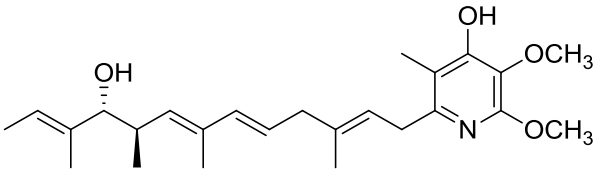
bioaustralis
fine chemicals

PRODUCT DATA SHEET

Piericidin A

Code No.: **BIA-P1069**

Pack sizes: **1 mg, 5 mg**



Synonyms : Shaoguanmycin B, MT 1882-I, SN 198E, IT 143D, Piericidin A1

Specifications

CAS #	:	**2738-64-9**
Molecular Formula	:	**$C_{25}H_{37}NO_4$**
Molecular Weight	:	**415.6**
Source	:	***Streptomyces* sp.**
Appearance	:	**Pale Yellow Oil**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in ethanol, methanol, DMF or DMSO. Poor water solubility.**

Application Notes

Piericidin A is the major analogue of a family of pyridyl antibiotics isolated from selected Streptomyces species. It 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.

References

1. 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.
2. →H+/2e- stoichiometry in NADH-quinone reductase reactions catalyzed by bovine heart submitochondrial particles. Galkin A.S. et al., FEBS Lett. 1999, 451, 157.
3. 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.
4. 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.

Updated: 24 May 2019

Building C, 28-54 Percival Road, Smithfield, NSW 2164, AUSTRALIA

Tel: 61 2 9757 4515 Fax: 61 2 9757 2586 Web: www.bioaustralis.com Email: info@bioaustralis.com