



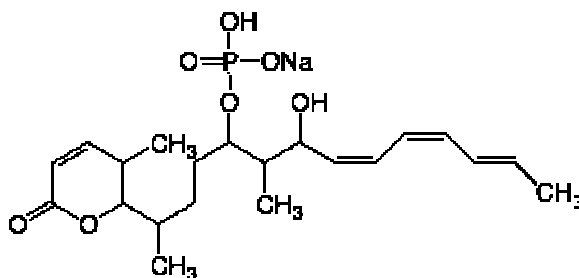
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## PRODUCT DATA SHEET

### Cytostatin

(Inhibitor for Protein Phosphatase 2A)

Produced by *Streptomyces* sp. MJ654-NF4



Synonyms:

Cat. No.: 10664 Lot.006

Size: 1mg

### Identification of the substance

CAS# : 156856-30-3

Molecular Formula :  $C_{21}H_{32}NaO_7P$

Molecular Weight : 450.4381

Source : *Streptomyces* sp. MJ654-NF4

Appearance : Yellowish powder

Purity : >75% by HPLC (254nm)

Long Term Storage : at -20°C

Solubility : Soluble in MeOH, DMSO,  $CHCl_3$ , EtOAc,  $H_2O$   
Insoluble in n-Hexane

### Product description

Cytostatin at 0.39 to 6.25  $\mu$ g/ml inhibits the adhesion of B16 melanoma cells to laminin and collagen type IV in a dose dependent manner but not to fibronectin. The  $IC_{50}$  values are 1.3  $\mu$ g/ml to laminin and 1.4  $\mu$ g/ml to collagen. The administration of cytostatin inhibits metastases of B16-F10 markedly. The inhibitory ration is about 60 to 70% at 1.25mg/kg/day. Cytostatin inhibits protein phosphatase 2A with an  $IC_{50}$  of 0.09  $\mu$ g/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  $\mu$ g/ml.

This product is licenced 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. M. Amemiya, M. Ueno, M. Osono, T. Masuda, N. Kinoshita, C. Nishida, M. Hamada, M. Ishizuka, T. Takeuchi, *J Antibiotics*, 1994, 47, 536-40.
2. Inhibitory effect of cytostatin on spontaneous lung metastasis of B16-BL6 melanoma T. Masuda, S. Watanabe, M. Amemiya, M. Ishizuka, T. Takeuchi, *J. Antibiotics*, 1995, 48, 528-529
3. Cytostatin, an inhibitor of cell adhesion to extracellular matrix, selectively inhibits protein phosphatase 2A. M. Kawada, M. Amemiya, M. Ishizuka, T. Takeuchi, *Biochim Biophys Acta.*, 1999, 1452, 209-217
4. Specific inhibitors of protein phosphatase 2A inhibit tumor metastasis through augmentation of natural killer cells. M Kawada, M Kawatsu, T Masuda, S Ohba, M Amemiya, T Kohama, M Ishizuka, T Takeuchi, *Int Immunopharmacol.*, 2003, 3, 179-188