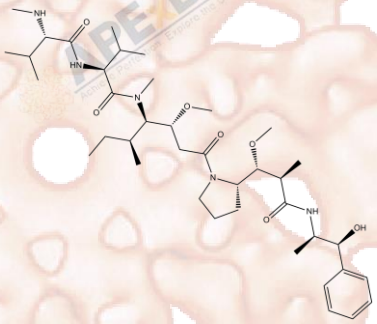
Product Data Sheet

Monomethyl auristatin E



Cat. No.:	A3631
CAS No.:	474645-27-7
Formula:	C39H67N5O7
M.Wt:	717.98
Synonyms:	Vedotin; MMAE
Target:	Cell Cycle/Checkpoint
Pathway:	Microtubule/Tubulin
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

⩾35.9 mg/mL in DMSO; insoluble in H2O; ⩾48.5 mg/mL in EtOH with gentle warming and ultrasonic

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	1.3928 mL	6.9640 mL	13.9280 mL
5 mM	0.2786 mL	1.3928 mL	2.7856 mL
10 mM	0.1393 mL	0.6964 mL	1.3928 mL

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

Biological Activity

Shortsummary	Antimitotic agent
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Karpas 299, H3396 and RCA cell lines
Preparation method:	The solubility of this compound in DMSO is >35.9 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	0-10000 ng/ml for 92 h

	Applications:	The cytotoxic activities was obtained on RCA colorectal carcinoma cells that were treated with the mAb-Val-Cit-MMAE conjugates for 96 h. Result showed that there was as much as a 104-fold reduction in cell viability in cBR96-Val-Cit-MMAE-treated cells. It was also found that, in all cases, the conjugates were potent, and the effects were due to specific drug delivery, because unconjugated, non-cross-linked mAbs had little to no cytotoxic activities.
In Vivo	**Animal experiment**	
	Animal models:	CB17 SCID mouse xenograft model with Karpas 299 and L2987 solid tumors
	Dosage form:	3 mg mAb component/kg/injection, i.v. for L2987 human lung adenocarcinoma tumors; 1 mg mAb component/kg/injection, i.v. for Karpas 299 human ALCL tumors
	Applications:	An experiment was undertaken in SCID mice with subcutaneous Karpas 299 ALCL tumors (cBR96 Ag–, cAC10Ag+), in which the cAC10-Val-Cit-MMAE was now the binding conjugate, whereas cBR96-Val-Cit-MMAE was the nonbinding control. The therapeutic effects of cAC10-Val-Cit-MMAE were pronounced. Cures of relatively large tumors (>200 mm3) were obtained at 1 mg mAb component/kg/injection (0.035 mg MMAE component/kg/injection), corresponding to 1/30th of the MTD. Equivalent doses of the nonbinding control conjugate, cBR96-Val-Cit-MMAE, were ineffective. Treatment with cAC10-Val-Cit-MMAE at 1 mg mAb component/kg/injection and at 0.5 mg/kg/injection resulted in 100% and 80% tumor cures, respectively.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1] Doronina SO,Toki BE,Torgov MY,µMendelsohn BA,Cerveny CG,Chace DF,DeBlanc RL,Gearing RP,Bovee TD,Siegall CB,Francisco JA,Wahl AF,µMeyer DL,Senter PD. Development of potent monoclonal antibody auristatin conjugates for cancer therapy. Nat Biotechnol.2003 Jul;21(7):778-84.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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