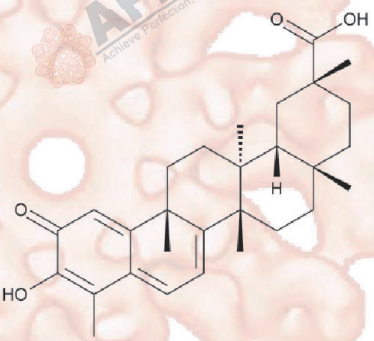
Product Data Sheet

Celastrol



Cat. No.: A2604
CAS No.: 34157-83-0
Formula: C29H38O4
M.Wt: 450.61
Synonyms:
Target: Ubiquitination/ Proteasome
Pathway: Proteasome
Storage: Store at -20°C

Solvent & Solubility

In Vitro

≥22.55 mg/mL in DMSO; insoluble in H2O; insoluble in EtOH

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	2.2192 mL	11.0961 mL	22.1921 mL
5 mM	0.4438 mL	2.2192 mL	4.4384 mL
10 mM	0.2219 mL	1.1096 mL	2.2192 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Antioxidant, anti-inflammatory and immunosuppressive agent
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Androgen-independent PC-3 prostate cancer cells
Preparation method:	The solubility of this compound in DMSO is > 22.6 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.
Reacting conditions:	0.5 ~ 5 μM

	Applications:	In PC-3 cells, Celastrol significantly inhibited the proteasomal chymotrypsin activity in a concentration-dependent manner. On the other hand, Celastrol concentration-dependently elevated the level of ubiquitinated proteins. Increased levels of IκB-α, Bax and p27 were also observed in PC-3 cells treated with Celastrol.
In Vivo	**Animal experiment**	
	Animal models:	Nude mice bearing C4-2B tumors
	Dosage form:	1 or 3 mg/kg/day; i.p.; for 16 days
	Applications:	In nude mice bearing C4-2B tumors, Celastrol (3 mg/kg) significantly inhibited tumor growth (up to 70%), which was associated with increased p27 and Bax levels. Celastrol at the dose of 3 mg/kg also resulted in more apoptotic tumor cells with the appearance of various PARP cleavage fragments in xenograft tumors. In addition, Celastrol (3 mg/kg) caused 35% of tumor inhibition, which was correlated to decreased proteasome activity and down-regulated AR protein expression.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Yang H, Chen D, Cui QC, et al. 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, 2006, 66(9): 4758-4765.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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