

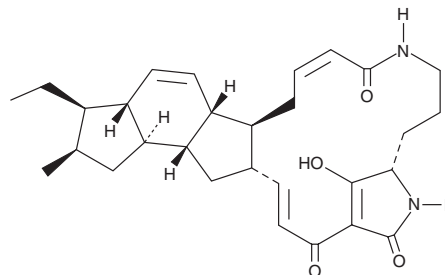
PRODUCT INFORMATION



Ikarugamycin

Item No. 15386

CAS Registry No.: 36531-78-9
Formal Name: (2R,3R,7Z,14S,19E)-3-ethyl-2,3,3aS,5aR,5bS,6,10,11,12,13,14,15,20aS,21,21aR,21bR-hexadecahydro-22-hydroxy-2-methyl-14,17-metheno-17H-as-indaceno[3,2-k][1,6]diazacycloheptadecine-9,16,18(1H)-trione
MF: C₂₉H₃₈N₂O₄
FW: 478.6
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

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

Description

Ikarugamycin is a macrocyclic antibiotic first isolated from *Streptomyces* sp. that demonstrates potent antiprotozoal activity.¹ It exhibits cytotoxic effects in cancer cell lines, inhibiting cell proliferation (IC₅₀ = 221.3 nM in HL-60 cells) through genotoxicity and by inducing apoptosis and activation of caspases.² It also was shown to significantly inhibit oxidized low-density lipoprotein-induced accumulation of cholesteryl esters in macrophages at 1-4 μM.³ Additionally, ikarugamycin is used to inhibit clathrin-coated pit-mediated endocytosis.⁴

References

1. Jomon, K., Kuroda, Y., Ajsaka, M., *et al.* A new antibiotic, ikarugamycin. *J. Antibiot. (Tokyo)* **25(5)**, 271-280 (1972).
2. Popescu, R., Heiss, E.H., Ferk, F., *et al.* Ikarugamycin induces DNA damage, intracellular calcium increase, p38 MAP kinase activation and apoptosis in HL-60 human promyelocytic leukemia cells. *Mutat. Res.* **709-710**, 60-66 (2011).
3. Hasumi, K., Shinohara, C., Naganuma, S., *et al.* Inhibition of the uptake of oxidized low-density lipoprotein in macrophage J774 by the antibiotic ikarugamycin. *Eur. J. Biochem.* **205(2)**, 841-846 (1992).
4. Luo, T., Fredericksen, B.L., Hasumi, K., *et al.* Human immunodeficiency virus type 1 Nef-induced CD4 cell surface downregulation is inhibited by ikarugamycin. *J. Virol.* **75(5)**, 2488-2492 (2001).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/14/2022

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