

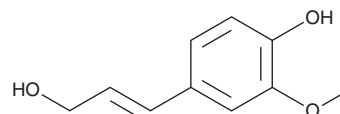
PRODUCT INFORMATION



Coniferyl Alcohol

Item No. 29470

CAS Registry No.:	458-35-5
Formal Name:	4-(3-hydroxy-1-propen-1-yl)-2-methoxy-phenol
Synonym:	Coniferol
MF:	C ₁₀ H ₁₂ O ₃
FW:	180.2
Purity:	≥98%
UV/Vis.:	λ _{max} : 266 nm
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

Coniferyl alcohol is supplied as a solid. A stock solution may be made by dissolving the coniferyl alcohol in the solvent of choice, which should be purged with an inert gas. Coniferyl alcohol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of coniferyl alcohol in ethanol is approximately 30 mg/ml and approximately 25 mg/ml in DMSO and DMF.

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 coniferyl alcohol can be prepared by directly dissolving the solid in aqueous buffers. The solubility of coniferyl alcohol in PBS, pH 7.2, is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Coniferyl alcohol is a monolignol that has been found in pine sap.¹ It is a precursor in the biosynthesis of lignin and has been used in the synthesis of lignin and a variety of phytochemicals.^{2,3} Coniferyl alcohol is an inhibitor of S-adenosyl-homocysteine hydrolase (SAAH) *in vitro* (IC₅₀ = 34 nM).⁴ It increases the promoter activity of Hsp25 and Hsp70 in NCI H460 cells, as well as protein levels of Hsf1, Hsp27, and Hsp70 in L132 human lung fibroblast cells when used at a concentration of 3 μM.⁵ It also prevents cell death of *Hsf1*^{+/+}, but not *Hsf1*^{-/-}, mouse embryonic fibroblasts induced by paclitaxel (Item No. 10461), cisplatin (Item No. 13119), or ionizing radiation (IR), and inhibits IR-induced bone marrow damage in mice when administered at a dose of 10 mg/kg.

References

- Schwalbe, C.G. and Neumann, K.E. *Cellulose-Chemie* **11**, 113-128 (1930).
- Watts, H.D., Mohamed, M.N., and Kubicki, J.D. *Phys. Chem. Chem. Phys.* **13**(47), 20974-20985 (2011).
- Ly, Y., Cheng, X., Wu, D., et al. *Bioresour. Technol.* **267**, 578-583 (2018).
- Hao, W., Li, Y., Shan, Q., et al. *J. Enzyme Inhib. Med. Chem.* **32**(1), 1209-1215 (2017).
- Choi, S.-K., Mun, G.-I., Choi, E., et al. *J. Nat. Prod.* **80**(8), 2379-2383 (2017).

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, 12/09/2022

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