

PRODUCT INFORMATION



Cytostatin (sodium salt)

Item No. 19602

CAS Registry No.: 457070-06-3
Formal Name: (5S,6S)-5,6-dihydro-6-
[[1S,4S,5S,6S,7Z,9Z,11E]-6-hydroxy-
1,5-dimethyl-4-(phosphonoxy)-7,9,11-
tridecatrien-1-yl]-5-methyl-2H-pyran-2-
one, monosodium salt

MF: C₂₁H₃₂O₇P • Na

FW: 450.4

Purity: ≥75%

Supplied as: A powder

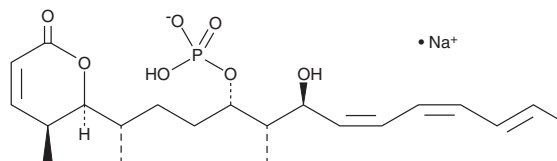
Storage: -20°C

Stability: ≥4 years

Special Conditions: Keep cool and dry

Item Origin: Bacterium/*Streptomyces* sp. MJ654-NF4

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



Laboratory Procedures

Cytostatin (sodium salt) is supplied as a powder. A stock solution may be made by dissolving the cytostatin (sodium salt) in the solvent of choice, which should be purged with an inert gas. Cytostatin (sodium salt) is soluble in organic solvents such as methanol and DMSO. Cytostatin (sodium salt) is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

Cytostatin is a natural antitumor inhibitor of cell adhesion to extracellular matrix, blocking adhesion of B16 melanoma cells to laminin and collagen type IV *in vitro* (IC₅₀s = 1.3 and 1.4 µg/ml, respectively) and B16 cell metastatic activity in mice.^{1,2} It induces apoptosis of FS3 mouse fibrosarcoma cells (IC₅₀ = 3.1 µg/ml).³ Cytostatin potently and selectively inhibits protein phosphatase 2A (PP2A; IC₅₀ = 29 nM against the catalytic subunit), while having no effect against PP1, PP2B, or PP5.^{4,5}

References

1. Amemiya, M., Ueno, M., Osono, M., *et al.* Cytostatin, a novel inhibitor of cell adhesion to components of extracellular matrix produced by *Streptomyces* sp. MJ654-NF4. I. Taxonomy, fermentation, isolation and biological activities. *J. Antibiot. (Tokyo)* **47(5)**, 536-540 (1994).
2. Masuda, T., Watanabe, S., Amemiya, M., *et al.* Inhibitory effect of cytostatin on spontaneous lung metastases of B16-BL6 melanoma cells. *Int. J. Cancer* **78(6)**, 727-734 (1998).
3. Yamazaki, K., Amemiya, M., Ishizuka, M., *et al.* Screening for apoptosis inducers in microbial products and induction of apoptosis by cytostatin. *J. Antibiot. (Tokyo)* **48(10)**, 1138-1140 (1995).
4. Kawada, M., Amemiya, M., Ishizuka, M., *et al.* Cytostatin, an inhibitor of cell adhesion to extracellular matrix, selectively inhibits protein phosphatase 2A. *Biochim. Biophys. Acta* **1452(2)**, 209-217 (1999).
5. Swingle, M.R., Amable, L., Lawhorn, B.G., *et al.* Structure-activity relationship studies of fostriecin, cytostatin, and key analogs, with PP1, PP2A, PP5, and (β12-β13)-chimeras (PP1/PP2A and PP5/PP2A), provide further insight into the inhibitory actions of fostriecin family inhibitors. *J. Pharmacol. Exp. Ther.* **331(1)**, 45-53 (2009).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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