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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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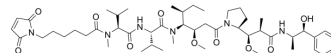
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Mc-MMAE

Cat. No.:	HY-15741
CAS No.:	863971-24-8
Molecular Formula:	C ₄₉ H ₇₈ N ₆ O ₁₀
Molecular Weight:	911.18
Target:	Microtubule/Tubulin; Drug-Linker Conjugates for ADC
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton; Antibody-drug Conjugate/ADC Related
Storage:	4°C, stored under nitrogen * The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro	DMSO : 180 mg/mL (197.55 mM; Need ultrasonic)																									
	H ₂ O : < 0.1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble)																									
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Preparing Stock Solutions</td> <td>1 mM</td> <td>1.0975 mL</td> <td>5.4874 mL</td> <td>10.9748 mL</td> </tr> <tr> <td>5 mM</td> <td>0.2195 mL</td> <td>1.0975 mL</td> <td>2.1950 mL</td> </tr> <tr> <td>10 mM</td> <td>0.1097 mL</td> <td>0.5487 mL</td> <td>1.0975 mL</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	1.0975 mL	5.4874 mL	10.9748 mL	5 mM	0.2195 mL	1.0975 mL	2.1950 mL	10 mM	0.1097 mL	0.5487 mL	1.0975 mL				
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Please refer to the solubility information to select the appropriate solvent.																										
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 4.5 mg/mL (4.94 mM); Suspended solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 4.5 mg/mL (4.94 mM); Clear solution 																									

BIOLOGICAL ACTIVITY

Description	Mc-MMAE is a protective group (maleimidocaproyl)-conjugated monomethyl auristatin E (MMAE), which is a potent tubulin inhibitor. Mc-MMAE is a agent-linker conjugate for ADC.
IC₅₀ & Target	Auristatin
In Vitro	Synthesis of maleimidocaproyl-MMAE (mc-MMAE) requires the addition of maleimidocaproic acid to a solution of MMAE in dichloromethane followed by the addition of diethyl cyanophosphonate and diisopropylethylamine ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay ^[1]

Horseshoe peroxidase (HRP) is thiolated with 2-iminothiolane and conjugated to mc-MMAE to generate the HRP-MMAE reporter enzyme-drug conjugate. Briefly, a thiolation reaction mixture containing 0.2 mM HRP (8 mg/mL) and 50 mM 2-iminothiolane in 25 mM sodium borate decahydrate ($\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$) buffer (pH 9.0) is incubated for 1 hour at 37°C. Unreacted 2-iminothiolane is removed by passage through a PD-10 desalting column equilibrated in PBS (pH 7.4). Peak fractions are pooled and mc-MMAE is coupled to thiolated HRP (HRP-SH) at a molar ratio of 3:1. The final conjugation reaction mixture contained 80 μM HRP-SH (3.2 mg/mL) in sodium borate buffer [50 mM H_3BO_3 , 50 mM NaCl (pH 8.0); 80% v/v] and 240 μM mc-MMAE in ice-cold CH_3CN (20% v/v). After 30 minutes on ice, the reaction is terminated with a 20-fold molar excess of free cysteine (4.8 mM) before PD-10 chromatography. Peak fractions containing HRP-MMAE (exchanged into PBS) are pooled and evaluated for extent of modification using the thiol-reactive dye, Alexa Fluor 594 C_5 maleimide^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Sanderson RJ, et al. In vivo drug-linker stability of an anti-CD30 dipeptide-linked auristatin immunoconjugate. *Clin Cancer Res.* 2005 Jan 15;11(2 Pt 1):843-52.

Caution: Product has not been fully validated for medical applications. For research use only.

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