Product Data Sheet

Product Name: Dolastatin 10 trifluoroacetate
Cat. No.: GC10557

Chemical Properties

Cas. No.	2342568-65-2		
Chemical Name	2,2,2-trifluoroacetic acid compound with (S,Z)-2-(dimethylamino)-N-((S)-1-(((3R,4S,5S)-1-((S)-2-((1R,2R,Z)-3-hydroxy-1-methoxy-2-methyl-3-(((S)-2-phenyl-1-(thiazol-2-yl)ethyl)imino)propyl)pyrrolidin-1-yl)-3-methoxy-5-methyl-1-oxoheptan-4-yl)(methyl)amino)		
SMILES	CC[C@]([C@@](N(C([C@](/N=C(O)/[C@](N(C)C)([H])C(C)C)([H])C(C)C)=O)C)([H])[C@@](OC)([H])CC(N1CCC[C@@]1([H])[C@@](OC)([H])[C@@](/C(O)=N/[C@@](C2=NC=CS2)([H])CC3=CC=CC=C3)([H])C)=O)([H])C.FC(F)(C(O)=O)F		
Formula	$C_{44}H_{69}F_3N_6O_8S$	M.Wt	899.11
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Dolastatin 10 trifluoroacetate		

Background

Dolastatin 10 trifluoroacetate is an antitumor agent [1].

Dolastatin 10 trifluoroacetate 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 IC50 value of 1.2 μM. Besides that, it potently inhibits vincristine binding to tubulin with a Ki value of 1.4 μM 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].

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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.

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