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TOCRIS

Print Date: Jun 17th 2024

Certificate of Analysis

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Product Name: **Flutax 1** **Catalog No.: 2226** **Batch No.: 3**

CAS Number: 191930-58-2

IUPAC Name: (2a*R*,4*S*,4a*S*,6*R*,9*S*,11*S*,12*S*,12a*R*,12b*S*)-6,12b-*Bis*(acetyloxy)-9-[(2*R*,3*S*)-3-(benzoylamino)-2-hydroxy-1-oxo-3-phenylpropoxy]-12-(benzoyloxy)-2a,3,4,4a,5,6,9,10,11,12,12a,12b-dodecahydro-11-hydroxy-4a,8,13,13-tetramethyl-5-oxo-7,11-methano-1*H*-cyclodeca[3,4]benz[1,2-*b*]oxet-4-yl ester *N*-[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3*H*),9'-[9*H*]xanthen]-5-yl)carbonyl]-L-alanine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{71}H_{66}N_2O_{21}.3¼H_2O$

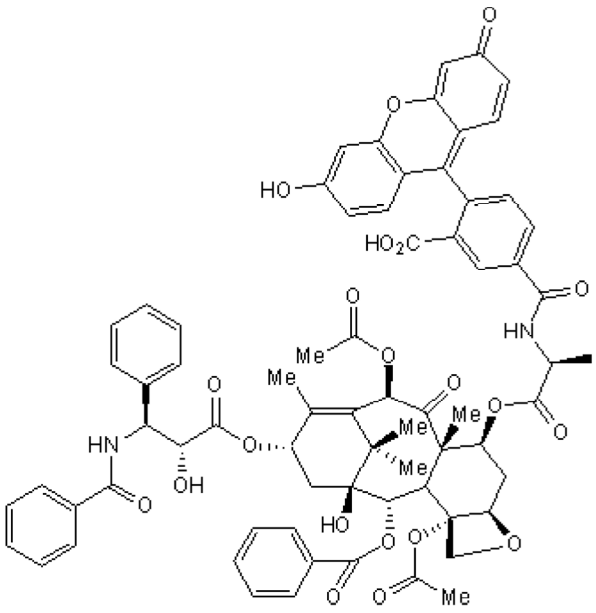
Batch Molecular Weight: 1341.85

Physical Appearance: Orange solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.5% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	63.55	5.45	2.09
Found	63.29	5.12	2.14

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Description:

Key information: Flutax 1 is a green-fluorescent taxol derivative; for microtubules labeling in live cells. Used for: direct imaging of the microtubule cytoskeleton. Application: fluorescent microscopy. Properties and Photophysical Data: Flutax 1 binds microtubules with high affinity (Ka ~ $10^7 M^{-1}$). Absorption, fluorescence and fluorescence decay of Flutax 1 in solution are pH sensitive. Excitation and emission maxima (λ) are 495 nm and 520 nm, respectively.

Physical and Chemical Properties:

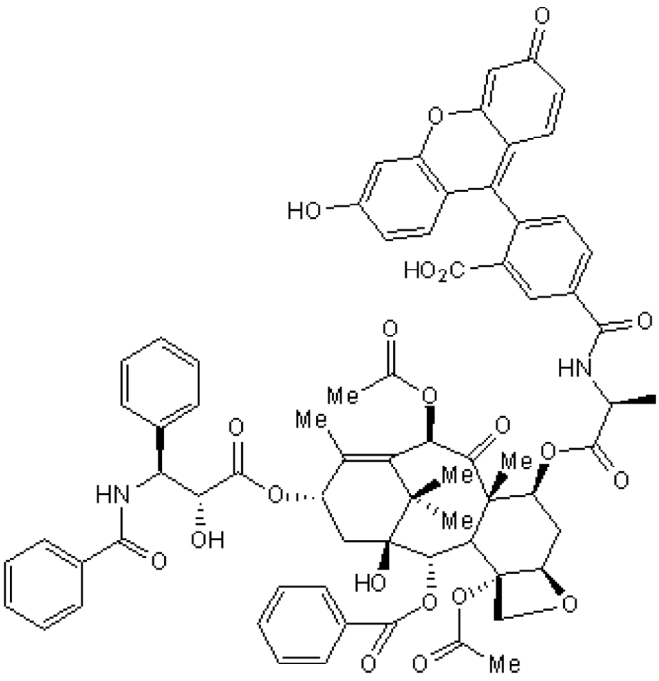
Batch Molecular Formula: $C_{71}H_{66}N_2O_{21}.3¼H_2O$

Batch Molecular Weight: 1341.85

Physical Appearance: Orange solid

Minimum Purity: ≥95%

Batch Molecular Structure:



Storage: Store at -20°C

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:

DMSO to 100 mM
ethanol to 100 mM

This product is supplied in lyophilized form. It may appear as a solid, gel or film and 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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

Diaz *et al* (2003) Fast kinetics of Tax. binding to microtubules. J.Biol.Chem. ***278*** 8407. PMID: 12496245.

Diaz *et al* (2000) Molecular recognition of Tax. by microtubules. Kinetics and thermodynamics of binding of fluorescent Tax. derivatives to an exposed site. J.Biol.Chem. ***275*** 26268. PMID: 10818101.

Evangelio *et al* (1998) Fluorescent taxoids as probes of the microtubule cytoskeleton. Cell Motil.Cytoskel. ***39*** 73. PMID: 9453715.

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