumor growth and induced apoptosis in tumor cells.Reduced lung metastasis. Decreased the body weights.

CUSTOMER VALIDATION

- iScience. 6 September 2022, 105081.
- Res Sq. 2024 Sep 17.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Okouneva, T., et al., Inhibition of centromere dynamics by eribulin (E7389) during mitotic metaphase. Mol Cancer Ther, 2008. 7(7): p. 2003-11.

[2]. Smith, J.A., et al., Eribulin binds at microtubule ends to a single site on tubulin to suppress dynamic instability. Biochemistry, 2010. 49(6): p. 1331-7.

[3]. Towle, M.J., et al., Eribulin induces irreversible mitotic blockade: implications of cell-based pharmacodynamics for in vivo efficacy under intermittent dosing conditions. Cancer Res, 2011. 71(2): p. 496-505.

[4]. Watanabe K, et, al. Low-dose eribulin reduces lung metastasis of osteosarcoma in vitro and in vivo. Oncotarget. 2019 Jan 4; 10(2): 161-174.

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