

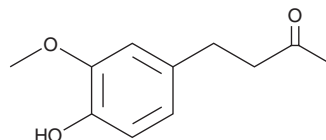
# PRODUCT INFORMATION



## Zingerone

Item No. 24909

**CAS Registry No.:** 122-48-5  
**Formal Name:** 4-(4-hydroxy-3-methoxyphenyl)-2-butanone  
**Synonyms:** NSC 15335, Vanillylacetone  
**MF:** C<sub>11</sub>H<sub>14</sub>O<sub>3</sub>  
**FW:** 194.2  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Zingerone is supplied as a crystalline solid. A stock solution may be made by dissolving the zingerone in the solvent of choice, which should be purged with an inert gas. Zingerone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of zingerone in ethanol and DMF is approximately 30 mg/ml and approximately 20 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of zingerone can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of zingerone in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Zingerone is a phenolic ketone originally isolated from ginger that has antioxidant, anti-inflammatory, anticarcinogenic, and antidiarrheal activities.<sup>1,2</sup> It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals in a cell-free assay with an EC<sub>50</sub> value of 41.6 μmol.<sup>3</sup> Zingerone (6 mg/kg per day) prevents myocardial expression of TNF-α, IL-1β, and IL-6 in rats following myocardial infarction induced by isoproterenol (Item No. 15592).<sup>4</sup> It decreases 1,2-dimethylhydrazine-induced tumor incidence by 67% and aberrant crypt foci formation by 68.85% in rats when administered at a dose of 20 mg/kg per day.<sup>5</sup> Zingerone (10 mM) decreases *E. coli* heat-labile enterotoxin-induced fluid accumulation in the ileal loop of mice.<sup>6</sup>

### References

1. Nomura, H. *J. Chem. Soc.* **111**, 769-776 (1917).
2. Ahmad, B., Rehman, M.U., Amin, I., et al. *ScientificWorldJournal* **2015**:816364 (2015).
3. Manjunatha, J.R., Bettadaiah, B.K., Negi, P.S., et al. *Food Chem.* **136**(2), 650-658 (2013).
4. Hemalatha, K.L. and Prince, P.S.M. *Eur. J. Pharmacol.* **791**, 595-602 (2016).
5. Vinothkumar, R., Vinothkumar, R., Sudha, M., et al. *Eur. J. Cancer Prev.* **23**(5), 361-371 (2014).
6. Chen, J.-C., Huang, L.-J., Wu, S.-L., et al. *J. Agric. Food Chem.* **55**(21), 8390-8397 (2007).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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#### 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  
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