

Certificate of Analysis

Print Date: Sep 6th 2018

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Product Name: Laulimalide Catalog No.: 4007 Batch No.: 1

CAS Number: 115268-43-4

IUPAC Name: (1R,3S,7S,8S,10S,12S,15Z,18R)-12-[(1S,2E)-3-[(2S)-3,6-dihydro-4-methyl-2H-pyran-2-yl]-1-hydroxy-2-propen-1-yl]

-7-hydroxy-3-methyl-5-methylene-9,13,22-trioxatricyclo[16.3.1.0^{8,10}]docosa-15,19-dien-14-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{30}H_{42}O_7$ Batch Molecular Weight: 514.65

Physical Appearance: White lyophilised solid
Solubility: DMSO to 20 mM
Storage: Store at -20°C

Batch Molecular Structure:

2. ANALYTICAL DATA

HPLC: Shows >97% purity **Mass Spectrum:** Consistent with structure



Product Information

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Description:

Microtubule stabilizing agent. Potent inhibitor of cellular proliferation in cancer cell lines (IC_{50} reported to be 3-30 nM, dependent on cell line used). Causes cells to arrest in the prometaphase of the cell cycle, prevents formation of bipolar spindle and increases kinetochore tension in preformed spindles.

Physical and Chemical Properties:

Batch Molecular Formula: C₃₀H₄₂O₇ Batch Molecular Weight: 514.65

Physical Appearance: White lyophilised 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:

DMSO to 20 mM

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:

Bennett *et al* (2012) Low-dose laulimalide represents a novel molecular probe for investigating microtubule organization. Cell Cycle. *11* 3045. PMID: 22871740.

Bennett *et al* (2010) Discovery and characterization of the laulimalide-microtubule binding mode by mass shift perturbation mapping. Chem.Biol. *17* 725. PMID: 20659685.

Pryor et al (2002) The microtubule stabilizing agent laulimalide does not bind in the taxoid site, kills cells resistant to paclitaxel and epothilones, and may not require its epoxide moiety for activity. Biochemistry. **41** 9109. PMID: 12119025.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use