

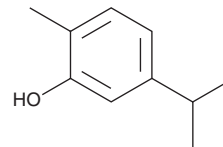
PRODUCT INFORMATION



Carvacrol

Item No. 33753

CAS Registry No.:	499-75-2
Formal Name:	2-methyl-5-(1-methylethyl)-phenol
Synonyms:	Cymophenol, Isopropyl <i>o</i> -cresol, NSC 6188, <i>p</i> -Cymen-2-ol
MF:	C ₁₀ H ₁₄ O
FW:	150.2
Purity:	≥98%
Supplied as:	A liquid
Storage:	-20°C
Stability:	≥2 years
Item Origin:	Synthetic



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

Laboratory Procedures

Carvacrol is supplied as a liquid. A stock solution may be made by dissolving the carvacrol in the solvent of choice, which should be purged with an inert gas. Carvacrol is soluble in chloroform at a concentration of 10 mg/ml.

Description

Carvacrol is a monoterpene that has been found in *O. vulgare*, and has diverse biological activities.¹ It induces currents in HEK293 cells expressing mouse transient receptor potential vanilloid 3 (TRPV3) or rat TRP ankyrin A1 (TRPA1) when used at concentrations of 500 and 250 μM, respectively.² It also inhibits constitutive activation of TRP melastatin 7 (TRPM7) expressed in HEK293 cells (IC₅₀ = 306 μM).³ Carvacrol is active against various strains of *P. aeruginosa* (MICs = 0.3-0.13 μg/ml).⁴ It decreases rat brain, liver, and kidney levels of malondialdehyde (MDA), as well as increases superoxide dismutase (SOD), glutathione peroxidase (GPX), glutathione reductase (GR), and catalase activities in the same tissues when administered at a dose of 40 mg/kg.⁵ Carvacrol (15 mg/kg) decreases the number of liver tumor nodules in a rat model of diethylnitrosamine-induced hepatocarcinogenesis.⁶ Formulations containing carvacrol have been used as flavoring agents.

References

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2. Xu, H., Delling, M., Jun, J.C., *et al.* Oregano, thyme and clove-derived flavors and skin sensitizers activate specific TRP channels. *Nat. Neurosci.* **9**(5), 628-635 (2006).
3. Parnas, M., Peters, M., Dadon, D., *et al.* Carvacrol is a novel inhibitor of Drosophila TRPL and mammalian TRPM7 channels. *Cell Calcium* **45**(3), 300-309 (2009).
4. Cox, S.D. and Markham, J.L. Susceptibility and intrinsic tolerance of *Pseudomonas aeruginosa* to selected plant volatile compounds. *J. Appl. Microbiol.* **103**(4), 930-936 (2007).
5. Samarghandian, S., Farkhonden, T., Samini, F., *et al.* Protective effects of carvacrol against oxidative stress induced by chronic stress in rat's brain, liver, and kidney. *Biochem. Res. Int.* 2645237 (2016).
6. Jayakumar, S., Madankumar, A., Asokkumar, S., *et al.* Potential preventive effect of carvacrol against diethylnitrosamine-induced hepatocellular carcinoma in rats. *Mol. Cell Biochem.* **360**(1-2), 51-60 (2012).

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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