

S-(+)-Marmesin

Chemical Properties

CAS No. : 13849-08-6

Formula: C₁₄H₁₄O₄

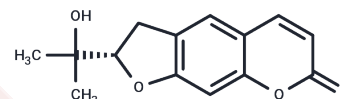
Molecular Weight: 246.26

Storage:

Keep away from direct sunlight, Keep away from moisture, Store at low temperature

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	S-(+)-Marmesin (marmesin) is a coumarin originally isolated from the mature bark of A. marmelos, exhibiting COX-2/5-LOX dual inhibitory activity.
Targets(IC50)	COX, Lipoxygenase
In vitro	Marmesin treatment abrogated VEGF-A-induced endothelial cell migration, invasion and capillary-like structure formation in vitro as well as angiogenic sprouting ex vivo. These anti-angiogenic activities of marmesin were mediated through inactivation of VEGF-A-stimulated signaling pathways, and down-regulation of cell surface signaling molecules including VEGF receptor-2, human epidermal growth factor receptor-2, integrin β 1 and integrin-linked kinase[1].
In vivo	Marmesin inhibits colony formation and induces apoptosis dose-dependently. Marmesin treatment triggered upregulation of Bax and downregulation of Bcl-2 causing significant increase in the Bax/Bcl-2 ratio, marmesin could also induce ROS mediated alterations in mitochondrial membrane potential. Additionally, marmesin induced G2/M cell cycle arrest and significantly inhibited cell migration potential of leukemia cells at the IC50. Remarkably, marmesin prevent tumor growth significantly in vivo at the dosage of 30 mg/kg in vivo. These results strongly indicate that marmesin may prove to be a novel anticancer lead for the management of leukemia[2].

Solubility Information

Solubility	DMSO: 2 mg/mL (8.12 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.0607 mL	20.3037 mL	40.6075 mL
5 mM	0.8121 mL	4.0607 mL	8.1215 mL
10 mM	0.4061 mL	2.0304 mL	4.0607 mL
50 mM	0.0812 mL	0.4061 mL	0.8121 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

Marmesin is a novel angiogenesis inhibitor: Regulatory effect and molecular mechanism on endothelial cell fate and angiogenesis[J]. Cancer Letters, 2015, 369(2):323-330.

Dong, Xu, Li, et al. In vitro and in vivo anticancer effects of marmesin in U937 human leukemia cells are mediated via mitochondrial-mediated apoptosis, cell cycle arrest, and inhibition of cancer cell migration[J]. Oncology Reports, 2018.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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