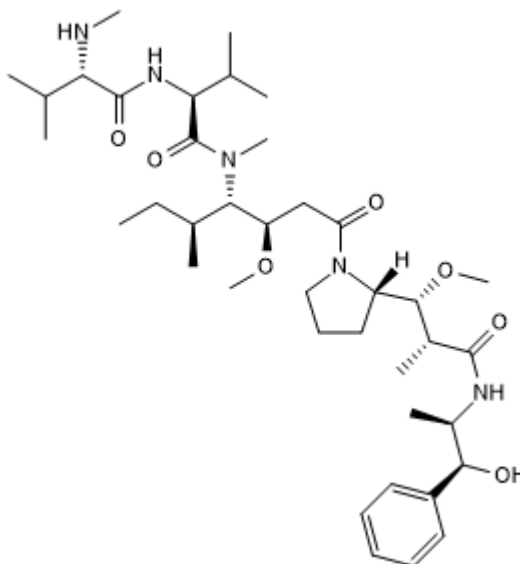


**Product Name:** MMAE **Catalog No.:** 5683 **Batch No.:** 1  
**CAS Number:** 474645-27-7  
**IUPAC Name:** *N*-Methyl-L-valyl-*N*-[(1*S*,2*R*)-4-[(2*S*)-2-[(1*R*,2*R*)-3-[(1*R*,2*S*)-2-hydroxy-1-methyl-2-phenylethyl]amino]-1-methoxy-2-methyl-3-oxopropyl]-1-pyrrolidinyl]-2-methoxy-1-[(1*S*)-1-methylpropyl]-4-oxobutyl]-*N*-methyl-L-valinamide

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>39</sub>H<sub>67</sub>N<sub>5</sub>O<sub>7</sub>  
**Batch Molecular Weight:** 717.98  
**Physical Appearance:** Off White solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 98.7% purity  
**Mass Spectrum:** Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

**Product Name:** MMAE

**Catalog No.:** 5683

**Batch No.:** 1

CAS Number: 474645-27-7

IUPAC Name: *N*-Methyl-L-valyl-*N*-[(1*S*,2*R*)-4-[(2*S*)-2-[(1*R*,2*R*)-3-[(1*R*,2*S*)-2-hydroxy-1-methyl-2-phenylethyl]amino]-1-methoxy-2-methyl-3-oxopropyl]-1-pyrrolidinyl]-2-methoxy-1-[(1*S*)-1-methylpropyl]-4-oxobutyl]-*N*-methyl-L-valinamide

**Description:**

Potent, synthetic, cytotoxic analog of dolastatin 10 (Cat. No. 3375). Suppresses tumor cell viability in vitro (GI<sub>C50</sub> values are 0.22, 0.49 and 0.54 nM in BT474, MDA-MB-361-DYT2 and N87 cells, respectively). MMAE derivatives have been shown to induce regression of established tumor xenografts when conjugated to tumor targeting antibodies via a protease-cleavable linker.

**Physical and Chemical Properties:**

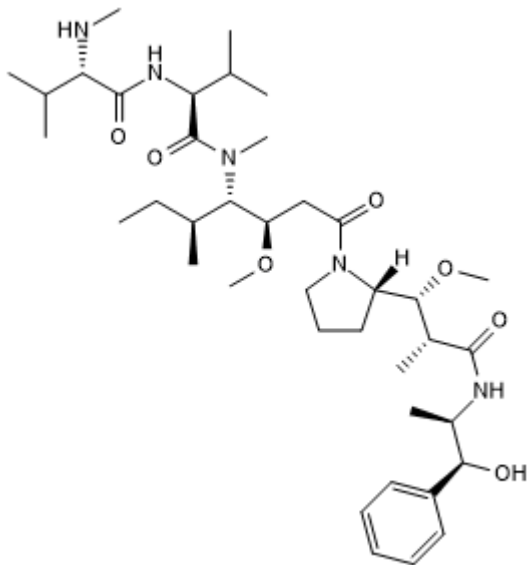
Batch Molecular Formula: C<sub>39</sub>H<sub>67</sub>N<sub>5</sub>O<sub>7</sub>

Batch Molecular Weight: 717.98

Physical Appearance: Off White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Doronina et al** (2003) Development of potent monoclonal antibody auristatin conjugates for cancer therapy. *Nat.Biotechnol.* **21** 778. PMID: 12778055.

**Maderna et al** (2014) Discovery of cytotoxic dolastatin 10 analogues with N-terminal modifications. *J.Med.Chem.* **57** 10527. PMID: 25431858.

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