

Hello Bio, Inc.  
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500  
F. 609-228-4994

customercare-usa@hellobio.com



## DATASHEET

Oligomycin A

### Product overview

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

### Biological Data

<b>Biological description</b>	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.
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### Solubility & Handling

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

### Chemical Data

<b>Chemical name</b>	(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
<b>Molecular Weight</b>	791.06
<b>Chemical structure</b>	
<b>Molecular Formula</b>	C <sub>45</sub> H <sub>74</sub> O <sub>11</sub>
<b>CAS Number</b>	579-13-5
<b>PubChem identifier</b>	5281899
<b>SMILES</b>	<chem>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)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)O)C)C</chem>
<b>InChiKey</b>	MNULEGDCPYONBU-MQCNKYSOSA-N
<b>MDL number</b>	MFCD00065705
<b>Appearance</b>	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](#)

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