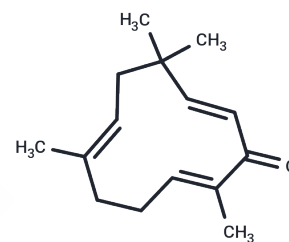


## zerumbone

## Chemical Properties

CAS No. :	471-05-6
Formula:	C <sub>15</sub> H <sub>22</sub> O
Molecular Weight:	218.33
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Zerumbone is a natural monocyclic sesquiterpene first isolated from rhizomes of the wild ginger <i>Z. zerumbet</i> . It has also been shown to have anti-oxidant and anti-inflammatory activities, contributing to immunomodulatory and hepatoprotective effects.
Targets(IC50)	Apoptosis, Antioxidant, Caspase, Antibacterial, Antifection, HSV
In vivo	Pretreatment with zerumbone not only reduced leukocytes infiltration into the alveolar space but also inhibited lung edema in LPS-induced ALI. Decreased secretion of proinflammatory cytokines such as TNF $\alpha$ and IL-6 caused by LPS were reversed by zerumbone. LPS-induced expressions of proinflammatory mediators, iNOS and COX-2, were inhibited by zerumbone. In addition, NF $\kappa$ B activation and Akt phosphorylation were inhibited by zerumbone in LPS-induced ALI. Suggested that the protective mechanisms of zerumbone on endotoxin-induced ALI were via inhibition of Akt-NF $\kappa$ B activation.
Animal Research	Mice were pretreated with zerumbone at various concentrations for 30 min followed by intratracheal administration of LPS for 6 h. Pretreatment with zerumbone not only reduced leukocytes infiltration into the alveolar space but also inhibited lung edema in LPS-induced ALI. Decreased secretion of proinflammatory cytokines such as TNF $\alpha$ and IL-6 caused by LPS were reversed by zerumbone.

## Solubility Information

Solubility	DMSO: 237.5 mg/mL (1087.8 mM), Sonication is recommended. ( $< 1$ mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (9.16 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	4.5802 mL	22.9011 mL	45.8022 mL
5 mM	0.916 mL	4.5802 mL	9.1604 mL
10 mM	0.458 mL	2.2901 mL	4.5802 mL
50 mM	0.0916 mL	0.458 mL	0.916 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Ho Y C , Lee S S , Yang M L , et al. Zerumbone reduced the inflammatory response of acute lung injury in endotoxin-treated mice via Akt-NFkB pathway[J]. *Chemico-biological interactions*, 2017, 271:9.

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