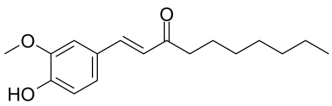
(E)-[6]-Dehydroparadol

Cat. No.:	HY-77293
CAS No.:	878006-06-5
Molecular Formula:	$C_{17}H_{24}O_3$
Molecular Weight:	276.37
Target:	Apoptosis; Keap1-Nrf2
Pathway:	Apoptosis; NF-κB
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (361.83 mM; Need ultrasonic)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	3.6183 mL	18.0917 mL	36.1834 mL
5 mM	0.7237 mL	3.6183 mL	7.2367 mL
10 mM	0.3618 mL	1.8092 mL	3.6183 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 (9.05 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (9.05 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

(E)-[6]-Dehydroparadol, an oxidative metabolite of [6]-Shogaol (HY-14616), is a potent Nrf2 activator. (E)-[6]-Dehydroparadol can inhibit the growth and induce the apoptosis of human cancer cells[1][2].

IC_{50} & Target

Nrf2[2]

In Vitro

(E)-[6]-Dehydroparadol (M15) (5-80 μM; 24 h) inhibits the growth of HCT-116 and H-1299 cells, with IC_{50}s of 43.02 and 41.59 μM, respectively[1].

(E)-[6]-Dehydroparadol (10-40 μM; 24 h) induces apoptosis in HCT-116 and H-1299 cells[1].

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

In Vivo	(E)-[6]-Dehydroparadol (compound 19) (5 μM; 24 h) enhances Tg[glutathione S-transferase pi 1 (gstp1):green fluorescent protein (GFP)] fluorescence signal in the Tg(gstp1:GFP) transgenic zebrafish embryos[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Chen H, et, al. Metabolism of ginger component [6]-shogaol in liver microsomes from mouse, rat, dog, monkey, and human. Mol Nutr Food Res. 2013 May;57(5):865-76.

[2]. Zhu Y, et, al. Synthesis, evaluation, and metabolism of novel [6]-shogaol derivatives as potent Nrf2 activators. Free Radic Biol Med. 2016 Jun;95:243-54.

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