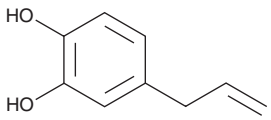
PRODUCT INFORMATION

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: $C_9H_{10}O_2$
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 (IC_{50}s = 20.17, 2, and 16.7 µM, respectively).[1,2] 4-Allylcatechol is cytotoxic to HT-29 colon cancer cells (IC_{50} = 30 µg/ml).[3] It reduces paw edema and arthritic paw tissue homogenate levels of IL-1β, prostaglandin E_2 (PGE_2; Item No. 14010), leukotriene B_4 (LTB_4; 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).

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