Furanodienone

Cat. No.: HY-N2184

CAS No.: 24268-41-5

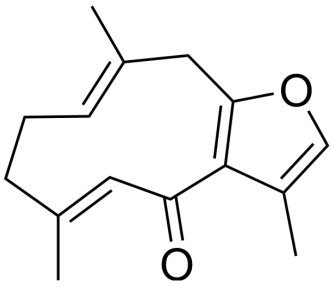
Molecular Formula: $C_{15}H_{18}O_2$

Molecular Weight: 230.3

Target: Apoptosis

Pathway: Apoptosis

Storage: -20°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 : 100 mg/mL (434.22 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	4.3422 mL	21.7108 mL	43.4216 mL
	5 mM	0.8684 mL	4.3422 mL	8.6843 mL
	10 mM	0.4342 mL	2.1711 mL	4.3422 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: ≥ 2.5 mg/mL (10.86 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (10.86 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.86 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Furanodienone is one of the major bioactive constituents derived from Rhizoma Curcumae. Furanodienone induced apoptosis[1].

In Vitro

Furanodienone (0-573.8 μM; 24 hours) exhibits IC_{50} values : 56.4 μM (RKO), 73.7 μM (sw480), 251.1 μM (HT-29), 412.5 μM (sw620) and 573.8 μM (LoVo) at 24 hours, while that in 48 h are 51.8 μM (RKO), 44.18 μM (sw480), 168.9 μM (HT-29), 314.2 μM (sw620) and 502.1 μM (LoVo), respectively[1].
Furanodienone (0-150 μM; 24 hours) induces apoptosis and shows increase in caspase-9 and -3 activity has been observed in both cells, whereas a relative minor effect on that of caspase-8 in RKO and HT-29 cells[1].

Furanodienone (0-150 μM; 24 hours) increases the apoptotic rates from 2.34±0.45% to 19.45±2.37% and 27.34±0.79%, in RKO cells at 75 and 150 μM. whereas 12.4±1.08 and 20.64±3.02% apoptosis at the concentration of 75 and 150 μM are observed in HT-29 cells compared with 2.89±0.26%[1].

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

Western Blot Analysis[1]

Cell Line:	RKO and HT-29 cells
Concentration:	0 μM; 50 μM; 100 μM; 150 μM
Incubation Time:	24 hours
Result:	Increased caspase-9 and -3.

Apoptosis Analysis[1]

Cell Line:	RKO and HT-29 cells
Concentration:	0 μM; 75 μM; 150 μM
Incubation Time:	24 hours
Result:	Induced apoptosis of colorectal cells (RKO and HT-29).

CUSTOMER VALIDATION

- Life. 2022, 12(1), 114.

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REFERENCES

[1]. Li YW, et al. Furanodienone induces cell cycle arrest and apoptosis by suppressing EGFR/HER2 signaling in HER2-overexpressing human breast cancer cells. Cancer Chemother Pharmacol. 2011 Nov;68(5):1315-23.

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