7-Methoxy-1-tetralone

Cat. No.: HY-W001925

CAS No.: 6836-19-7

Molecular Formula: $C_{11}H_{12}O_2$

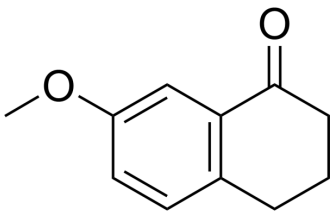
Molecular Weight: 176.21

Target: Apoptosis; NF-κB; c-Met/HGFR; Akt; MMP

Pathway: Apoptosis; NF-κB; Protein Tyrosine Kinase/RTK; PI3K/Akt/mTOR; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (567.50 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.6750 mL	28.3752 mL	56.7505 mL
5 mM	1.1350 mL	5.6750 mL	11.3501 mL
10 mM	0.5675 mL	2.8375 mL	5.6750 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (14.19 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

7-Methoxy-1-tetralone is a potent antitumor agent. 7-Methoxy-1-tetralone inhibits cancer cell proliferation and migration, and induces hepatocellular carcinoma cell (HCC) apoptosis. 7-Methoxy-1-tetralone decreased the protein levels of NF-κB, matrix metallopeptidase 2 (MMP2)/MMP9, and p-AKT. 7-Methoxy-1-tetralone showed antitumor activity in nude mice and had no effect on body weight and liver, spleen and organ index[1].

In Vitro

7-Methoxy-1-tetralone (31.25-1000 μM; 48 h) inhibits proliferative activity of LO2 and HepG2 cells[1].
7-Methoxy-1-tetralone (40 μM, 100 μM, and 250 μM; 48 h) induces HepG2 cell apoptosis, and decreases the protein expression levels of c-Met, p-AKT, AKT, NF-κB, MMP2, and MMP9 in cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	HepG2 cells
Concentration:	40 μM, 100 μM, and 250 μM
Incubation Time:	48 h
Result:	Decreased the protein expression levels of c-Met, p-AKT, NF-κB, MMP2, and MMP9.

Cell Proliferation Assay[1]

Cell Line:	LO2 and HepG2 cells
Concentration:	31.25 μM, 62.5 μM, 125 μM, 250 μM, 500 μM, and 1000 μM
Incubation Time:	24 h, 48 h, and 72 h
Result:	Exhibited anti-proliferative activity of MT on LO2 and HepG2 cells.

In Vivo

7-Methoxy-1-tetralone (80, 120, or 160 mg/kg/d; ip; 19 doses in total) inhibits tumor growth in subcutaneously implanted tumor model with HepG2 cells[1].

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

Animal Model:	BALB/c nude mice (5-week-old) with subcutaneously implanted HepG2 cells[1]
Dosage:	80, 120, or 160 mg/kg/d
Administration:	Intraperitoneal injection; sacrificed after 19 days
Result:	Resulted the tumor inhibition rates of 40.57% (80 mg/kg), 51.43% (120 mg/kg), 79.43% (160 mg/kg), respectively.

REFERENCES

[1]. Wen Y, et al. 7-Methoxy-1-Tetralone Induces Apoptosis, Suppresses Cell Proliferation and Migration in Hepatocellular Carcinoma via Regulating c-Met, p-AKT, NF-κB, MMP2, and MMP9 Expression. Front Oncol. 2020 Feb 7;10:58.

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