CHAMOT

Forskolin

CM008-1SM
CM008-5SM

CHAMOT
喬默生物技術(上海)有限公司
CHAMOT BIOTECHNOLOGY CO. LTD.

CONTENT

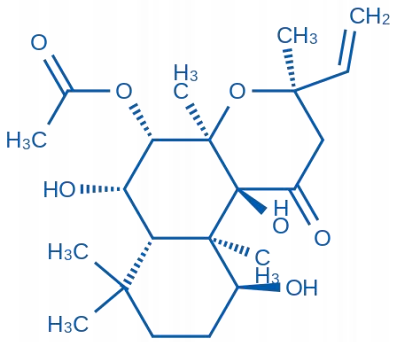
Forskolin

编号: CM008-1SM
CM008-5SM

规格: 1 mg
5 mg

类别: 小分子

产品简介



CAS号: 66575-29-9

分子式: $C_{22}H_{34}O^{7}$

分子量: 410.50

储存	Powder	Sealed in dry,Store in freezer, under -20°C		
	In solvent	-20°C:3-6 月	-80°C:12月	
溶解度	DMSO	600.0 mg/mL (1461.6 mM)		
	Water	insoluble		
使用配方	IP	2%DMSO+2%Tween80+40% PEG300+water	12 mg/mL	clear
	PO	0.5% CMC-Na	100mg/mL	suspension

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品使用

原液配制	Volume / Mass / Concentration	5 mg	50 mg	250 mg	1 g
	1mM	12.1803 mL	121.803 mL	609.015 mL	2436.05 mL
	5mM	2.4361 mL	24.361 mL	121.805 mL	487.21 mL
	10mM	1.2180 mL	12.180 mL	60.9 mL	243.61 m

产品应用数据

Biological Activity

Description	Forskolin is a strong adenylate cyclase activator with an IC50 of 41 nM. Forskolin can activate adenylyl cyclase in broken cell preparations as well as in intact tissues, thereby resulting in marked increases of intracellular cyclic adenosine phosphate (cAMP) accumulation. cAMP as a second messenger plays very important roles in biological processes. Forskolin elicits cellular responses which have been proposed to be dependent on cyclic AMP. In vitro studies have shown that forskolin significantly stimulated vasopressin (AVP) and oxytocin (OT) secretion from the rat neurohypophysis in a dose-dependent manner. Moreover, addition of forskolin to the rat hypothalamic SON in vitro increase cAMP accumulation, and Forskolin elicited a 3-fold greater increase in cyclic AMP in the neural lobe of the pituitary in vitro. In human mesenchymal stromal cells (hMSCs), the use of Forskolin in different concentrations inhibits cell proliferation. At the same time, Forskolin induced alkaline phosphatase levels, bone-specific target genes, and secretion of insulin-like growth factor-1 in a manner related to concentration. The effect of forskolin on in vivo shows that bone formation ability significantly enhance after treatment of hMSCs with forskolin. In addition, 0.10mM forskolin displayed larger amounts of bone by pretreating hMSCs before implantation, compared with with 0.15 mM forskolin. Importantly, Forskolin has been shown to have a number of relevant anticancer effects, such as the induction of mesenchymal-to-epithelial transition, the inhibition of proliferation, motility, and migration in many types of cancer cells, indicating its perspectives as an effective anticancer agent.
Mechanism	Forskolin is a strong adenylate cyclase activator via an interaction with the catalytic subunit of adenylate cyclase, directly activating the adenylate cyclase enzyme and raising intracellular cAMP levels.

Cell Study

Cell Lines	Concentration	Assay Type	Time	Activity Description	Data Sources
3T3-L1	2.5/5 μM	Function Assay	24 h	significantly decreases ATGL prot expression at all doses tested	25590597
3T3-L1 preadipocytes	10 μM	Function Assay	12 h	induces CREB phosphorylation ar C/EBPβ expression	25928058
AML-12	20 μM	Function Assay	3 h	upregulates the phosphorylation levels at Thr-411 and Ser-493	26048985

Animal Study

Dose	Rat: 10 mg/kg - 30 mg/kg (intragastric) Mice: 2.5 mg/kg - 10 mg/kg (p.o.), 100 mg/kg (p.o.)
Administration	Intragastric, p.o.

Clinical Study

NCT Number	Condition or disease	Phase	Recruitment Status	Estimated Study Completion Date	Locations
NCT03390985	-	-	Completed	-	-
NCT02586883	Idiopathic Dilation of the Bro...	Not Applicable	Recruiting	April 2020	France ...
NCT03455153	-	-	Completed	-	United Kingdom ...