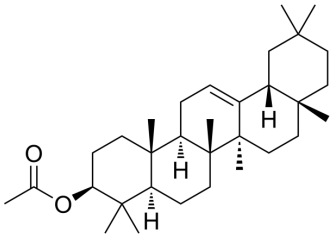
β-Amyrin acetate

Cat. No.:	HY-N2923
CAS No.:	1616-93-9
Molecular Formula:	$C_{32}H_{52}O_2$
Molecular Weight:	468.75
Target:	HMG-CoA Reductase (HMGCR); Fungal
Pathway:	Metabolic Enzyme/Protease; Anti-infection
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description

β-Amyrin acetate is a triterpenoid with potent anti-inflammatory, antifungal, anti-diabetic, anti-hyperlipidemic activities. β-Amyrin acetate can inhibit HMG-CoA reductase activity by locating in the hydrophobic binding cleft of HMG CoA reductase[1][2][3][4].

In Vitro

β-Amyrin acetate (50 μg/mL) inhibits heat-induced hemolysis and hypotonicity-induced hemolysis of human erythrocytes[1].

β-Amyrin acetate (5-100 μM) has HMG-CoA reductase inhibitory activity by locating in the hydrophobic binding cleft lined with residues Leu562, Gly560, Ala564, Gly569, Ser852, Leu853, Leu857, Met854, Ala856, Ser852 and Ala855 of human HMG CoA reductase[2].

β-Amyrin acetate (7.8-1000 μg/mL, 48 h) inhibits all of the Candida fungal species tested with MIC values ranging from 30 to 250 μg/mL)[4].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

β-Amyrin acetate (applied on the anterior surface of the right ear, 100 μg/ear, a single dose) significantly inhibits xylene-induced ear edema in mice[1].

β-Amyrin acetate (intraperitoneal injection, 4 mg/100 g, daily for 6 consecutive days) shows significant anti-inflammatory activities (43.6%) in adult albino rats[3].

β-Amyrin acetate (subcutaneous injection, 4 mg/100 g, daily for 10 days) increases the ATP-phosphohydrolase activity in liver homogenates both in normal and arthritic rats[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Xylene-induced mouse ear topical edema model[1]
Dosage:	50 and 100 μg/ear (5 μL)
Administration:	Applied on the anterior surface of the right ear
Result:	Inhibited Xylene-induced ear edema in mice

Animal Model:	Adult albino rats[3]
Dosage:	4 mg/100g, daily for 6 consecutive days

Administration:	Intraperitoneal injection
Result:	Showed significant anti-inflammatory activities with mean average weight of granulation tissue of 9.2 mg after 6 days.

REFERENCES

[1]. Nkeoma Nkasi Okoye, et al. beta-Amyrin and alpha-amyrin acetate isolated from the stem bark of Alstonia boonei display profound anti-inflammatory activity. Pharm Biol. 2014 Nov;52(11):1478-86.

[2]. Ranjani Maurya, et al. β-Amyrin acetate and β-amyrin palmitate as antidyslipidemic agents from Wrightia tomentosa leaves. Phytomedicine. 2012 Jun 15;19(8-9):682-5.

[3]. M.B.Gupta, et al. Biochemical study of the anti-inflammatory activity of α and β-amyrin acetate. Biochemical Pharmacology. 1971 Feb; 2(20): 401-405.

[4]. S Johann, et al. Antifungal activity of the amyrin derivatives and in vitro inhibition of Candida albicans adhesion to human epithelial cells. Lett Appl Microbiol. 2007 Aug;45(2):148-53.

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