

PRODUCT INFORMATION

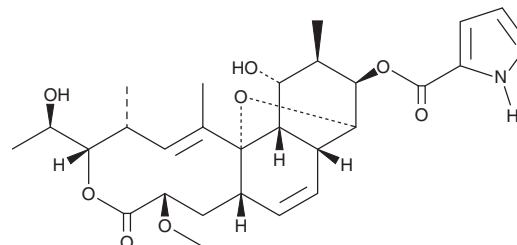


Nargenicin

Item No. 25456

CAS Registry No.: 70695-02-2
Formal Name: 1H-pyrrole-2-carboxylic acid, (1E,3R,4S,7S,8aS,10aR,11R,12R,13R,14R,14aS,14bS)-3,4,6,7,8,8a,10a,11,12,13,14,14a-dodecahydro-14-hydroxy-4-[(1R)-1-hydroxyethyl]-7-methoxy-1,3,13-trimethyl-6-oxo-11,14b-epoxy-14bH-naphth[2,1-e]oxecin-12-yl ester

Synonyms: Antibiotic 47444, CP 47,444, NSC 355066
MF: C₂₈H₃₇NO₈
FW: 515.6
Purity: ≥98%
UV/Vis.: λ_{max}: 267 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Bacterium/*Nocardia argentinensis*



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

Laboratory Procedures

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

Description

Nargenicin is a macrolide antibiotic that selectively inhibits the growth of *S. aureus*, methicillin resistant *S. aureus* (MRSA), and *M. luteus* (MICs = 0.6, 0.3, and 2.5 µg/ml, respectively) over a panel of 11 Gram-positive and Gram-negative bacteria (MICs = >80 µg/ml).¹ It dose-dependently inhibits *S. aureus* DnaE in the presence of DNase I-activated DNA and *E. coli* DnaE when used at concentrations of 0.00001-0.1 and 0.01-100 µg/ml, respectively.² In murine BV-2 microglial cells, nargenicin (1 µM) inhibits cytokine expression and nitric oxide production induced by LPS.³ Nargenicin (200 µM), when used in combination with 1,25-dihydroxyvitamin D₃ or all-*trans* retinoic acid (Item No. 11017), reduces cell proliferation by 37-47% and increases cell differentiation by 82-85% in HL-60 human myeloid leukemia cells.⁴ *In vivo*, nargenicin (50 mg/kg, p.o.) reduces the number of colony-forming units (CFUs) in infected kidneys by 100,000-fold in a murine model of *S. aureus* infection.²

References

1. Sohng, J.K., Yamaguchi, T., Seong, C.N., et al. *Arch. Pharm. Res.* **31(10)**, 1339-1345 (2008).
2. Painter, R.E., Adam, G.C., Arocho, M., et al. *Chem. Biol.* **22(10)**, 1362-1373 (2015).
3. Yoo, J.C., Cho, H.S., Park, E., et al. *Neuroreport* **20(11)**, 1007-1012 (2009).
4. Kim, S.H., Yoo, J.C., and Kim, T.S. *Biochem. Pharmacol.* **77(11)**, 1694-1701 (2009).

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.

WARRANTY AND LIMITATION OF REMEDY

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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