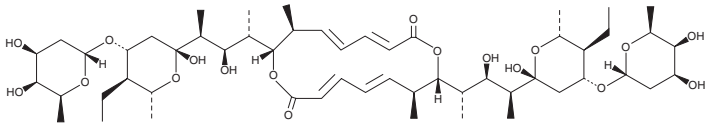
PRODUCT INFORMATION

Elaiophylin

Item No. 15583

CAS Registry No.:	37318-06-2
Synonyms:	Azalomycin-B, Gopalamicin, Salbomycin
MF:	$C_{54}H_{88}O_{18}$
FW:	1,025.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 253 nm
Supplied as:	A neat solid
Storage:	-20°C
Stability:	≥4 years
Special Conditions:	Protect from light when in solution.
Item Origin:	Bacterium/*Streptomyces hygroscopicus*



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

Laboratory Procedures

Elaiophylin is supplied as a neat solid. A stock solution may be made by dissolving the elaiophylin in the solvent of choice, which should be purged with an inert gas. Elaiophylin is soluble in organic solvents such as ethanol and DMSO. The solubility of elaiophylin in ethanol with sonication is approximately 1 mg/ml and approximately 20 mg/ml in DMSO.

Description

Elaiophylin is a macrodiolide antibiotic that can be isolated from various strains of *Streptomyces*.[1,2] It displays *in vitro* anti-protozoal activity against both *Plasmodium* and *Trypanosoma* (IC_{50}s = 370 and 460 ng/ml, respectively) and cytotoxicity against human fetal lung fibroblast MRC-5 cells (IC_{50} = 870 ng/ml).[3] Elaiophylin alone has no activity against *Candida*, although it enhances the anti-fungal activity of rapamycin (Item No. 13346).[2] Elaiophylin also forms stable, long-lasting ion channels in bilayer membranes that are selective for cations.[4]

References

1. Fiedler, H.P., Wörner, W., Zähner, H., *et al*. Metabolic products of microorganisms. 200 Isolation and characterization of niphithricins A, B, and elaiophylin, antibiotics produced by *Streptomyces violaceoniger*. *J. Antibiot. (Tokyo)* **34(9)**, 1107-1118 (1981).
2. Fang, A., Wong, G.K., and Demain, A.L. Enhancement of the antifungal activity of rapamycin by the coproduced elaiophylin and nigericin. *J. Antibiot. (Tokyo)* **53(2)**, 158-162 (2000).
3. Otoguro, K., Iwatsuki, M., Ishiyama, A., *et al*. *In vitro* and *in vivo* antiprotozoal activities of bispolides and their derivatives. *J. Antibiot. (Tokyo)* **63(5)**, 275-277 (2010).
4. Grigoriev, P.A., Schlegel, R., and Gräfe, U. Cation selective ion channels formed by macrodiolide antibiotic elaiophylin in lipid bilayer membranes. *Bioelectrochemistry* **54(1)**, 11-15 (2001).

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