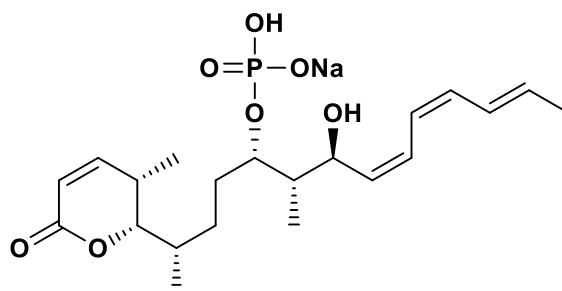


PRODUCT DATA SHEET

Date: Aug. 16, 2022

Cytostatin (sodium salt) (Inhibitor for Protein Phosphatase 2A)



Synonyms:

Specifications

| | |
|-------------------|--|
| Code No. | : 10664 |
| Lot No. | : 007 (prepared by adding sodium bicarbonate) |
| CAS# | : 457070-06-3 (sodium salt) |
| Parent CAS# | : 156856-30-3 (salt free form) |
| Molecular Formula | : C ₂₁ H ₃₂ O ₇ P Na |
| Molecular Weight | : 450.444 (sodium salt) |
| Source | : <i>Streptomyces</i> sp. MJ654-NF4 |
| Supplied as | : Powder, sodium salt |
| Purity | : >75% (HPLC, 254nm) |
| Long Term Storage | : at -20 °C under argon atmosphere (Protect from air and light) |
| Solubility | : Soluble in MeOH, DMSO, H ₂ O Insoluble in <i>n</i> -hexane |

Application Notes

Cytostatin inhibits the adhesion of B16 melanoma cells to laminin and collagen type IV at the IC₅₀ values of 1.3 µg/ml and 1.4 µg/ml, respectively, but not inhibits the adhesion to fibronectin. The administration of cytostatin inhibits metastases of B16-F10 markedly. The inhibitory ratio is about 70% at 1.25 mg/kg/day. Cytostatin inhibits protein phosphatase 2A with an IC₅₀ of 0.09 µg/ml in a non-competitive manner against a substrate, *p*-nitrophenyl phosphate, but it has no apparent effect on other protein phosphatases including protein phosphatase 1, protein phosphatase 2B and alkaline phosphatase even at 100 µg/ml.

This product is licensed under JP patent No.367455

References

- 1) 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. Amemiya M, *et al. J Antibiot.* 1994 **47**(5) 536-540.
- 2) Inhibitory effect of cytostatin on spontaneous lung metastasis of B16-BL6 melanoma. Masuda T, *et al. J Antibiot.* 1995 **48**(6) 528-529.
- 3) Cytostatin, an inhibitor of cell adhesion to extracellular matrix, selectively inhibits protein phosphatase 2A. Kawada M, *et al. Biochim Biophys Acta.* 1999 **1452**(2) 209-217
- 4) Specific inhibitors of protein phosphatase 2A inhibit tumor metastasis through augmentation of natural killer cells. Kawada M, *et al. Int Immunopharmacol.* 2003 **3**(2) 179-188