

# PRODUCT INFORMATION



## Monomethyl Auristatin E

Item No. 16267

CAS Registry No.: 474645-27-7

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

Synonyms: Brentuximab vedotin, MMAE

MF: C<sub>39</sub>H<sub>67</sub>N<sub>5</sub>O<sub>7</sub>

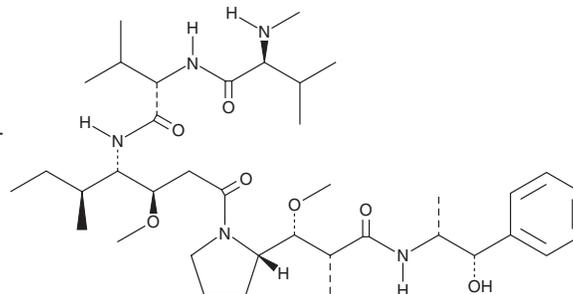
FW: 718.0

Purity: ≥95%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Monomethyl auristatin E is supplied as a crystalline solid. A stock solution may be made by dissolving the monomethyl auristatin E in the solvent of choice, which should be purged with an inert gas. Monomethyl auristatin E is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of monomethyl auristatin E in these solvents is approximately 25, 5, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of monomethyl auristatin E can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of monomethyl auristatin E in PBS (pH 7.2) is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Dolastatin 10 is a natural antimitotic and antineoplastic agent that binds to tubulin and inhibits tubulin polymerization.<sup>1</sup> MMAE is a synthetic analog of dolastatin 10 that similarly inhibits tubulin polymerization and exhibits potent cytotoxicity. It is commonly conjugated with monoclonal antibodies directed at antigens specific to cancer cells for tumor-directed cytotoxicity.<sup>2,3</sup> MMAE is typically coupled to the antibody via a protease-cleavable linker, allowing separation of the drug from the antibody following intracellular localization.<sup>3,4</sup>

### References

1. Kingston, D.G.I. Tubulin-interactive natural products as anticancer agents. *J. Nat. Prod.* **72**(3), 507-515 (2009).
2. Francisco, J.A., Cervený, C.G., Meyer, D.L., *et al.* cAC10-vcMMAE, an anti-CD30-monomethyl auristatin E conjugate with potent and selective antitumor activity. *Blood* **102**(4), 1458-1465 (2003).
3. Tse, K.F., Jeffers, M., Pollack, V.A., *et al.* CR011, a fully human monoclonal antibody-auristatin E conjugate for the treatment of melanoma. *Clin. Cancer Res.* **12**(4), 1373-1382 (2006).
4. van de Donk, N.W.C.J. and Dhimolea, E. Brentuximab vedotin. *mAbs* **4**(4), 458-465 (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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