

**Product Name:** AT 101

**Catalog No.:** 3367

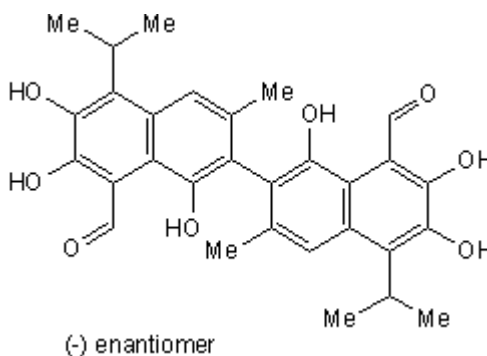
**Batch No.:** 4

CAS Number: 90141-22-3

IUPAC Name: (-)-1,1',6,6',7,7'-Hexahydroxy-3,3'-dimethyl-5,5'-bis(1-methylethyl)-[2,2'-binaphthalene]-8,8'-dicarboxaldehyde

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>30</sub>H<sub>30</sub>O<sub>8</sub>  
**Batch Molecular Weight:** 518.56  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 100 mM  
ethanol to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 0.17 (Ethyl acetate:Petroleum ether [4:1])  
**HPLC:** Shows >99.2% purity  
**Chiral HPLC:** Shows >99.8% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	69.49	5.83	
Found	69.25	5.75	0.1

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**Description:**

R(-)-enantiomer of gossypol (Cat. No. 1964). Mimics the BH3 domains of Bcl-2, Bcl-XL and Mcl-1. Disrupts heterodimerization of Bcl-2 with proapoptotic family members. Induces apoptosis in vitro through activation of caspase-9; cytotoxic to multiple myeloma and drug-resistant cell lines. Delays onset of androgen-independent growth of VCaP prostate cancer xenografts in vivo.

**Physical and Chemical Properties:**

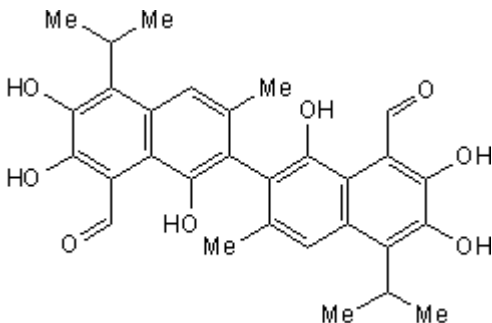
Batch Molecular Formula: C<sub>30</sub>H<sub>30</sub>O<sub>8</sub>

Batch Molecular Weight: 518.56

Physical Appearance: Yellow solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



(-) enantiomer

**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM  
ethanol 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:**

**Loberg et al (2007)** *In vivo* evaluation of AT-101 (R(-)-gossypol acetic acid) in androgen-independent growth of VCaP prostate cancer cells in combination with surgical castration. *Neoplasia* **9** 1030. PMID: 18084610.

**Kline et al (2008)** R(-)-gossypol (AT-101) activates programmed cell death in multiple myeloma cells. *Exp.Hematol.* **36** 568. PMID: 18346839.

**Balakrishnan et al (2009)** AT-101 induces apoptosis in CLL B cells and overcomes stromal cell-mediated Mcl-1 induction and drug resistance. *Blood* **113** 149. PMID: 18836097.

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**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel:+1 612 379 2956