Leucinostatin A is the major component of an atypical nonapeptide complex produced by Paecilomyces lilacinus, 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.

Leucinostatin A is soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.

Leucinostatin A inhibits respiration by uncoupling oxidative phosphorylation.

Isolation of leucinostatin A and one of its constituents, the new amino acid, 4-methyl-6-(2-oxobutyl)-2-piperidinecarboxylic acid, from Paecilomyces lilacinus A-267. Mori Y. et al. J. Antibiot. 1982, 35, 543.
