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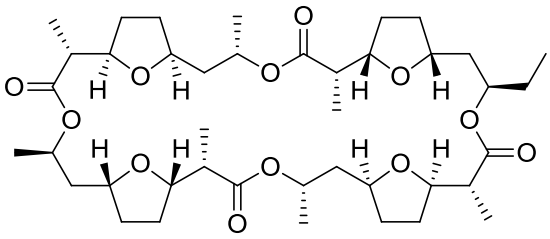
PRODUCT DATA SHEET

Monactin

Code No.: **BIA-M1055**

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



Synonyms : 5-demethyl-5-ethylnonactin, AKD 1B

Specifications

CAS #	:	**7182-54-9**
Molecular Formula	:	**$C_{41}H_{66}O_{12}$**
Molecular Weight	:	**751.0**
Source	:	***Streptomyces* sp.**
Appearance	:	**Colourless Film**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in ethanol, methanol, DMF or DMSO. Poor water solubility.**

Application Notes

Monactin is a member of the macrotetrolide complex produced by a range of Streptomyces species. Monactin has not previously been available for intensive investigation. Early literature reported that the related dinactin is a monovalent cation ionophore with high selectivity for ammonium and potassium. Monactin inhibits T-cell proliferation induced by IL-2 and cytokine production at nanomolar levels for IL-2, IL-4, IL-5 and IFN-γ.

References

1. Effects of cyclosporin A and dinactin on T-cell proliferation, interleukin-5 production, and murine pulmonary inflammation. Umland S. P., et al., Am. J. Respir. Cell Mol. Biol., 1999, 20, 481.
2. Immunosuppressive effects of polynactins (tetranactin, trinactin and dinactin) on experimental autoimmune uveoretinitis in rats. Tanouchi Y., et al., Jpn. J. Ophthalmol., 1987, 31, 218.
3. Antibiotics as tools for metabolic studies. VI. Damped oscillatory swelling of mitochondria induced by nonactin, monactin, dinactin, and trinactin. Graven S. N., et al., Biochemistry, 1966, 5, 1735.

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