

## Certificate of Analysis

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**Product Name:** Adapalene

**Catalog No.:** 2852

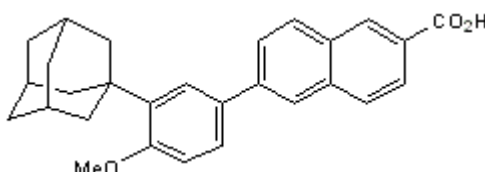
**Batch No.:** 1

CAS Number: 106685-40-9

IUPAC Name: 6-(4-Methoxy-3-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylphenyl)-2-naphthalenecarboxylic acid

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>28</sub>H<sub>28</sub>O<sub>3</sub>  
**Batch Molecular Weight:** 412.52  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 25 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows >98.4% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	81.53	6.84	
Found	81.51	6.9	

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**Description:**

Retinoic acid analog that is a RAR $\beta$  and RAR $\gamma$  agonist (AC<sub>50</sub> values are 2.2, 9.3, 22 and > 1000 nM for RAR $\beta$ , RAR $\gamma$ , RAR $\alpha$  and RXR $\alpha$  receptors respectively). Inhibits proliferation and induces apoptosis in colorectal cancer cell in vitro. Displays comedolytic activity.

**Physical and Chemical Properties:**

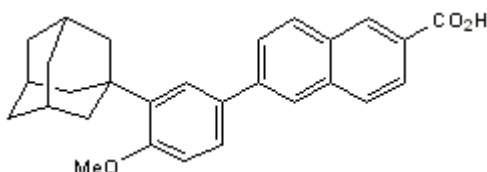
Batch Molecular Formula: C<sub>28</sub>H<sub>28</sub>O<sub>3</sub>

Batch Molecular Weight: 412.52

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 25 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:**

**Ocker *et al*** (2003) The synthetic retinoid adapalene inhibits proliferation and induces apoptosis in colorectal cancer cells in vitro. *Int.J.Cancer* **107** 453. PMID: 14506747.

**Millikan** (2000) Adapalene: an update on newer comparative studies between the various retinoids. *Int.J.Dermatol.* **39** 784. PMID: 11095202.

**Shroot *et al*** (1997) Pharmacology and chemistry of adapalene. *J.Am.Acad.Dermatol.* **36** S96. PMID: 9204085.

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