

PRODUCT INFORMATION

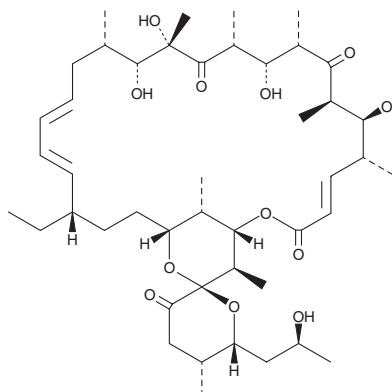


Oligomycin B

Item No. 11343

CAS Registry No.: 11050-94-5
Formal Name: (1S,2'R,4E,5'R,6R,6'R,7S,8R,10S,11S,12R,14S,15R,16S,18E,20E,22S,25R,28R,29S)-22-ethyl-5',6'-dihydro-7,11,14,15-tetrahydroxy-6'-[(2S)-2-hydroxypropyl]-5',6,8,10,12,14,16,28,29-nonamethyl-spiro[2,26-dioxabicyclo[23.3.1]nonacosa-4,18,20-triene-27,2'-[2H]pyran]-3,3',9,13(4'H)-tetrone

MF: C₄₅H₇₂O₁₂
FW: 805.1
Purity: ≥85%
UV/Vis.: λ_{max}: 225 nm
Supplied as: A crystalline 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

Oligomycin B is supplied as a crystalline solid. A stock solution may be made by dissolving the oligomycin B in the solvent of choice. Oligomycin B is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of oligomycin B in ethanol and DMF is approximately 30 mg/ml and approximately 20 mg/ml in DMSO.

Oligomycin B is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, oligomycin B should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Oligomycin B has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Oligomycins are macrolides created by *Streptomyces* species that can be toxic to other organisms. Different oligomycin isomers are highly specific for the disruption of mitochondrial metabolism. Oligomycin B is a nonselective inhibitor of the mitochondrial F₁F₀ ATP synthase. Oligomycin B (1-10 μM) can reduce the rate of ATP depletion in myocardial ischemia and decrease calcium-induced calcium release oscillation frequency of rat sensory neurons.^{1,2}

References

1. Grover, G.J. and Malm, J. Pharmacological profile of the selective mitochondrial F₁F₀ ATP hydrolase inhibitor BMS-199264 in myocardial ischemia. *Cardiovasc. Ther.* **26**, 287-296 (2008).
2. Jackson, J.G. and Thayer, S.A. Mitochondrial modulation of Ca²⁺-induced Ca²⁺-release in rat sensory neurons. *J. Neurophysiol.* **96**, 1093-1104 (2006).

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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