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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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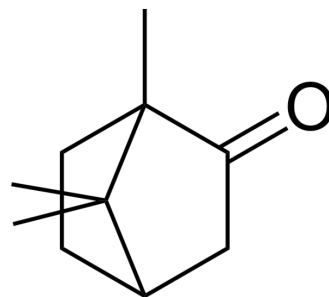
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Camphor

Cat. No.:	HY-N0808		
CAS No.:	76-22-2		
Molecular Formula:	C ₁₀ H ₁₆ O		
Molecular Weight:	152.23		
Target:	TRP Channel; Influenza Virus		
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Anti-infection		
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 (656.90 mM; Need ultrasonic)
H₂O : 3.33 mg/mL (21.87 mM; ultrasonic and warming and heat to 60°C)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		6.5690 mL	32.8450 mL	65.6901 mL
	5 mM		1.3138 mL	6.5690 mL	13.1380 mL
	10 mM		0.6569 mL	3.2845 mL	6.5690 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 3.33 mg/mL (21.87 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (16.42 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (16.42 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (16.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Camphor ((±)-Camphor) is a topical anti-infective and anti-pruritic and internally as a stimulant and carminative. However, Camphor is poisonous when ingested. Antiviral, antitussive, and anticancer activities^[1]. Camphor is a TRPV3 agonist^[2].

IC₅₀ & Target

TRPV3^[2]

In Vitro

Camphor induces fibroblast proliferation through the PI3K/AKT and ERK signaling pathways^[3].

The MTT assay results show that 32.5, 65, 130, and 260 μ M Camphor increase fibroblast viability to 108.9 $\pm$ 6.6%, 118.6 $\pm$ 2.8%, 127.7 $\pm$ 4.2%, and 131.6 $\pm$ 7.2%, respectively, compared to 0 μ M Camphor treatment^[3].

Camphor (0-260 μ M) treatment for 24 hours increases the generation of ROS by up to 17.97% compared to 5.04% in the no-treatment control^[3]. Camphor (0-260 μ M, 24 hours) induces the phosphorylation of PI3K, AKT, ERK, and 4EBP1 in a dose- and time-dependent manner^[3].

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

Cell Viability Assay^[3]

Cell Line:	Primary dermal fibroblast cells
Concentration:	0-260 μ M
Incubation Time:	24 hours
Result:	32.5, 65, 130, and 260 μ M increased fibroblast viability to 108.9 $\pm$ 6.6%, 118.6 $\pm$ 2.8%, 127.7 $\pm$ 4.2%, and 131.6 $\pm$ 7.2%, respectively, compared to 0 μ M treatment.

Western Blot Analysis^[3]

Cell Line:	Primary dermal fibroblast cells
Concentration:	0-260 μ M
Incubation Time:	24 hours
Result:	Induced the phosphorylation of PI3K, AKT, ERK, and 4EBP1, a repressor of mRNA translation and mTOR substrate, in a dose- and time-dependent manner.

CUSTOMER VALIDATION

- bioRxiv. 2023 Jun 3.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Chen W, et al. Camphor--a fumigant during the Black Death and a coveted fragrant wood in ancient Egypt and Babylon--a review. *Molecules*. 2013 May 10;18(5):5434-54.
- [2]. Billen B, et al. Different ligands of the TRPV3 cation channel cause distinct conformational changes as revealed by intrinsic tryptophan fluorescence quenching. *J Biol Chem*. 2015 May 15;290(20):12964-74.
- [3]. Tran TA, et al. Camphor Induces Proliferative and Anti-senescence Activities in Human Primary Dermal Fibroblasts and Inhibits UV-Induced Wrinkle Formation in Mouse Skin. *Phytother Res*. 2015 Dec;29(12):1917-25.

Caution: Product has not been fully validated for medical applications. For research use only.

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