

Product Data Sheet

Product Name: Bacitracin A (technical grade)

Cat. No.: GC49793

Chemical Properties

Cas. No. 22601-59-8

SMILES O=C(N[C@@H](C(N[C@@H](C(N[C@@H](C(N[C@@H](C(N[C@@H](C(NCC(C1)=O)CC(N=O)=O)CC(O)=O)=O)CC2=CN=CN2)=O)CC3=CC=CC=C3)=O)([H])[C@@H](C)CC)=O)CCCN[C@H]1NC([C@H]([C@@H](C)CC)NC([C@@H](CCC(O)=O)NC([C@H](CC(C)C)NC([C@@H]4CSC([C@@H](N)[C@H](CC)C)=N4)=O)=O)=O)=O

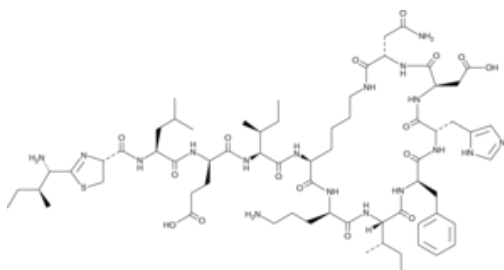
Formula C₆₆H₁₀₃N₁₇O₁₆S M.Wt 1422.7

Solubility DMSO: slightly soluble, Methanol: slightly, sonicated Storage -20°C

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

Bacitracin A is a polypeptide antibiotic that has been found in *B. licheniformis* and the main active component of the bacitracin family of polypeptide antibiotics.¹ It is active against *M. lysodeikticus* when used at a concentration of 0.1 µM and forms a complex with divalent cations and the cell membrane component C55-isoprenyl pyrophosphate.² Bacitracin A is also active against the plant pathogenic bacteria *P. ananatis* with a median effective concentration (MEC) of 9.1 µg/ml.³ It induces cell wall damage and cell leakage in *P. ananatis*.

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

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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1. Newton, G.G.F., and Abraham, E.P. Observations on the nature of bacitracin A *Biochem. J.* 53(4) 604-613 (1953)
2. Storm, D.R., and Strominger, J.L. Complex formation between bacitracin peptides and isoprenyl pyrophosphates. The specificity of lipid-peptide interactions *J. Biol. Chem.* 248(11) 3940-3945 (1973)
3. Jin, P., Tan, Z., Wang, H., et al. Antimicrobial effect of *Bacillus licheniformis* HN-5 bacitracin A on rice pathogen *Pantoea ananatis* *BioControl* 66 249-257 (2020)

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