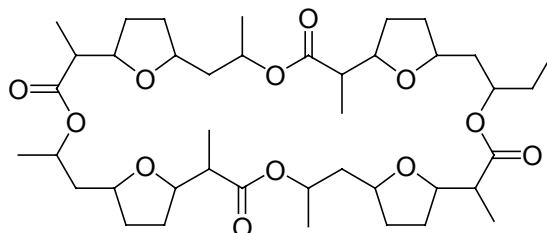


## Monactin

Code: **BIA-M1055**

Pack sizes: **1.0 mg, 5.0 mg**



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

## Specifications

CAS # : **7182-54-9**

Molecular Formula : **C<sub>41</sub>H<sub>66</sub>O<sub>12</sub>**

Molecular Weight : **751.0**

Source : ***Streptomyces* sp. MST-AS5448**

Appearance : **Colourless Film**

Purity : **> 95% by HPLC**

Long Term Storage : **-20°C**

Solubility : **Soluble in ethyl acetate or DMSO, moderately in soluble ethanol or methanol.**

## 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 and interferon- $\gamma$ .

## 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.