Product Data Sheet

Product Name: Cirsiliol
Cat. No.: GC31235

Chemical Properties

Cas. No.	34334-69-5		
SMILES	O=C1C=C(C2=CC=C(O)C(O)=C2)OC3=CC(OC)=C(OC)C(O)=C13		
Formula	$C_{17}H_{14}O_7$	M.Wt	330.29
Solubility	DMSO : ≥ 25 mg/mL (75.69 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Cirsiliol		

Protocol

Cell experiment:

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 μM) dissolved in DMSO for 4 h[2].

Animal experiment:

Mice[1]BALB/c athymic nude mice are injected with 2×106 NCI-H1299 cells. When the tumor has acquired a minimal volume of 200 mm3, DMSO or Cirsiliol (200 μg/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].

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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.

Background

Cirsiliol is a flavonoid that has been found in *S. indicum* and has diverse biological activities.[1] It inhibits 5-lipoxygenase (5-LO) and 12-LO (IC_{50}s = 0.1 and 1 ?M, respectively).[1] Cirsiliol inhibits the release of slow-reacting substance of anaphylaxis (SRS-A) in passively sensitized isolated guinea pig lung (IC_{50} = 0.4 ?M). It induces relaxation of precontracted isolated rat uterus, urinary bladder, proximal aorta, and trachea in a concentration-dependent manner.[2] Cirsiliol inhibits colony formation and migration of B16/F10 murine melanoma cells.[3] *In vivo*, cirsiliol (200 ?g/kg) enhances radiation-induced inhibition of tumor growth in an H1299 non-small cell lung cancer (NSCLC) mouse xenograft model.[4]

1.Yoshimoto, T., Furukawa, M., Yamamoto, S., et al.Flavonoids: Potent inhibitors of arachidonate 5-lipoxygenaseBiochem. Biophys. Res. Commun.116(2)612-618(1983)
2.Mustafa, E.H., Zarga, M.A., Sabri, S., et al.Effects of cirsiliol, a flavone isolated from Achillea fragrantissima, on rat isolated smooth muscleInt. J. Pharm.33(3)204-209(1995)
3.Prasad, P., Vasas, A., Hohmann, J., et al.Cirsiliol suppressed epithelial to mesenchymal

transition in B16F10 malignant melanoma cells through alteration of the PI3K/Akt/NF-κB signaling pathwayInt. J. Mol. Sci.20(3)608(2019) 4.Kang, J., Kim, E., Kim, W., 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 linesJ. Biol. Chem.288(38)27343-27357(2013)

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