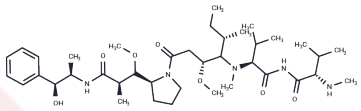
Data Sheet (Cat.No.T6897)

TargetMol

Monomethyl auristatin E

Chemical Properties



CAS No. : 474645-27-7

Formula: C39H67N5O7

Molecular Weight: 717.98

Storage: Store at low temperature
Powder: -20°C for 3 years
Actual storage temperature shall be subject to the COA.

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: 100 mg/mL (139.28 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (2.79 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and*

In vivo Formulation	*used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

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.