

PRODUCT INFORMATION



Oligomycin D

Item No. 20184

CAS Registry No.: 1404-59-7
Formal Name: (1S,2'R,4E,5'S,6S,6'S,7R,8S,10R,11R,12S,14R,15S,16R,18E,20E,22R,25S,29R)-22-ethyl-3',4',5',6'-tetrahydro-7,11,14,15-tetrahydroxy-6'-[(2R)-2-hydroxypropyl]-5',6,8,10,12,14,16,29-octamethylspiro[2,26-dioxabicyclo[23.3.1]nonacos-4,18,20-triene-27,2'-[2H]pyran]-3,9,13-trione

Synonyms: 26-Demethyloligomycin A, RR 32705, Rutamycin

MF: C₄₄H₇₂O₁₁

FW: 777.0

Purity: ≥95%

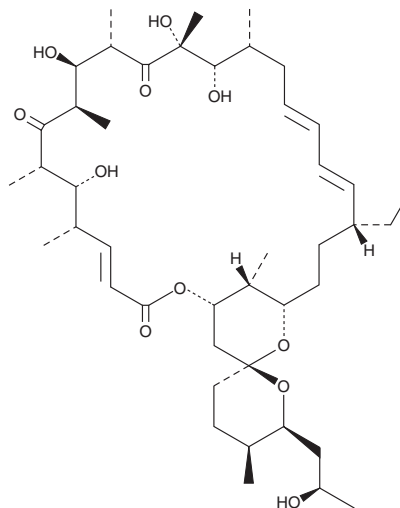
Supplied as: A lyophilisate

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

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

Oligomycin D is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Oligomycin D is a macrolide antibiotic produced by several species of *Streptomyces* that inhibits the mitochondrial F₁F₀-ATPase and is used to uncouple oxidative phosphorylation from electron transport.¹ Oligomycin D is reported to inhibit K-Ras plasma membrane localization in MDCK cells with an IC₅₀ value of 3.49 nM and is cytotoxic to SW620 colon cancer cells with an IC₅₀ value of 36 μM.²

References

1. Inoue, S., Mizutani, A., Sugita, R., *et al.* Purification and characterization of a novel protein activator of Ca²⁺/calmodulin-dependent protein kinase I. *Biochem. Biophys. Res. Commun.* **215(3)**, 861-867 (1995).
2. Salim, A. A., Tan, L., Huang, X.-C. *et al.* Oligomycins as inhibitors of K-Ras plasma membrane localisation. *Org. Biomol. Chem.* **14(2)**, 711-715, (2016).

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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