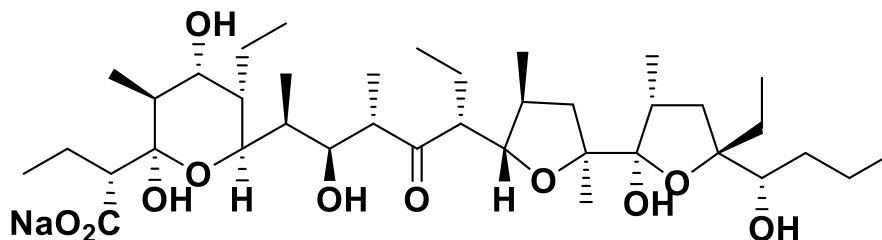


PRODUCT DATA SHEET

Date: Aug. 16, 2022

Inostamycin A (sodium salt)



Specifications

Code No.	: 14652
CAS#	: 1884611-95-3 (sodium salt)
Parent CAS#	: 129905-10-8 (salt free form)
Molecular Formula	: C ₃₈ H ₆₇ O ₁₁ Na
Molecular Weight	: 722.933
Source	: <i>Streptomyces</i> sp. MH816-AF15
Supplied as	: Powder, sodium salt
Purity	: > 90% (Quantitative NMR)
Long Term Storage	: at - 20 °C
Solubility	: Soluble in DMSO, DMF and CHCl ₃ , poorly soluble in H ₂ O

Application Notes

Inhibitor of phosphatidylinositol turnover. It inhibits EGF-induced inositol incorporation into inositol lipids with an IC₅₀ of about 0.5 µg/ml in the A431 cell assay system ¹⁾. Inostamycin A has antimicrobial activities against Gram-positive bacteria and cytotoxic activity against src-NIH-3T3 cell with IC₅₀ value of 0.07 µg/ml ²⁾. Inostamycin A potentiates colchicine cytotoxicity toward KB-C4 cells at 3 µg/ml ³⁾. Inostamycin A causes Ms-1 cell to accumulate in the G1 phase at 0.1 µg/ml and induces morphological apoptosis at high concentration (0.3 µg/ml) ⁴⁾.

References

- 1) Isolation and structure determination of inostamycin, a novel inhibitor of phosphatidylinositol turnover. (The isolation of Inostamycin A sodium salt is described.)
Imoto, M., Umezawa, K., Takahashi, Y., Naganawa, H., Iitaka, Y., Nakamura, H., Koizumi, Y., Sasaki, Y., Hamada, M., Sawa, T., Umezawa, H. & Takeuchi, T. *J. Nat. Prod.* **53**, 825-829 (1990).
- 2) Inostamycin B and C, new polyether antibiotics.
Odai, H., Shindo, K., Odagawa, A., Mochizuki, J., Hamada, M. & Takeuchi, T. *J. Antibiot.* **47**, 939-941 (1994).
- 3) Circumvention of multidrug resistant in human carcinoma KB cells by polyether antibiotics.
Kawada, M., Sumi, S., Umezawa, K., Inoue, S., Sawa, T. & Seto, H. *J. Antibiot.* **45**, 556-562 (1992).
- 4) Inhibition of cyclin D1 expression and induction of apoptosis by inostamycin in small cell lung carcinoma cells.
Imoto, M., Tanabe, K., Simizu, S., Tashiro, E., Takada, M. & Umezawa, K. *Jpn. J. Cancer Res.* **89**, 315-322 (1998).