

PRODUCT INFORMATION



Platencin

Item No. 13264

CAS Registry No.: 869898-86-2
Formal Name: 3-[[3-[(2S,8S)-1,3,4,7,8,8aR-hexahydro-8-methyl-3-methylene-7-oxo-2H-2,4aS-ethanon-aphthalen-8-yl]-1-oxopropyl]amino]-2,4-dihydroxy-benzoic acid

MF: C₂₄H₂₇NO₆

FW: 425.5

Purity: ≥99%

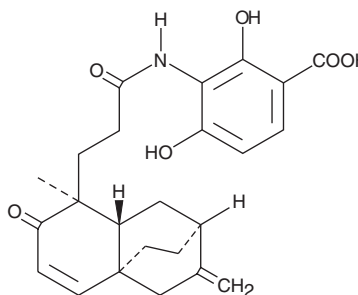
Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Bacterium/*Streptomyces* sp.

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



Laboratory Procedures

Platencin is supplied as a solid. A stock solution may be made by dissolving the platencin in the solvent of choice, which should be purged with an inert gas. Platencin is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

Description

Platencin is a natural, broad spectrum Gram-positive antibiotic isolated from *S. platensis*, which is also the source of platensimycin (Item No.15507).¹ Platencin inhibits two key enzymes in bacterial fatty acid synthesis, β -ketoacyl-ACP synthases II and III (FabF and FabH, respectively), unlike platensimycin which only targets FabF.¹ The IC₅₀ values for platencin against FabF and FabH are 1.95 and 3.91 μ g/ml, respectively.¹ It does not exhibit cross-resistance to antibiotic resistant bacterial strains, including methicillin-resistant *S. aureus*, vancomycin-intermediate *S. aureus*, and vancomycin-resistant *Enterococci*.¹ For these reasons, platencin has potential applications in fighting antibiotic resistant bacteria.^{2,3}

References

1. Wang, J., Kodali, S., Lee, S.H., et al. Discovery of platencin, a dual FabF and FabH inhibitor with in vivo antibiotic properties. *Proc. Natl. Acad. Sci. USA* **104(18)**, 7612-7616 (2007).
2. Martens, E. and Demain, A.L. Platensimycin and platencin: Promising antibiotics for future application in human medicine. *J. Antibiot. (Tokyo)* **64(11)**, 705-710 (2011).
3. Allahverdiyev, A.M., Bagirova, M., Abamor, E.S., et al. The use of platensimycin and platencin to fight antibiotic resistance. *Infect. Drug Resist.* **6**, 99-114 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM