

Product Information

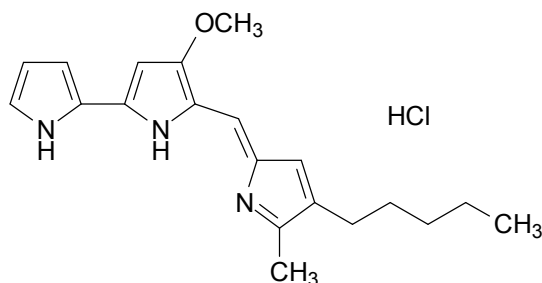
Prodigiosin hydrochloride from *Serratia marcescens*

Catalog Number **P0103**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS RN 56144-17-3

Product Description

Molecular Formula: $\text{C}_{20}\text{H}_{25}\text{N}_3\text{O} \cdot \text{HCl}$
Molecular Weight: 359.9



Prodigiosin is a tripyrrole red pigment biosynthesized by *Serratia marcescens* and other bacteria. It exhibits antibacterial, anticancer, cytotoxic, immunosuppressive, and antiproliferative activities.¹⁻³ Prodigiosin induces apoptosis in hematopoietic cancer cells and in cells derived from other human cancers, including gastric and colon, with no marked toxicity in nonmalignant cell lines.^{2,4,5} Morphological analysis of prodigiosin-treated cells demonstrated that prodigiosin induces cell shrinkage, chromatin condensation, reorganization of actin microfilament architecture, and detachment of cells from the cell culture substrate.⁶ Different targets and mechanisms of action were described for prodigiosin, including induction of single- and double-strand DNA breaks, modulation of pH, regulation of mitogen-activated protein kinase, and inhibition of cell cycle progression.⁵

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Prodigiosin is soluble in acetonitrile, methanol, chloroform, and DMSO. It is insoluble in water.

Storage/Stability

Store the product at $-20\text{ }^{\circ}\text{C}$. Under these conditions the product is stable for 2 years.

Solutions of prodigiosin are stable in acidic pH and unstable under alkaline conditions. Solutions, at 2 mg/mL in DMSO or methanol, are stable for at least 6 months at $-20\text{ }^{\circ}\text{C}$.

References

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2. Montaner, B., et al., Prodigiosin from the supernatant of *Serratia marcescens* induces apoptosis in haematopoietic cancer cell lines. *British J. Pharmacol.*, **131**, 585-593 (2000).
3. Song, M. J., et al., Purification and characterization of prodigiosin produced by integrated bioreactor from *Serratia* sp. KH-95. *J. Biosc. Bioeng.*, **101**, 157-161 (2006).
4. Montaner, B., and Pérez-Tomás, R., Prodigiosin induces caspase-9 and caspase-8 activation and cytochrome c release in Jurkat T cells. *Ann. NY Acad. Sci.*, **973**, 246-249 (2002).
5. Pérez-Tomás, R. et al., The prodigiosins, proapoptotic drugs with anticancer properties. *Biochem. Pharmacol.*, **66**, 1447-1452 (2003).
6. Diaz-Ruiz, C., et al., Prodigiosin induces cell death and morphological changes indicative of apoptosis in gastric cancer cell line HGT-1. *Histol. Histopathol.*, **16**, 415-421 (2001).

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