

Product Name:	Leucinostatin A
Product Number:	L030
CAS Number:	76600-38-9
Molecular Formula:	$C_{62}H_{111}N_{11}O_{13}$
Molecular Weight:	1218.6
Appearance:	Light tan to tan solid
Storage Conditions:	-20°C
Description:	<p>Leucinostatin A is the major component of an atypical nonapeptide complex produced by <i>Paecilomyces lilacinus</i>, first reported in 1973. Leucinostatins display broad bioactivity against Gram positive bacteria, fungi, plants and tumor cell lines. Leucinostatin A is potentiated by inhibitors such as venturicidin and oligomycin. More recently, interest in leucinostatin has focused on understanding its activity as an insulin-like growth factor I regulator, an ionophore, inhibitor of cell surface expression of viral glycoproteins and its anti-trypanosomal activity.</p> <p>Leucinostatin A is soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.</p>
Mechanism of Action:	Leucinostatin A inhibits respiration by uncoupling oxidative phosphorylation.
References:	<p>A new antibiotic, leucinostatin, derived from <i>Penicillium lilacinum</i>. Arai T. et al. J. Antibiot. 1973, 26, 157.</p> <p>Isolation of leucinostatin A and one of its constituents, the new amino acid, 4-methyl-6-(2-oxobutyl)-2-piperidinecarboxylic acid, from <i>Paecilomyces lilacinus</i> A-267. Mori Y. et al. J. Antibiot. 1982, 35, 543.</p> <p>Dual inhibitory effects of the peptide antibiotics leucinostatins on oxidative phosphorylation in mitochondria. Shima A. et al. Cell Struct. Funct. 1990, 15, 53.</p> <p>Leucinostatin A inhibits prostate cancer growth through reduction of insulin-like growth factor-I expression in prostate stromal cells. Kawada M. et al. Int. J. Cancer 2010, 126, 810.</p>