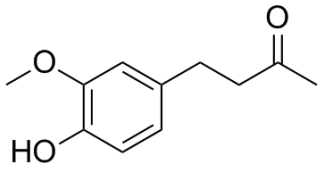
Zingerone

Cat. No.:	HY-14621
CAS No.:	122-48-5
Molecular Formula:	$C_{11}H_{14}O_3$
Molecular Weight:	194.23
Target:	NF-κB
Pathway:	NF-κB
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vivo	1. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline** Solubility: ≥ 2.08 mg/mL (10.71 mM); Clear solution 2. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)** Solubility: ≥ 2.08 mg/mL (10.71 mM); Clear solution 3. Add each solvent one by one: **10% DMSO >> 90% corn oil** Solubility: ≥ 2.08 mg/mL (10.71 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Zingerone (Vanillylacetone) is a nontoxic methoxyphenol isolated from Zingiber officinale, with potent anti-inflammatory, antidiabetic, antilipolytic, antidiarrhoeic, antispasmodic and anti-tumor[3] properties[1]. Zingerone alleviates oxidative stress and inflammation, down-regulates NF-κB mediated signaling pathways[2]. Zingerone acts as an anti-mitotic agent, and inhibits the growth of neuroblastoma cells[3].
IC_{50} & Target	NF-κB[3]
In Vitro	Zingerone is a nontoxic methoxyphenol with potent anti-inflammatory, antidiabetic, antilipolytic, antidiarrhoeic, antispasmodic properties[1]. Zingerone (0-2 mM) decreases neruoblastoma cell survival[3]. Zingerone (0-2 mM) reduces cyclin D1 expression, increases cleavage of caspase-3 and PARP-1 in BE(2)-M17 cells[3].
In Vivo	Zingerone (50, 100 mg/kg, p.o. daily for 21 days) protects against alloxan-induced diabetes via alleviation of oxidative stress and inflammation in rat[2]. Zingerone (10 mg/kg, i.p.) inhibits tumor progression through mitotic arrest, failure of cell division, and stimulation of apoptosis[3].

REFERENCES

[1]. Ahmad B, et al. A Review on Pharmacological Properties of Zingerone (4-(4-Hydroxy-3-methoxyphenyl)-2-butanone). ScientificWorldJournal. 2015;2015:816364.

[2]. Ahmad B, et al. Zingerone (4-(4-hydroxy-3-methylphenyl) butan-2-one) protects against alloxan-induced diabetes via alleviation of oxidative stress and inflammation: Probable role of NF-kB activation. Saudi Pharm J. 2018 Dec;26(8):1137-1145.

[3]. Choi JS, et al. Zingerone Suppresses Tumor Development through Decreasing Cyclin D1 Expression and Inducing Mitotic Arrest. Int J Mol Sci. 2018 Sep 19;19(9).

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