

PRODUCT INFORMATION

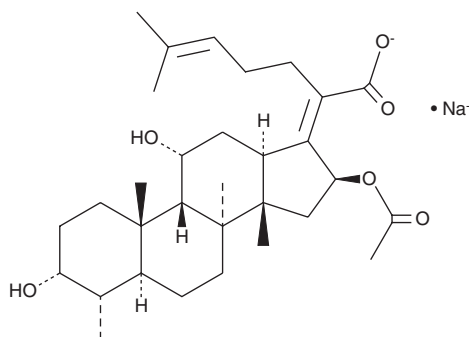


Fusidic Acid (sodium salt)

Item No. 14825

CAS Registry No.: 751-94-0
Formal Name: (4 α ,8 α ,9 β ,13 α ,14 β)-16 β -(acetyloxy)-3 α ,11 α -dihydroxy-29-nordammara-17Z(20),24-dien-21-oic acid, monosodium salt

Synonym: SQ 16,360
MF: C₃₁H₄₇O₆ • Na
FW: 538.7
Purity: \geq 98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 2 years



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

Laboratory Procedures

Fusidic acid (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the fusidic acid (sodium salt) in the solvent of choice. Fusidic acid (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of fusidic acid (sodium salt) in ethanol is approximately 12.5 mg/ml and approximately 14 mg/ml in DMSO and DMF.

Fusidic acid (sodium salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, fusidic acid (sodium salt) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Fusidic acid (sodium salt) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Fusidic acid is a fusidane antibiotic originally isolated from *F. coccineum*.¹ It is active against the Gram-positive bacteria *S. aureus*, *S. pyogenes*, *C. diphtheriae*, *B. subtilis*, and *C. tetani* (MIC₅₀s = 0.01-20 μ g/ml) but not the Gram-negative bacteria *E. coli*, *S. typhimurium*, and *P. vulgaris* or the fungi *C. albicans* and *A. fumigatus* (MIC₅₀s = >100 μ g/ml for all).² Fusidic acid inhibits ribosomal recycling and protein translocation, processes mediated by elongation factor G (EF-G), in isolated *E. coli* ribosomes (IC₅₀s = ~0.1 and ~200 μ M, respectively).³ Topical administration of fusidic acid (2%) reduces the number of skin colony forming units (CFUs) and levels of TNF- α and IL-6 in a mouse model of methicillin-resistant *S. aureus* (MRSA) skin wound infection.⁴

References

1. Verbist, L. The antimicrobial activity of fusidic acid. *J. Antimicrob. Chemother.* **25(Suppl. B)**, 1-5 (1990).
2. Godtfredsen, W.O., Jahnsen, S., Lorck, H., et al. Fusidic acid: A new antibiotic. *Nature* **193**, 987 (1962).
3. Savelsbergh, A., Rodnina, M.V., Wintermeyer, W. Distinct functions of elongation factor G in ribosome recycling and translocation. *RNA* **15(5)**, 772-780 (2009).
4. Mohamed, M.F. and Seleem, M.N. Efficacy of short novel antimicrobial and anti-inflammatory peptides in a mouse model of methicillin-resistant *Staphylococcus aureus* (MRSA) skin infection. *Drug Des. Devel. Ther.* **8**, 1979-1983 (2014).

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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