

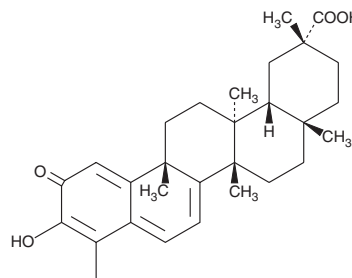
PRODUCT INFORMATION



Celastrol

Item No. 70950

CAS Registry No.: 34157-83-0
Formal Name: 3-hydroxy-9 β ,13 α -dimethyl-2-oxo-24,25,26-trinoroleana-1(10),3,5,7-tetraen-29-oic acid
MF: C₂₉H₃₈O₄
FW: 450.6
Purity: \geq 98%
UV/Vis.: λ_{max} : 253, 424 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Celastrol is supplied as a crystalline solid. A stock solution may be made by dissolving the celastrol in an organic solvent purged with an inert gas. Celastrol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of celastrol in these solvents is approximately 10 mg/ml in ethanol and DMSO and 20 mg/ml in DMF.

Celastrol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, celastrol should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Celastrol has a solubility of approximately 1 mg/ml in a 1:10 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

A variety of natural products from plant sources, particularly flavonoids, have long been observed to have antioxidant activity with potential benefits for human health.¹⁻³ Antioxidant triterpenes are less common. Celastrol is a triterpenoid antioxidant compound isolated from Chinese thunder god vine (*T. wilfordii*). In an isolated rat liver assay of lipid peroxidation, celastrol had an IC₅₀ value of 7 μ M, equivalent to about 15 times the antioxidant potency of α -tocopherol.⁴

References

1. Frémont, L., Belguendouz, L., and Delpal, S. Antioxidant activity of resveratrol and alcohol-free wine polyphenols related to LDL oxidation and polyunsaturated fatty acids. *Life Sci.* **64(26)**, 2511-2521 (1999).
2. Johnson, J.L. and Maddipati, K.R. Paradoxical effects of resveratrol on the two prostaglandin H synthases. *Prostaglandins and Other Lipid Mediators* **56(2-3)**, 131-143 (1998).
3. Miller, N.J. and Rice-Evans, C. Antioxidant activity of resveratrol in red wine. *Clin. Chem.* **41 (12 Pt 1)**, 1789 (1995).
4. Sassa, H., Takaishi, Y., and Terada, H. The triterpene celastrol as a very potent inhibitor of lipid peroxidation in mitochondria. *Biochem. Biophys. Res. Commun.* **172(2)**, 890-897 (1990).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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