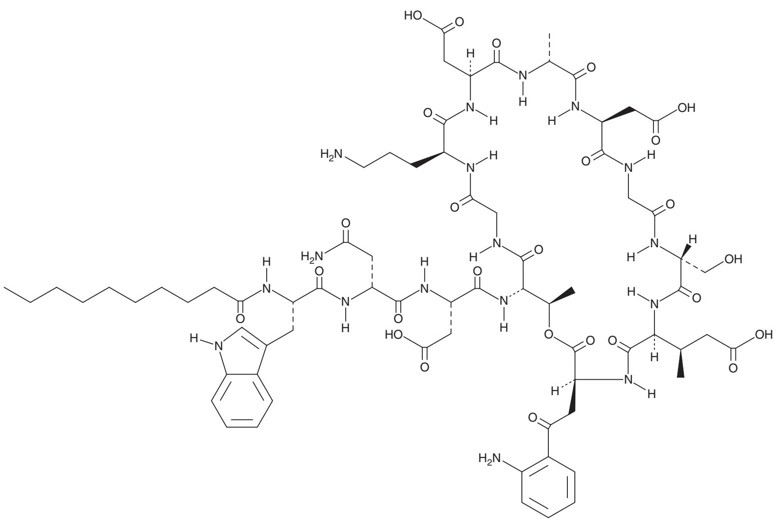
PRODUCT INFORMATION

Daptomycin
Item No. 15615



CAS Registry No.:	103060-53-3
Formal Name:	2,2'-((3S,6S,9R,15S,18R,21S,24S,30S,31R)-30-((S)-2-((R)-4-amino-2-((S)-2-decanamido-3-(1H-indol-3-yl)propanamido)-4-oxobutanamido)-3-carboxypropanamido)-3-(2-(2-aminophenyl)-2-oxoethyl)-24-(3-aminopropyl)-6-((R)-1-carboxypropan-2-yl)-9-(hydroxymethyl)-18,31-dimethyl-2,5,8,11,14,17,20,23,26,29-decaoxo-1-oxa-4,7,10,13,16,19,22,25,28-nonaazacyclohentriacontane-15,21-diyl) diacetic acid
Synonym:	LY146032
MF:	$C_{72}H_{101}N_{17}O_{26}$
FW:	1,620.7
Purity:	≥95%
UV/Vis.:	λ_{max}: 223, 261, 370 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Daptomycin is supplied as a crystalline solid. A stock solution may be made by dissolving the daptomycin in the solvent of choice, which should be purged with an inert gas. Daptomycin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of daptomycin in these solvents is approximately 5 and 1 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of daptomycin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of daptomycin in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Daptomycin is a naturally occurring cyclic lipopeptide produced by the soil saprotroph *S. roseosporus* that is effective against resistant Gram-positive bacteria (MIC_{90}s range from 0.25-16 mg/L).[1,2] It binds to bacterial plasma membranes to disrupt multiple aspects of function, including altering membrane potential and redirecting proteins essential for cell division and cell wall synthesis.[2,3]

References

1. Tally, F.P. and DeBruin, M.F. *J. Antimicrob. Chemother.* **46(4)**, 523-526 (2000).
2. Steenbergen, J.N., Alder, J., Throne, G.M., *et al. J. Antimicrob. Chemother.* **55(3)**, 283-288 (2005).
3. Pogliano, J., Pogliano, N., and Silverman, J.A. *J. Bacteriol.* **194(17)**, 4494-4504 (2012).

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