Print Date: Mar 4th 2015

Certificate of Analysis

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Product Name: **Fostriecin sodium salt** **Catalog No.: 1840** **Batch No.: 1**

CAS Number: 87860-39-7

IUPAC Name: (6*R*)-5,6-Dihydro-6-[(1*E*,3*R*,4*R*,6*R*,7*Z*,9*Z*,11*E*)-3,6,13-trihydroxy-3-methyl-4-(phosphonooxy)-1,7,9,11-tridecatetraenyl]-2*H*-pyran-2-one sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{19}H_{26}O_9PNa$

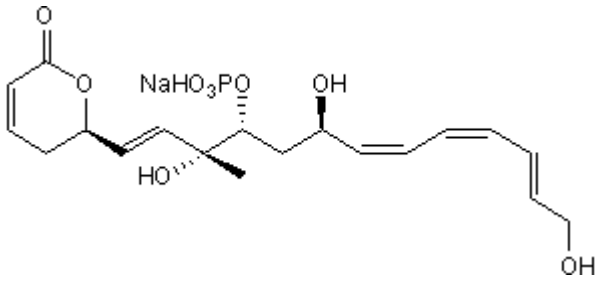
Batch Molecular Weight: 452.37

Physical Appearance: Colourless lyophilised solid

Solubility: water to 100 mM

Storage: Desiccate at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >98% purity

Mass Spectrum: Consistent with structure

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Description:

Originally identified as an antitumor antibiotic from Streptomyces pulveraceous. Displays potent inhibition of protein phosphatase types 2A (PP2A) and 4 (PP4) with IC_{50} values of 1.5 nM and 3 nM respectively. Also exhibits weaker inhibition of topoisomerase II (IC_{50} = 40 µM) and protein phosphatase type 1 (PP1) (IC_{50} = 131 µM) with no apparent inhibition of protein phosphatase type 2B (PP2B). Active in vivo.

Physical and Chemical Properties:

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Minimum Purity: >98%

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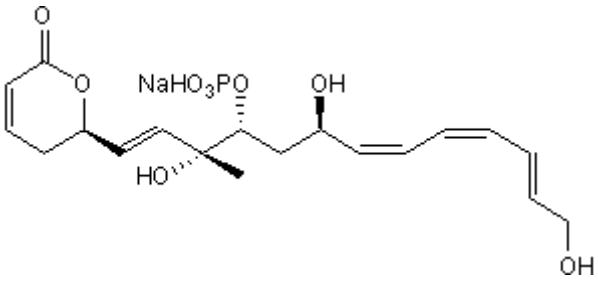

Storage: Desiccate at -20°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 100 mM

CAUTION- While this product is soluble in water, optimal stability is achieved by preparing aqueous buffered solutions at pH 6.5. Hydrolysis of the phosphate ester and loss of activity may result from inappropriate storage of this product. This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Tunac *et al* (1983) Novel antitumor agents CI-920, PD 113,270 and PD 113,271. I. Taxonomy, fermentation and biological properties. J.Antibiot. ***36*** 1595. PMID: 6689323.

Walsh *et al* (1997) Fostriecin, an antitumor antibiotic with inhibitory activity against serine/threonine protein phosphatases types 1 (PP1) and 2A (PP2A), is highly selective for PP2A. FEBS Lett. ***416*** 230. PMID: 9373158.

Hastie and Cohen (1998) Purification of protein phosphatase 4 catalytic subunit: inhibition by the antitumour drug fostriecin and other tumour suppressors and promoters. FEBS Lett. ***431*** 357. PMID: 9714542.