

Cycloastragenol

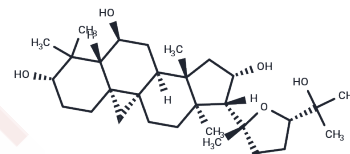
Chemical Properties

CAS No. : 78574-94-4

Formula: C₃₀H₅₀O₅

Molecular Weight: 490.71

Storage: Keep away from direct sunlight, Store at low temperature, Keep away from moisture
 Powder: -20°C for 3 years | In solvent: -80°C for 1 year
 Actual storage temperature shall be subject to the COA.



Biological Description

Description	Astramembrangenin (Cycloastragenol (Astramembrangenin)) is a triterpenoid saponin compound and a hydrolysis product of the main active ingredient in Astragalus membranaceus. Cycloastragenol (CAG) may have a novel therapeutic role in depression
Targets(IC50)	Epigenetic Reader Domain, Telomerase
In vitro	Cyclogalegenol has important anti-inflammatory activity by inhibiting lymphocytes activation, proliferation and cytokines expression, this effect may be related to reduction of overall intracellular Ca ²⁺ overload[1].
In vivo	oral administration of Cyclogalegenol for 7 days attenuated depression-like behavior in experimental mice. Cyclogalegenol stimulates telomerase activity in human neonatal keratinocytes and rat neuronal cells, and induces CREB activation followed by tert and bcl2 expression. Furthermore, Cyclogalegenol may have a novel therapeutic role in depression[2].
Cell Research	Mouse lymphocytes were obtained from spleens and subjected to Con A for 24?h. Herein, the cells were treated with different concentrations of Cyclogalegenol. Cell viability was assayed by MTT. Pretreated by Cyclogalegenol?and stimulated?by Con A,? the expression of CD69 and CD25, Th1/Th2/Th17 cytokines, cell cycle, proliferation and intracellular Ca ²⁺ concentration ([Ca ²⁺] _i) were analyzed by flow cytometry[1].
Animal Research	Mice were administered Cyclogalegenol?100 mg/kg, or water by oral gavage, or imipramine 15 mg/kg , a currently?used tricyclic antidepressant, by intraperitoneal injection for 7 days as well as 45 min before testing.?The forced swim test was performed as described previously , by placing a mouse in a glass cylinder (height: 30 cm, diameter: 15 cm) filled with water to a depth of 12 cm.?Mice were tested in the cylinder for 6 min. The water was changed before testing another animal.?All test sessions were recorded.?Depression-like behavior was determined by observing the immobility of the mouse, where immobility is defined as when a mouse floats passively in the water with minimal movement to keep its head above the water.?The total period of immobility during the last 4 min of the test session was determined[2].

Solubility Information

A DRUG SCREENING EXPERT

Solubility	DMSO: 125 mg/mL (254.73 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (6.72 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0379 mL	10.1893 mL	20.3786 mL
5 mM	0.4076 mL	2.0379 mL	4.0757 mL
10 mM	0.2038 mL	1.0189 mL	2.0379 mL
50 mM	0.0408 mL	0.2038 mL	0.4076 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Sun C , Jiang M , Zhang L , et al. Cycloastragenol mediates activation and proliferation suppression in concanavalin A-induced mouse lymphocyte pan-activation model[J]. Immunopharmacology and Immunotoxicology, 2017, 39(3):131-139.

Ip F C F , Ng Y P , An H J , et al. Cycloastragenol Is a Potent Telomerase Activator in Neuronal Cells: Implications for Depression Management[J]. Neurosignals, 2014, 22(1):52-63.

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