Falcarindiol

Cat. No.: HY-N0364

CAS No.: 55297-87-5

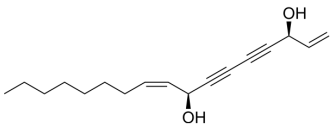
Molecular Formula: $C_{17}H_{24}O_2$

Molecular Weight: 260.37

Target: Apoptosis; Autophagy; PPAR

Pathway: Apoptosis; Autophagy; Cell Cycle/DNA Damage; Metabolic Enzyme/Protease; Vitamin D Related/Nuclear Receptor

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 33.33 mg/mL (128.01 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.8407 mL	19.2034 mL	38.4069 mL
	5 mM	0.7681 mL	3.8407 mL	7.6814 mL
	10 mM	0.3841 mL	1.9203 mL	3.8407 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: 1.11 mg/mL (4.26 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Falcarindiol, an orally active polyacetylenic oxylipin, activates PPARγ and increases the expression of the cholesterol transporter ABCA1 in cells. Falcarindiol induces apoptosis and autophagy. Falcarindiol has anti-inflammatory, antifungal, anticancer and antidiabetic properties[1][2]. Falcarindiol is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

IC_{50} & Target

PPARγ

In Vitro

Falcarindiol (3, 6, 12, 24 μM; for 24 hours) significantly decreases cell viability of MDA-MB-231 and MDA-MB-468 cells. Cell viability of MCF-10A cells is unchanged until the dose of Falcarindiol reaches to 24 uM. Falcarindiol preferentially induces cell death in breast cancer cells[1].
?Falcarindiol (6 uM; for 2 hours) induces autophagy and causes significant level of LC3-I converted to LC3-II in MDA-MB-231,

	MDA-MB-468 and SKBR3 cells[1]. ?Falcarindiol (6 uM; for 2, 4, 8, 24 hours) increases the level of GRP78 in MDA-MB-231 cells in dose- and time-dependent manner[1]. ?Falcarindiol (1-20 μM) has no effect on hMSCs and HT-29 cell viability. Falcarindiol with only concentrations above 50 μM exhibits a toxic effect on the cells[2]. ?Falcarindiol (5 μM; 10 min, 1 h and 24 h) causes a significant upregulation on PPARγ2 expression at 24 h[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Falcarindiol (7 μg/g; diet) increases ABCA1 expression in neoplastic tissue in five weeks old male rats[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- PLoS One. 2017 Apr 25;12(4):e0176348.

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REFERENCES

[1]. Tingting Lu, et al. Autophagy contributes to falcarindiol-induced cell death in breast cancer cells with enhanced endoplasmic reticulum stress. PLoS One. 2017 Apr 25;12(4):e0176348.

[2]. Camilla Bertel Andersen, et al. Falcarindiol Purified From Carrots Leads to Elevated Levels of Lipid Droplets and Upregulation of Peroxisome Proliferator-Activated Receptor-γ Gene Expression in Cellular Models. Front Pharmacol. 2020 Aug 28;11:565524.

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