

## Certificate of Analysis

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**Product Name:** Andrographolide

**Catalog No.:** 4626

**Batch No.:** 1

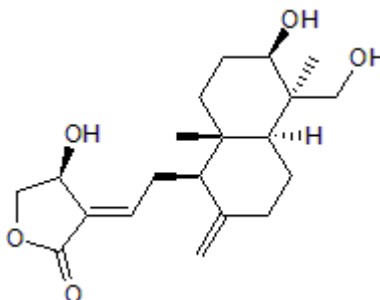
**CAS Number:** 5508-58-7

**EC Number:** 226-852-5

**IUPAC Name:** (3*E*,4*S*)-3-[2-[(1*R*,4*aS*,5*R*,6*R*,8*aS*)-Decahydro-6-hydroxy-5-(hydroxymethyl)-5,8*a*-dimethyl-2-methylene-1-naphthalenyl]ethylidene]dihydro-4-hydroxy-2(3*H*)-furanone

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>20</sub>H<sub>30</sub>O<sub>5</sub>  
**Batch Molecular Weight:** 350.45  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
 ethanol to 10 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 99.8% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Optical Rotation:** [α]<sub>D</sub> = -98.3 (Concentration = 1, Solvent = Acetic acid)  
**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	68.54	8.63	
Found	68.4	8.67	

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

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## Product Information

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### Description:

Inhibitor of NF-κB signaling; also attenuates concanavaline-induced IFNγ production in murine T cells (IC<sub>50</sub> = 1.7 μM). Blocks androgen receptor (AR) expression in AR-expressing C4-2 cells. Activates Nrf2 in BEAS-2B cells in response to cigarette smoke extract.

### Physical and Chemical Properties:

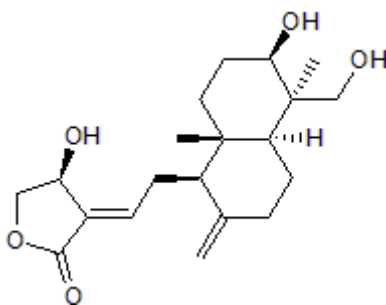
Batch Molecular Formula: C<sub>20</sub>H<sub>30</sub>O<sub>5</sub>

Batch Molecular Weight: 350.45

Physical Appearance: White solid

**Minimum Purity:** >99%

### Batch Molecular Structure:



**Storage:** Store at -20°C

### Solubility & Usage Info:

DMSO to 100 mM

ethanol to 10 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:

**Burgos *et al*** (2005) Andrographolide inhibits IFN-gamma and IL-2 cytokine production and protects against cell apoptosis. *Planta.Med.* **71** 429. PMID: 15931581.

**Liu *et al*** (2011) Andrographolide targets androgen receptor pathway in castration-resistant prostate cancer. *Genes Cancer.* **2** 151. PMID: 21779488.

**Guan *et al*** (2012) Andrographolide protects against cigarette smoke-induced oxidative lung injury via augmentation of Nrf2 activity. *Br.J.Pharmacol.* [Epub ahead of print]. PMID: 23146110.

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