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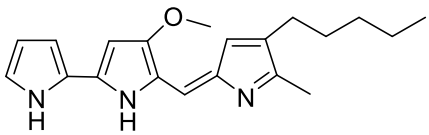
PRODUCT DATA SHEET

Prodigiosin

Code No.: **BIA-P1194**

Pack sizes: **0.5 mg, 2.5 mg**



Synonyms : -

Specifications

CAS #	:	**82-89-3**
Molecular Formula	:	**$C_{20}H_{25}N_3O$**
Molecular Weight	:	**323.4**
Source	:	***Serratia marcescens***
Appearance	:	**Dark red solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in methanol, DMSO. Limited water solubility.**

Application Notes

Prodigiosin is an intensely red pyrrole pigment produced by several bacteria, most notably Serratia marcescens. Prodigiosin has a broad biological profile with activity against fungi, tumor cell lines and malaria. It was shown to be an immunosuppressant in 2007. Prodigiosin acts via caspase inhibition to induce apoptosis in human primary cancer cells. Prodigiosin also acts as an inducer of p21WAF1/CIP1 expression via transforming growth factor-β receptor pathway, and activates NAG-1 via glycogen synthase kinase-3β.

References

1. Seeing red: The story of prodigiosin. Bennett J.W. & Bentley R., Adv. Appl. Microbiol. 2000, 47, 1.
2. Prodigiosin induces apoptosis of B and T cells from B-cell chronic lymphocytic leukemia. Campas C. et al., Leukemia 2003, 17, 746.
3. Prodigiosin: a novel family of immunosuppressants with anti-cancer activity. Pandey R. et al., Indian J. Biochem. Biophys. 2007, 44, 295.
4. The anticancer agent prodigiosin induces p21WAF1/CIP1 expression via transforming growth factor-beta receptor pathway. Soto-Cerrato V. et al., Biochem Pharmacol. 2007, 74, 1340.
5. Prodigiosin induces the proapoptotic gene NAG-1 via glycogen synthase kinase-3beta activity in human breast cancer cells. Soto-Cerrato V. et al., Mol. Cancer Ther. 2007, 6, 362.
6. Proteomic analysis of prodigiosin-induced apoptosis in a breast cancer mitoxantrone-resistant (MCF-7 MR) cell line. Monge M. et al., Invest. New Drugs 2007, 25, 21.

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