Dolastatin 10

Cat. No.: HY-15580

CAS No.: 110417-88-4

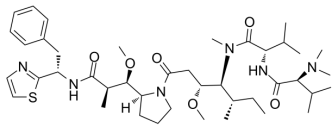
Molecular Formula: $C_{42}H_{68}N_6O_6S$

Molecular Weight: 785.09

Target: Microtubule/Tubulin; ADC Cytotoxin

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

Storage: Powder -80°C 2 years
-20°C 1 year
* The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (127.37 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.2737 mL	6.3687 mL	12.7374 mL
	5 mM	0.2547 mL	1.2737 mL	2.5475 mL
	10 mM	0.1274 mL	0.6369 mL	1.2737 mL

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

BIOLOGICAL ACTIVITY

Description

Dolastatin 10 (DLS 10) is a potent antimitotic peptide that inhibits tubulin polymerization.

IC_{50} & Target

Auristatin

In Vitro

Dolastatin 10 is a unique pentapeptide that isolated from the sea hare Dolabella auricularia. These in vitro data are quite comparable to those of Dolastatin 10 and Auristatin PE, each of which has GI_{50} values of 10^{-5}-10^{-6} μg/mL (10^{-2}-10^{-3} nM) against a similar minipanel of human cell lines[2]. The antibody-drug conjugate (ADC) comprises the anti-CD30 monoclonal antibody cAC10 conjugated to the cytotoxic agent monomethyl auristatin E (MMAE), a synthetic analog of the tubulin polymerization inhibitor Dolastatin 10[3].

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

REFERENCES

[1]. Pitot HC, et al. Phase I trial of dolastatin-10 (NSC 376128) in patients with advanced solid tumors. Clin Cancer Res. 1999 Mar;5(3):525-31.

[2]. Pettit GR, et al. Antineoplastic agents. 592. Highly effective cancer cell growth inhibitory structural modifications ofdolastatin 10. J Nat Prod. 2011 May 27;74(5):962-8.

[3]. Brentuximab vedotin. Drugs R D. 2011;11(1):85-95.

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