

Certificate of Analysis

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Product Name: Celastrol

Catalog No.: 3203

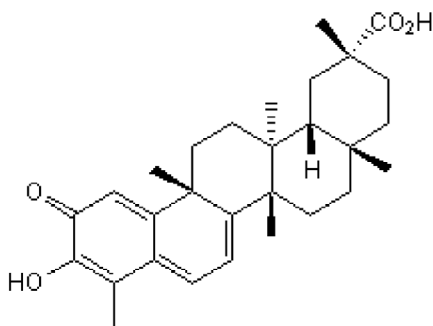
Batch No.: 2

CAS Number: 34157-83-0

IUPAC Name: (9 β ,13 α ,14 β ,20 α)-3-Hydroxy-9,13-dimethyl-2-oxo-24,25,26-trinoroleana-1(10),3,5,7-tetraen-29-oic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₉H₃₈O₄
Batch Molecular Weight: 450.61
Physical Appearance: Red solid
Solubility: DMSO to 100 mM
 ethanol to 75 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

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

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Description:

Celastrol is an antioxidant, anti-inflammatory, antitumor and neuroprotective agent. Inhibits lipid peroxidation in mitochondria, TNF- α -induced NF κ B activation, peroxidase activity of peroxiredoxin PRDX1 (IC₅₀ = 0.29 μ M), and topoisomerase II activity in vitro (IC₅₀ = 7.41 μ M). Celastrol treatment inhibits the growth of PC-3 tumors in mice.

Physical and Chemical Properties:

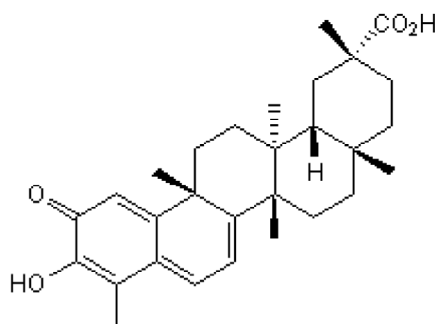
Batch Molecular Formula: C₂₉H₃₈O₄

Batch Molecular Weight: 450.61

Physical Appearance: Red solid

Minimum Purity: \geq 99%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 75 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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

Xu et al (2023) Celastrol suppresses colorectal cancer via covalent targeting peroxiredoxin 1. *Signal Transduct.Target Ther.* **8** 51. PMID: 36732502.

Sethi et al (2007) Celastrol, a novel triterpene, potentiates TNF-induced apoptosis and suppresses invasion of tumor cells by inhibiting NF- κ B-regulated gene products and TAK1-mediated NF- κ B activation. *Blood* **109** 2727. PMID: 17110449.

Yang et al (2006) Celastrol, a triterpene extracted from the Chinese "Thunder of God Vine," is a potent proteasome inhibitor and suppresses human prostate cancer growth in nude mice. *Cancer Res.* **66** 4758. PMID: 16651429.

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