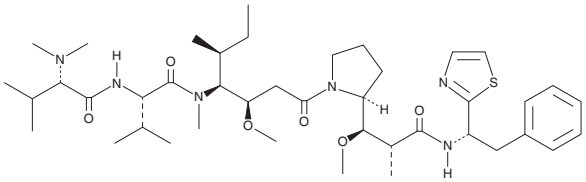
PRODUCT INFORMATION

Dolastatin 10

Item No. 45982

CAS Registry No.: 110417-88-4
Formal Name: N,N-dimethyl-L-valyl-N-[(1S,2R)-2-methoxy-4-[(2S)-2-[(1R,2R)-1-methoxy-2-methyl-3-oxo-3-[[(1S)-2-phenyl-1-(2-thiazolyl)ethyl]amino]propyl]-1-pyrrolidinyl]-1-[(1S)-1-methylpropyl]-4-oxobutyl]-N-methyl-L-valinamide
Synonym: NSC 376128
MF: $C_{42}H_{68}N_6O_6S$
FW: 785.1
Purity: ≥90%
Supplied as: A 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

Dolastatin 10 is supplied as a solid. A stock solution may be made by dissolving the dolastatin 10 in the solvent of choice, which should be purged with an inert gas. Dolastatin 10 is slightly soluble (0.1-1 mg/ml) in acetonitrile and DMSO.

Description

Dolastatin 10 is a marine pentapeptide originally isolated from *D. auricularia* that has anticancer and antifungal activities.[1-6] It inhibits tubulin polymerization (IC_{50} = 1.2 µM), tubulin-dependent GTP hydrolysis, and guanine nucleotide exchange on tubulin in cell-free assays.[1,5] Dolastatin 10 induces cell cycle arrest at mitosis and inhibits the growth of various cancer cell lines (IC_{50}s = 0.018-1.8 nM).[1,6] It reduces tumor growth and invasion in a DU145 prostate cancer mouse xenograft model.[4] It is active against fluconazole-susceptible and -resistant strains of *C. neoformans* (MICs = 0.78-3.12 and 0.049-0.78 µg/ml, respectively).[3]

References

1. Bai, R.L., Pettit, G.R., and Hamel, E. Binding of dolastatin 10 to tubulin at a distinct site for peptide antimitotic agents near the exchangeable nucleotide and vinca alkaloid sites. *J. Biol. Chem.* **265(28),** 17141-17149 (1990).
2. Pettit, G.R., Kamano, Y., Herald, C.L., *et al.* The isolation and structure of a remarkable marine animal antineoplastic constituent: Dolastatin 10. *J. Am. Chem. Soc.* **109(22),** 6883-6885 (1987).
3. Pettit, R.K., Pettit, G.R., and Hazen, K.C. Specific activities of dolastatin 10 and peptide derivatives against *Cryptococcus neoformans*. *Antimicrob. Agents Chemother.* **42(11),** 2961-2965 (1998).
4. Turner, T., Jackson, W.H., Pettit, G.R., *et al.* Treatment of human prostate cancer cells with dolastatin 10, a peptide isolated from a marine shell-less mollusc. *Prostate* **34(3),** 175-181 (1998).
5. Bai, R.L., Pettit, G.R., and Hamel, E. Structure-activity studies with chiral isomers and with segments of the antimitotic marine peptide dolastatin 10. *Biochem. Pharmacol.* **40(8),** 1859-1864 (1990).
6. Aherne, G.W., Hardcastle, A., Valenti, M., *et al.* Antitumour evaluation of dolastatins 10 and 15 and their measurement in plasma by radioimmunoassay. *Cancer Chemother. Pharmacol.* **38(3),** 225-232 (1996).

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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