

Product Name:	Piericidin A
Product Number:	P081
CAS Number:	2738-64-9
Molecular Formula:	C ₂₅ H ₃₇ NO ₄
Molecular Weight:	415.6
Appearance:	Pale Yellow Oil
Storage Conditions:	-20°C
Description:	<p>Piericidin A is the major analogue of a family of pyridyl antibiotics isolated from selected Streptomyces species.</p> <p>Piericidin A is soluble in ethanol, methanol, DMF or DMSO. Poor water solubility.</p>
Mechanism of Action:	<p>Piericidin A is a specific, potent inhibitor of NADH-ubiquinone oxidoreductase (Complex I) that binds to ubiquinone binding site(s). Piericidin A inhibits both mitochondrial and bacterial NADH-ubiquinone oxidoreductases, binding close to NUOD-NUOB interface.</p>
References:	<p>Evidence for a quinone binding site close to the interface between NUOD and NUOB subunits of Complex I. Prieur I. et al. Biochim. Biophys. Acta 2001, 1504, 173.</p> <p>¹→H⁺/2e⁻ stoichiometry in NADH-quinone reductase reactions catalyzed by bovine heart submitochondrial particles. Galkin A.S. et al. FEBS Lett. 1999, 451, 157.</p> <p>The 49-kDa subunit of NADH-ubiquinone oxidoreductase (Complex I) is involved in the binding of piericidin and rotenone, two quinone-related inhibitors. Darrouzet E. et al. FEBS Lett. 1998, 10, 34.</p> <p>Two binding sites of inhibitors in NADH: ubiquinone oxidoreductase (complex I). Relationship of one site with the ubiquinone-binding site of bacterial glucose:ubiquinone oxidoreductase. Friedrich T. et al. Eur J Biochem. 1994, 219, 691.</p>