

## Product Data Sheet

Product Name: Dolastatin 10

Cat. No.: GC16273

### Chemical Properties

Cas. No. 110417-88-4

Chemical Name (2S)-2-[[[(2R)-2-(dimethylamino)-3-methylbutanoyl]amino]-N-[(3S,4S)-3-methoxy-1-[(2S)-2-[(1R,2S)-1-methoxy-2-methyl-3-oxo-3-[[[(1S)-2-phenyl-1-(1,3-thiazol-2-yl)ethyl]amino]propyl]pyrrolidin-1-yl]-5-methyl-1-oxoheptan-4-yl]-N,3-dimethylbutanamide

SMILES CCC(C)C(C(CC(=O)N1CCCC1C(C(C)C(=O)NC(CC2=CC=CC=C2)C3=NC=CS3)OC)OC)N(C)C(=O)C(C(C)C)NC(=O)C(C(C)C)N(C)C

Formula C42H68N6O6S

M.Wt 785.09

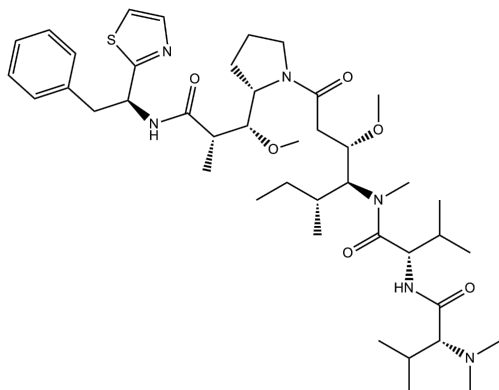
Solubility  $\geq 78.5\text{mg/mL}$  in EtOH

Storage Store at  $-20^{\circ}\text{C}$ , unstable in solution, ready to use.

General tips For obtaining a higher solubility, please warm the tube at  $37^{\circ}\text{C}$  and shake it in the ultrasonic bath for a while. Stock solution can be stored below  $-20^{\circ}\text{C}$  for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



### Background

Dolastatin 10 is an antitumor agent [1].

Dolastatin 10 is a potent antimitotic polypeptide isolated from a marine animal and is developed as a potential antitumor agent. Dolastatin 10 is found to have activity to inhibit tubulin polymerization with

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

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IC50 value of 1.2 $\mu$ M. Besides that, it potently inhibits vincristine binding to tubulin with a  $K_i$  value of 1.4 $\mu$ M in a noncompetitive manner. Dolastatin 10 also shows moderate effect on enhancing the binding of colchicines to tubulin. In addition, Dolastatin 10 has the inhibitory activity in tubulin-dependent GTP binding [1].

In the cellular assay, Dolastatin 10 shows activity against some human leukaemia, lymphoma and solid tumour cell lines (such as OVCAR-3 and NSCLC) with IC50 values ranging from 0.1nM to 10nM. It is currently tested in the clinical trials [2].

### References:

- [1] Bai R L, Pettit G R, Hamel E. Binding of dolastatin 10 to tubulin at a distinct site for peptide antimitotic agents near the exchangeable nucleotide and vinca alkaloid sites. *Journal of Biological Chemistry*, 1990, 265(28): 17141-17149.
- [2] Schwartzmann G. Marine organisms and other novel natural sources of new cancer drugs. *Annals of Oncology*, 2000, 11(suppl 3): 235-243.

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