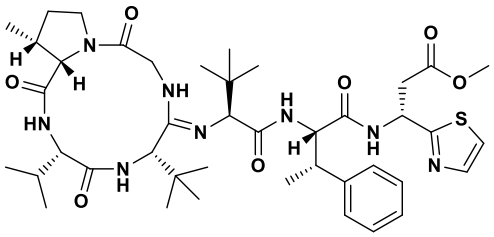
PRODUCT DATA SHEET

Date: Mar. 25, 2020

Bottromycin A2 (Inhibitor for protein synthesis)



Synonyms:

Specifications

Code No.	: 00592
CAS#	: 15005-62-6
Molecular Formula	: $C_{42}H_{62}N_8O_7S$
Molecular Weight	: 823.067
Source	: *Streptomyces,* No. 3668-L2
Appearance	: white powder
Purity	: >80% (HPLC)
Long Term Storage	: at - 20 ˚C
Solubility	: Soluble in MeOH, Ether and H_2O Insoluble in n-Hexane

Application Notes

Bottromycin A2 is a macrocyclic peptide antibiotic isolated from *Streptomyces* No. 3668-L2.[1-3] Bottromycin A2 shows potent antibacterial activities against methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant Enterococci (VRE) among other Gram-positive bacteria and mycoplasma. [2,3] The mechanism of action of botromycin A2 is known to inhibit bacterial protein synthesis by binding to the A-site of the ribosome and blocking aminoacyl-tRNA binding. [4,5]

References

1) Structures of bottromycins A and B.
Nakamura S, Chikaike T, Yonehara H, Umezawa H.
J. Antibiot. 1965, **18**, 60-61.

2) Isolation and characterization of bottromycin A and B.
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3) Structure determination and total synthesis of bottromycin A2: a potent antibiotic against MRSA and VRE.
Shimamura H, Gouda H, Nagai K, Hirose T, Ichioka M, Furuya Y, Kobayashi Y, Hirono S, Sunazuka T, Omura S.
Angew Chem int Ed Engl. 2009, **48**, 914-917.

4) Mechanism of protein synthesis inhibition by bottromycin A2: studies with puromycin.
Lin YC, Kinoshita T, Tanaka N.
J. Antibiot. 1968, **21**, 471-476.

5) Mode of action of bottromycin A2. Release of aminoacyl- or peptidyl-tRNA from ribosomes.
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