

Celastrol

NF- κ B inhibitor

Catalog # ant-cl5

<http://www.invivogen.com/celastrol>

For research use only

Version # 17D24-MM

PRODUCT INFORMATION

Content:

1 mg of celastrol

Storage and stability:

Celastrol is shipped at room temperature. Store as supplied at -20°C in a tightly sealed vial.

Quality control:

- Purity: \geq 95% (LC)
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.
- The biological activity has been confirmed using cellular assays.

DESCRIPTION

Celastrol, a quinone methide triterpene isolated from the Chinese medicinal plant *Tripterygium wilfordii*, is known for its antitumor and anti-inflammatory properties but its mode of action and spectrum of cellular targets are poorly understood. Celastrol was recently found to be a potent inhibitor of the heat-shock protein Hsp90 inducing the disruption of protein-protein interactions of Hsp90 and its co-chaperones^{1,2}. Furthermore, it was shown to act as an effective inhibitor of the transcription factor NF- κ B potentiating the apoptosis induced by TNF- α and chemotherapeutic agents and inhibiting invasion³.

1. Zhang T. et al., 2008. A novel Hsp90 inhibitor to disrupt Hsp90/Cdc37 complex against pancreatic cancer cells. *Mol. Cancer Ther.*, 7: 162-170. **2. Hieronymus H. et al., 2006.** Gene expression signature-based chemical genomic prediction identifies a novel class of HSP90 pathway modulators. *Cancer Cell*, 10(4): 321-330. **3. Sethi G. 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: 2727-2735.

CHEMICAL PROPERTIES

CAS number: 34157-83-0

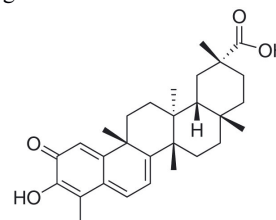
Formula: C₂₉H₃₈O₄

Molecular weight: 450.6 g/mol

Solubility: 10 mg/ml DMSO

Purity: >98%

Structure:



METHODS

Preparation of stock solution (2.2 mM)

1. Add 1 ml of DMSO to 1 mg of celastrol.
2. Vortex until completely dissolved.
3. Prepare further dilutions using aqueous buffers.

Note: We do not recommend storing aqueous solutions of celastrol for more than one day.

Working concentration: 300 nM-10 μ M

NF- κ B inhibition:

To assess the role of NF- κ B, pretreat cells, such as macrophages or HEK293 cells transfected with one or several TLR genes, for 1 hour with or without celastrol at 300 nM-10 μ M and then incubate at 37°C with the appropriate TLR ligand or an NF- κ B inducer such as TNF- α for 18-24 hours. Detect NF- κ B inhibition using the appropriate detection system.

RELATED PRODUCTS

Product	Description	Cat. Code
Dexamethasone	NF- κ B & MAPK inhibitor	tlr1-dex
Resveratrol	NF- κ B & mTOR inhibitor	tlr1-resv
Triptolide	NF- κ B inhibitor	ant-tpl

TECHNICAL SUPPORT

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