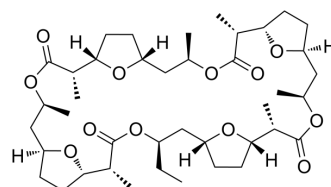


Monactin

Cat. No.:	HY-111525
CAS No.:	7182-54-9
Molecular Formula:	C ₄₁ H ₆₆ O ₁₂
Molecular Weight:	750.96
Target:	Bacterial; Antibiotic; Oxidative Phosphorylation
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Monactin is a mactrotetralide antibiotic and a non-selective ionophore for monovalent cations, including potassium, sodium, and lithium. Monactin is isolated from <i>Streptomyces</i> and has antiproliferative activity ^{[1][2][3]} .
In Vitro	Monactin displays strong antiproliferative activity against A2780 ovarian cancer cells (IC ₅₀ 0.13 μM), A2058 melanoma cells (0.02 μM), and H522-T1 non small-cell cancer lung cells (0.01 μM) ^[3] . Monactin inhibits TCF/β-catenin transcriptional activity ^[4] . At a concentration of 10 μM, nigericin and monactin inhibited growth of <i>Streptococcus faecalis</i> , and the inhibition was reversed by addition of excess K ⁽⁺⁾ ^[5] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Monactin is potent uncoupler of oxidative phosphorylation and inducer of ATP hydrolysis in rat liver mitochondria ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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- [3]. Harinantenaina Rakotondraibe L, et al. Antiproliferative and antiplasmodial compounds from selected *Streptomyces* species. *Bioorg Med Chem Lett*. 2015;25(23):5646-5649.
- [4]. Tamai, Y, et al. Nonactin and related compounds found in a screening program for wnt signal inhibitory activity. *Heterocycles*, 84(2), 1245-1250.
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Caution: Product has not been fully validated for medical applications. For research use only.

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