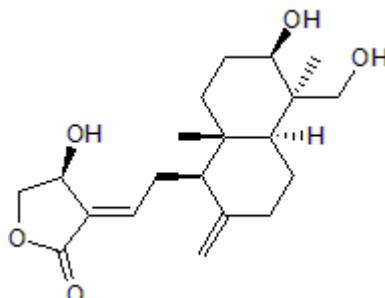


**Certificate of Analysis****Product Name:** Andrographolide**Catalog No.:** 4626**Batch No.:** 1**CAS Number:** 5508-58-7**EC Number:** 226-852-5**IUPAC Name:** (3E,4S)-3-[2-[(1R,4aS,5R,6R,8aS)-Decahydro-6-hydroxy-5-(hydroxymethyl)-5,8a-dimethyl-2-methylene-1-naphthalenyl]ethylidene]dihydro-4-hydroxy-2(3H)-furanone**1. 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

## Product Information

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**Product Name:** Andrographolide

CAS Number: 5508-58-7

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

**Catalog No.:** 4626

**Batch No.:** 1

EC Number: 226-852-5

**Description:**

Inhibitor of NF- $\kappa$ B signaling; also attenuates concanavaline-induced IFN $\gamma$  production in murine T cells ( $IC_{50} = 1.7 \mu M$ ). 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:**

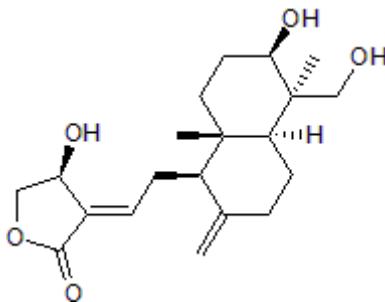
Batch Molecular Formula:  $C_{20}H_{30}O_5$

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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