# Gingerenone A

**Cat. No.:** HY-120912

**CAS No.:** 128700-97-0

**Molecular Formula:** $C_{21}H_{24}O_5$

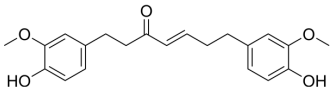
**Molecular Weight:** 356.41

**Target:** Keap1-Nrf2; Glutathione Peroxidase

**Pathway:** NF-κB; Apoptosis; Metabolic Enzyme/Protease

**Storage:**

| | | |
|---|---|---|
| Pure form | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 6 months |
| | -20°C | 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 100 mg/mL (280.58 mM; Need ultrasonic)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 2.8058 mL | 14.0288 mL | 28.0576 mL |
| 5 mM | 0.5612 mL | 2.8058 mL | 5.6115 mL |
| 10 mM | 0.2806 mL | 1.4029 mL | 2.8058 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 (7.01 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (7.01 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (7.01 mM); Clear solution; Need ultrasonic

## BIOLOGICAL ACTIVITY

**Description**

Gingerenone A is a Nrf2-Gpx4 activator with anti-breast-cancer properties. Gingerenone A results a delayed G2/M in cancer cells, following oxidative stress and senescence responses. Gingerenone A also alleviates ferroptosis in secondary liver injury (SLI) in dextran sodium sulfate (DSS)-induced colitis mice. Gingerenone A can be isolated from Zingiber officinale[1][2].

**$IC_{50}$ & Target**

Nrf2-Gpx4[1]

## REFERENCES

[1]. Yu TJ, et al. Gingerenone A Induces Antiproliferation and Senescence of Breast Cancer Cells. Antioxidants (Basel). 2022 Mar 19;11(3):587.

[2]. Chen Y, et al. Gingerenone A Alleviates Ferroptosis in Secondary Liver Injury in Colitis Mice via Activating Nrf2-Gpx4 Signaling Pathway. J Agric Food Chem. 2022 Oct 5;70(39):12525-12534.



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