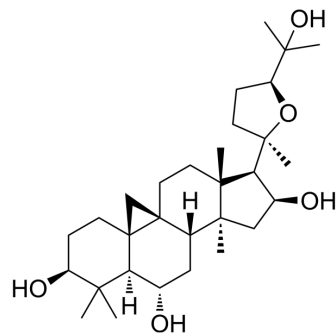


Cycloastragenol

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 Concentration	Mass	1 mg	5 mg	10 mg	
				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	1. 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						
	2. 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						
	3. 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.
- J Integr Med. 2024 May 24.
- Toxicol Appl Pharmacol. 2023 Aug 12;116656.

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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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