

Monomethyl auristatin E

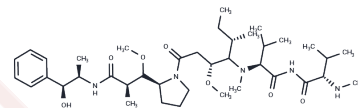
Chemical Properties

CAS No. : 474645-27-7

Formula: C₃₉H₆₇N₅O₇

Molecular Weight: 717.98

Appearance: no data available

Storage: store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Monomethyl auristatin E (MMAE) (MMAE), an antimitotic agent, inhibits cell division by blocking the polymerization of tubulin and also has inhibition of antibody-drug conjugates (ADCs) activity.
Targets(IC50)	Apoptosis, Microtubule Associated, ADC Cytotoxin
In vitro	When coupled to cAC10, Monomethyl auristatin E shows selective cytotoxicity in CD30+ cells, and induces G2/M-phase growth arrest and cell death through the induction of apoptosis. [1] When coupled to anti-CD79b antibody, anti-CD79b-vcMonomethyl auristatin E has very potent and broad activity across a large panel of NHL cell lines in vitro. [2] When coupled to anti-HER2 antibody, hertuzumab-vc-Monomethyl auristatin E can also be effectively internalized and potently kill HER2 over-expressing tumor cells. [3]
In vivo	In the Karpas 299 ALCL model, cAC10-vcMonomethyl auristatin E (1 mg/kg, i.v.) induces complete, durable tumor regression, while free Monomethyl auristatin E (0.36 mg/kg) doesn't produce detectable antitumor activity. [1] In mouse xenograft models of NHL, anti-CD79b-vcMonomethyl auristatin E (7 mg/kg, p.o.) strikingly results in sustained complete tumor remission. [2]
Cell Research	Cytotoxicity is measured using Alamar Blue dye reduction assay according to the manufacturer's directions. Briefly, a 40% solution (wt/vol) of Alamar Blue is freshly prepared in complete media just before cultures are added. Ninety-two hours after drug exposure, Alamar Blue solution is added to cells to constitute 10% culture volume. Cells are incubated for 4 hours, and dye reduction is measured on a Fusion HT fluorescent plate reader (Packard Instruments, Meriden, CT). (Only for Reference)

Solubility Information

Solubility	DMSO: 71.8 mg/mL (100 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3928 mL	6.964 mL	13.928 mL
5 mM	0.2786 mL	1.3928 mL	2.7856 mL
10 mM	0.1393 mL	0.6964 mL	1.3928 mL
50 mM	0.0279 mL	0.1393 mL	0.2786 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Francisco JA, et al. Blood. 2003, 102(4), 1458-1465.

Ai Y, Wang W, Liu F, et al. Mannose antagonizes GSDME-mediated pyroptosis through AMPK activated by metabolite GlcNAc-6P. Cell Research. 2023: 1-19.

Dornan D, et al. Blood. 2009, 114(13), 2721-2729.

Yao X, et al. Breast Cancer Res Treat. 2015, 153(1), 123-133.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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