

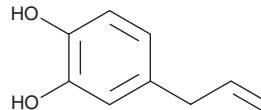
PRODUCT INFORMATION



4-Allylcatechol

Item No. 36542

CAS Registry No.: 1126-61-0
Formal Name: 4-(2-propen-1-yl)-1,2-benzenediol
Synonyms: Hydroxychavicol, 4-Allylbenzene-1,2-diol, 4-Allylpyrocatechol, 1,2-Dihydroxy-4-allylbenzene
MF: C₉H₁₀O₂
FW: 150.2
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

4-Allylcatechol is supplied as a solid. A stock solution may be made by dissolving the 4-allylcatechol in the solvent of choice, which should be purged with an inert gas. 4-Allylcatechol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 4-allylcatechol in these solvents is approximately 10 mg/ml.

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 4-allylcatechol can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 4-allylcatechol in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

4-Allylcatechol is a phenol that has been found in *P. betle* and has diverse biological activities.¹⁻⁴ It scavenges DPPH (Item No. 14805) radicals, reduces the formation of thiobarbituric acid reactive substances (TBARS), and inhibits xanthine oxidase in cell-free assays (IC₅₀s = 20.17, 2, and 16.7 μM, respectively).^{1,2} 4-Allylcatechol is cytotoxic to HT-29 colon cancer cells (IC₅₀ = 30 μg/ml).³ It reduces paw edema and arthritic paw tissue homogenate levels of IL-1β, prostaglandin E₂ (PGE₂; Item No. 14010), leukotriene B₄ (LTB₄; Item No. 20110), and nitric oxide (NO) in a mouse model of steam-killed *M. tuberculosis*-induced arthritis when administered at a dose of 4 mg/kg.⁴ 4-Allylcatechol has been used as a precursor in the synthesis of, and is a metabolite of, safrole.^{5,6}

References

1. Rathee, J.S., Patro, B.S., Mula, S., et al. *J. Agric. Food Chem.* **54**(24), 9046-9054 (2006).
2. Nishiwaki, K., Ohigashi, K., Deguchi, T., et al. *Chem. Pharm. Bull. (Tokyo)* **66**(7), 741-747 (2018).
3. Rajedadram, A., Pin, K.Y., Ling, S.K., et al. *J. Zhejiang Univ. Sci. B* **22**(2), 112-122 (2021).
4. Pandey, A., Bani, S., Dutt, P., et al. *Cytokine* **49**(1), 114-121 (2010).
5. Heather, M., Shimmon, R., and McDonagh, A.M. *Forensic Sci. Int.* **248**, 140-147 (2015).
6. Yang, A.-H., Zhang, L., Zhi, D.-X., et al. *Xenobiotica* **48**(11), 1164-1174 (2018).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 05/17/2023

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