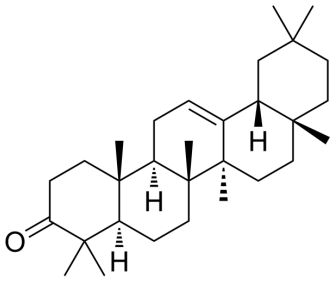
β-Amyrone

Cat. No.:	HY-N2925
CAS No.:	638-97-1
Molecular Formula:	$C_{30}H_{48}O$
Molecular Weight:	424.7
Target:	Fungal; COX; PPAR
Pathway:	Anti-infection; Immunology/Inflammation; Cell Cycle/DNA Damage; Vitamin D Related/Nuclear Receptor
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description	β-Amyrone (β-Amyron) is a triterpene compound which has anti-inflammatory activity through inhibiting the expression of COX-2. β-Amyrone has antifungal activity , as well as antiviral activity against Chikungunya virus. β-Amyrone also inhibits α-glucosidase and acetylcholinesterase (AChE) activity. β-Amyrone can be used in the research of disease like inflammation, infection, and obesity[1][2][3][4].
IC_{50} & Target	COX-2
In Vitro	β-Amyrone (1.25-10 μg/mL, 24 h) inhibits on NO˙ production in LPS-stimulated J774 cells, with an IC_{50} value of 4.61 μg/mL, and has no obvious effect on cell viability[1]. β-Amyrone (10 μg/mL, 24 h) inhibits IL-6, IL-10 levels, and COX-2 expression in LPS-stimulated J774 cells[1]. β-Amyrone (0-235 μM, 7days) has antiviral activity in Vero cells against Chikungunya virus (CHIKV), with EC_{50} value of 86 uM [2]. β-Amyrone inhibits α-glucosidase, acetylcholinesterase (AChE) and fungal activity with IC_{50} values of 25 μM, 23 μM and 8 μg/mL, respectively[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis[1]

Cell Line:	LPS (1 μg/mL)-stimulated J774 cells
Concentration:	2.5, 5, 10 μg/mL
Incubation Time:	24 h
Result:	Inhibited COX-2 expression in a concentration-dependent manner (approximately 90% reduction at 5 or 10 μg/ mL).

In Vivo	β-Amyrone (local administration on ear, 0.1-0.6 mg/kg, a single dose) inhibits ear edema formation in phenol-induced edema mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Ear phenol-induced edema in Balb C mice[1]

Dosage:	0.1, 0.3, 0.6 mg/kg, a single dose
Administration:	Local administration (20 μL solution) on ear
Result:	Inhibited ear edema formation in a dose-related manner (47% inhibition at the dose of 0.6mg/kg).

REFERENCES

[1]. Patrícia D O de Almeida, et al. Anti-Inflammatory Activity of Triterpenes Isolated from Protium paniculatum Oil-Resins. Evid Based Complement Alternat Med. 2015;2015:293768.

[2]. Mélanie Bourjot, et al. Chemical constituents of Anacolosa pervilleana and their antiviral activities. Fitoterapia. 2012 Sep;83(6):1076-80.

[3]. Ki-Kwang Oh, et al. Elucidating Drug-Like Compounds and Potential Mechanisms of Corn Silk (Stigma Maydis) against Obesity: A Network Pharmacology Study. Curr Issues Mol Biol. 2021 Nov 6;43(3):1906-1936.

[4]. Ata A, et al. Chemical constituents of Drypetes gossweileri and their enzyme inhibitory and anti-fungal activities. Phytochemistry Letters, 2011, 4(1): 34-37.

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