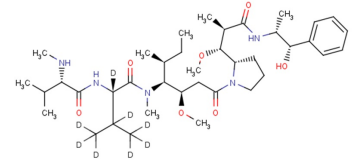


## Data Sheet (Cat.No.T10948)

D8-MMAE

### Chemical Properties

CAS No.:	2070009-72-0
Formula:	C39H59D8N5O7
Molecular Weight:	726.03
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



### Biological Description

Description	D8-MMAE (D8-Monomethyl auristatin E) is an effective mitotic inhibitor and tubulin inhibitor, deuterated MMAE.
Targets(IC <sub>50</sub> )	Others: None
In vitro	Antibody-drug conjugates (ADC) contain targeted antibodies with effective small molecule payloads. The ADC is produced against different receptors on the anaplastic large cell lymphoma L-82 line, but delivers the same cytotoxic payload (monomethyl auristatin E, MMAE). ADC-mediated cytotoxicity is not related to target expression or drug: antibody ratio. LC-MS was used to measure the concentration of MMAE in the L-82 tumor parallel cohort by the same treatment protocol. Although there was no difference in tumor volume between the treatment groups 3 days after administration, intratumoral MMAE measurements showed two patterns. First, the MMAE concentration in the tumor increases in proportion to the ADC dose, which corresponds to stronger antitumor activity. Second, intra-tumor MMAE concentrations obtained after treatment with cOKT9-vcMMAE and cAC10-vcMMAE were similar at each dose, which is consistent with the observation that tumors responded similarly to these two ADCs.
In vivo	In tumor xenograft models, the MMAE concentration in the tumor is always correlated with the degree of tumor growth inhibition. IHC analysis showed that tumors that were not combined with control treatment consisted of CD30 + and CD30- cells, presumably because they did not kill CD30 + or CD30- Karpas 299 cells. Only CD30- cells were found in tumors treated with cAC10-vcMMAF, indicating that cAC10-vcMMAF eliminated most CD30 + cells. Interestingly, at the end of the study, two tumors recurring from the treatment of cAC10-vcMMAE were also found to be CD30-, indicating that in the remaining two tumors, a small portion of CD30-cells may have escaped bystanders Kill.

### Solubility Information

Solubility	DMSO: 100 mg/mL (137.74 mM) ( < 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.377 mL	6.887 mL	13.774 mL
5 mM	0.275 mL	1.377 mL	2.755 mL
10 mM	0.138 mL	0.689 mL	1.377 mL
50 mM	0.028 mL	0.138 mL	0.275 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

## Reference

1. Li F, et al. Intracellular Released Payload Influences Potency and Bystander-Killing Effects of Antibody-Drug Conjugates in Preclinical Models. Cancer Res. 2016 May 1;76(9):2710-9.

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