TOCRIS
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Print Date: Jan 14th 2016

Certificate of Analysis

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Product Name: **Vinorelbine ditartrate** **Catalog No.: 3401** **Batch No.: 2**

CAS Number: 125317-39-7

IUPAC Name: (2β,3β,4β,5α,12*R*,19α)-4-(Acetyloxy)-6,7-didehydro-15-[(2*R*,6*R*,8*S*)-4-ethyl-1,3,6,7,8,9-hexahydro-8-(methoxycarbonyl)-2,6-methano-2*H*-azecino[4,3-*b*]indol-8-yl]-3-hydroxy-16-methoxy-1-methylaspidospermidine-3-carboxylic acid methyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{45}H_{54}N_4O_8.2C_4H_6O_6.2½H_2O$

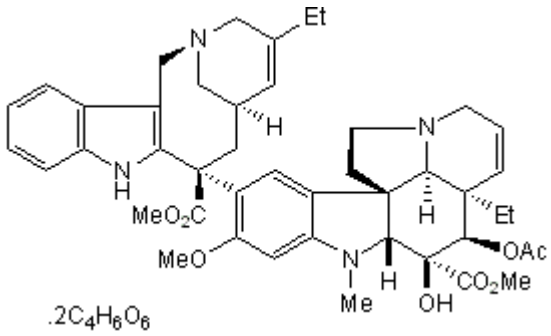
Batch Molecular Weight: 1124.14

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	56.63	6.37	4.98
Found	56.64	6.4	4.9

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Description:

Selective mitotic microtubule antagonist that exhibits > 20 fold selectivity over axonal microtubules. Inhibits proliferation of multiple human tumor cell lines (IC_{50} = 1.25 nM in HeLa cells) and blocks metaphase/anaphase transition by suppression of microtubule dynamics (IC_{50} = 3.8 nM). Reduces spindle length by 29% and inhibits microtubule polymerization at micromolar concentrations.

Physical and Chemical Properties:

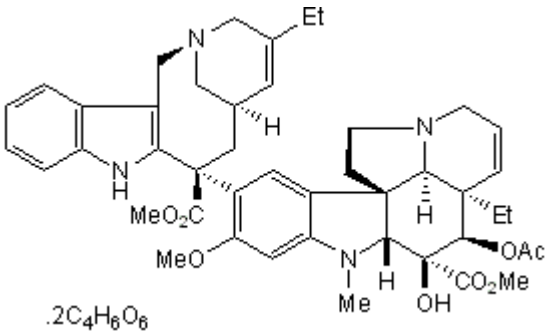
Batch Molecular Formula: $C_{45}H_{54}N_4O_8.2C_4H_6O_6.2½H_2O$

Batch Molecular Weight: 1124.14

Physical Appearance: White solid

Minimum Purity: >97%

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:

water to 100 mM
DMSO to 100 mM

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:

Budman (1997) Vinorelbine (Navelbine): A third generation vinca alkaloid. Cancer Invest. ***15*** 475. PMID: 9316630.

Ngan *et al* (2001) Mechanism of mitotic block and inhibition of cell proliferation by the semisynthetic vinca alkaloids vinorelbine and its newer derivative vinflunine. Mol.Pharmacol. ***60*** 225. PMID: 11408618.

Okouneva *et al* (2003) The effects of vinflunine, vinorelbine, and vinblastine on centromere dynamics. Mol.Cancer Ther. ***2*** 427. PMID: 12748304.

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