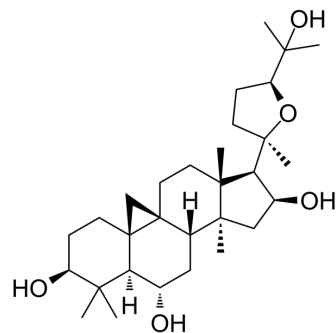


Cycloastragenol

Cat. No.:	HY-N1485
CAS No.:	78574-94-4
Molecular Formula:	C ₃₀ H ₅₀ O ₅
Molecular Weight:	490.72
Target:	Telomerase
Pathway:	Cell Cycle/DNA Damage
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 66.67 mg/mL (135.86 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		2.0378 mL	10.1891 mL	20.3782 mL
		5 mM		0.4076 mL	2.0378 mL	4.0756 mL
	10 mM		0.2038 mL	1.0189 mL	2.0378 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.09 mM); Clear solution Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.24 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.24 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	Cycloastragenol (Astramembrangenin), the active form of astragaloside IV, has anti-oxidant, anti-inflammatory, anti-aging, anti-apoptotic, and cardiovascular protective effects. Cycloastragenol is a potent telomerase activator and can lengthen telomeres. Cycloastragenol alleviates age-related bone loss and improves bone microstructure and biomechanical properties ^{[1][2][3]} .
In Vitro	Cycloastragenol (0.03-3 μM; 24-72 hours) promotes viability, osteoblastic differentiation, and mineralization in MC3T3-E1 cells ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Cycloastragenol (5, 10, 20 mg/kg) is injected intraperitoneally at the onset of reperfusion, 12 h later and then twice daily for up to three days. Cycloastragenol dose-dependently reduces brain infarct volume, significantly ameliorated functional deficits, and prevents neuronal cell loss in middle cerebral artery occlusion (MCAO) mice. Cycloastragenol suppresses the mRNA expression of pro-inflammatory cytokines, including TNF- α and IL-1 β , and inhibits the activation of microglia and astrocytes in the ischemic brain^[2].

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

CUSTOMER VALIDATION

- Int J Mol Sci. 2023, Mar 31;24(7), 6554.
- Int J Mol Sci. 2023 Feb 6;24(4):3179.

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REFERENCES

[1]. Yu Y, et al. Cycloastragenol: An exciting novel candidate for age-associated diseases. *Exp Ther Med.* 2018;16(3):2175-2182.

[2]. Li M, et al. Cycloastragenol upregulates SIRT1 expression, attenuates apoptosis and suppresses neuroinflammation after brain ischemia. *Acta Pharmacol Sin.* 2020;41(8):1025-1032.

[3]. Yu Y, et al. Cycloastragenol prevents age-related bone loss: Evidence in d-galactose-treated and aged rats. *Biomed Pharmacother.* 2020;128:110304.

Caution: Product has not been fully validated for medical applications. For research use only.

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