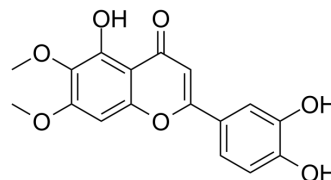


Cirsiliol

Cat. No.:	HY-110399
CAS No.:	34334-69-5
Molecular Formula:	C ₁₇ H ₁₄ O ₇
Molecular Weight:	330.29
Target:	Lipoxygenase
Pathway:	Metabolic Enzyme/Protease
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : \geq 25 mg/mL (75.69 mM)
* " \geq " means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.0276 mL	15.1382 mL	30.2764 mL
	5 mM	0.6055 mL	3.0276 mL	6.0553 mL
	10 mM	0.3028 mL	1.5138 mL	3.0276 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description	Cirsiliol is a potent and selective 5-lipoxygenase inhibitor and a competitive low affinity benzodiazepine receptor ligand.
IC ₅₀ & Target	5-Lipoxygenase
In Vitro	In concentrations from 0.01 to 300 μ M, cirsiliol causes concentration-dependent relaxation of rat isolated ileum. Cirsiliol may inhibit Ca ²⁺ influx but stimulates Ca ²⁺ release from intracellular stores ^[1] . Treatment with rhamnetin or cirsiliol reduces the proliferation of NSCLC cells through the suppression of radiation-induced Notch-1 expression ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In xenograft mouse model, tumor volume is significantly reduced by combinational treatment with irradiation and rhamnetin or cirsiliol compared with irradiation alone ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[2]

NSCLC, NCI-H1299, NCI-H460, WI-26 VA4 and MRC-5 cell lines are exposed to a single dose of γ -rays. Cells are then treated with rhamnetin and cirsiliol (5, 10, 15, 20, 25 μ M) dissolved in DMSO for 4 h^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Administration ^[1]

Mice^[1]

BALB/c athymic nude mice are injected with 2×10^6 NCI-H1299 cells. When the tumor has acquired a minimal volume of 200 mm³, DMSO or Cirsiliol (200 μ g/kg body weight) is administered intraperitoneally every day for 25 days. The animals are also irradiated with 10 Gy once a week for 3 weeks. On day 25, the tumors are excised and subjected to further analyses^[1].

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

REFERENCES

[1]. Mustafa EH, et al. Effects of cirsiliol, a flavone isolated from *Achillea fragrantissima*, on rat isolated ileum. *Gen Pharmacol.* 1992 May;23(3):555-60.

[2]. Kang J, et al. Rhamnetin and cirsiliol induce radiosensitization and inhibition of epithelial-mesenchymal transition (EMT) by miR-34a-mediated suppression of Notch-1 expression in non-small cell lung cancer cell lines. *J Biol Chem.* 2013 Sep 20;288(38):27343-57.

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

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