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DATASHEET

Oligomycin A

Product overview

Name	Oligomycin A
Cat No	HB4488
Biological action	Inhibitor
Purity	>98%
Description	Inhibitor of mitochondrial function

Biological Data

Biological description	Inhibitor of mitochondrial function which blocks the proton channel of mitochondrial ATP synthase to block oxidative phosphorylation and inhibit the electron transport chain. Anti-tumor antibiotic.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in ethanol (10 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	(1R,4E,5'S,6S,6'S,7R,8S,10R,11R, 12S,14R,15S,16R,18E,20E,22R,25S,27R,28S,29R)-22-ethyl-7,11,14,15-tetrahydroxy-6'-[(2R)-2-hydroxypropyl]-5',6,8,10,12,14,16,28,29-nonamethyl-3',4',5',6'-tetrahydro-3H,9H,13H-spiro[2,26-dioxabicyclo[23.3.1]nonacosa-4,18,20-triene-27,2'-pyran]-3,9,13-trione
Molecular Weight	791.06
Chemical structure	
Molecular Formula	$C_{45}H_{74}O_{11}$
CAS Number	579-13-5
PubChem identifier	5281899
SMILES	CC[C@H]\1CC[C@@H]2[C@@H]([C@@H]([C@H]([C@@]3(O2)CC[C@H]([C@H](O3)C[C@H](C)O)C)C)OC(=O)/C=C/[C@H]([C@@H]([C@H](C(=O)[C@H]([C@@H]([C@H](C(=O)[C@@]([C@@H]([C@H](C/C=C/C=C1)C)O)(C)O)C)O)C)C)O)C)C
InChiKey	MNULEGDCPYONBU-MQCNKYSOSA-N
MDL number	MFCD00065705
Appearance	White to off-white

References

Assessing Mitochondrial Dysfunction in Cells

Brand et al (2011) Biochem J 435(2)
PubMedID 21726199

Mechanism of Inhibition of Mitochondrial Adenosine Triphosphatase by Dicyclohexylcarbodiimide and Oligomycin: Relationship to ATP Synthesis

Penefsky, (1985) Comparative Study 82(6)
PubMedID 2858849

Oligomycin A-induced Inhibition of Mitochondrial ATP-synthase Activity Suppresses Boar Sperm Motility and in Vitro Capacitation Achievement Without Modifying Overall Sperm Energy Levels

Lluch et al (2014) Reprod Fertil Dev 26(6)
PubMedID 25319379