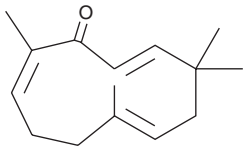
PRODUCT INFORMATION

Zerumbone

Item No. 15400

CAS Registry No.:	471-05-6
Formal Name:	(2E,6E)-2,6,9,9-tetramethyl-2,6,10E-cycloundecatrien-1-one
MF:	$C_{15}H_{22}O$
FW:	218.3
Purity:	≥95%
Supplied as:	Solid white crystals or powder
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Curcuma zerumbet*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Zerumbone is supplied as solid white crystals or powder. A stock solution may be made by dissolving the zerumbone in the solvent of choice. Zerumbone is soluble in organic solvents such as ethanol and DMSO, which should be purged with an inert gas.

Description

Zerumbone is a natural monocyclic sesquiterpene first isolated from rhizomes of the wild ginger *Z. zerumbet*.[1] It potently inhibits the activation of Epstein-Barr virus by phorbol esters (IC_{50} = 140 nM).[1,2] Zerumbone inhibits Sonic hedgehog signaling and induces apoptosis in cancer cell lines.[3-5] It has also been shown to have anti-oxidant and anti-inflammatory activities, contributing to immunomodulatory and hepatoprotective effects.[6]

References

1. Murakami, A., Takahashi, M., Jiwajinda, S., *et al.* Identification of zerumbone in *Zingiber zerumbet* smith as a potent inhibitor of 12-*O*-tetradecanoylphorbol-13-acetate-induced Epstein-Barr virus activation. *Biosci. Biotechnol. Biochem.* **63(10)**, 1811-1812 (1999).
2. Murakami, A., Takahashi, D., Kinoshita, T., *et al.* Zerumbone, a southeast asian ginger sesquiterpene, markedly suppresses free radical generation, proinflammatory protein production, and cancer cell proliferation accompanied by apoptosis: The α,β-unsaturated carbonyl group is a prerequisite. *Carcinogenesis* **23(5)**, 795-802 (2002).
3. Stanton, B.Z. and Peng, L.F. Small-molecule modulators of the *Sonic Hedgehog* signaling pathway. *Mol. Biosyst.* **6(1)**, 44-54 (2010).
4. Sun, Y., Sheng, Q., Cheng, Y., *et al.* Zerumbone induces apoptosis in human renal cell carcinoma via Gli-1/Bcl-2 pathway. *Pharmazie* **68(2)**, 141-145 (2013).
5. Sehrawat, A., Arlotti, J.A., Murakami, A., *et al.* Zerumbone causes Bax- and Bak-mediated apoptosis in human breast cancer cells and inhibits orthotopic xenograft growth *in vivo*. *Breast Cancer Res. Treat.* **136(2)**, 429-441 (2012).
6. Rahman, H.S., Rasedee, A., How, C.W., *et al.* Zerumbone-loaded nanostructured lipid carriers: Preparation, characterization, and antileukemic effect. *Int. J. Nanomedicine* **8**, 2769-2781 (2013).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM