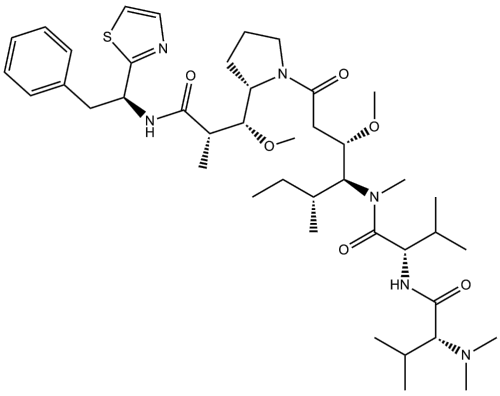
Product Data Sheet

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	≥ 78.5mg/mL in EtOH	Storage	Store at -20°C,unstable in solution, ready to use.
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°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

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IC50 value of 1.2μM. Besides that, it potently inhibits vincristine binding to tubulin with a Ki value of 1.4μM 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] Schwartsmann G. Marine organisms and other novel natural sources of new cancer drugs. Annals of Oncology, 2000, 11(suppl 3): 235-243.

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