

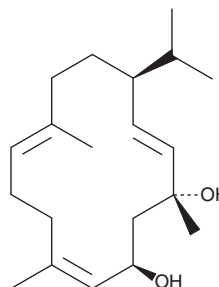
PRODUCT INFORMATION



β-Cembrenediol

Item No. 21031

CAS Registry No.: 57605-81-9
Formal Name: (1R,3R,4E,8E,12S,13E)-1,5,9-trimethyl-12-(1-methylethyl)-4,8,13-cyclotetradecatriene-1,3-diol
Synonym: β-CBD
MF: C₂₀H₃₄O₂
FW: 306.5
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

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

β-CBD is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, β-CBD, should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. β-CBD has a solubility of approximately 0.2 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

β-CBD is a diterpenoid from tobacco plants that is found in cigarette smoke condensate.¹ β-CBD inhibits induction of the early antigen of Epstein-Barr virus (EA-EBV) by 12-O-tetradecanoylphorbol-13-acetate (TPA) *in vitro* (IC₅₀ = 21.9 μM). It inhibits tumor promoting effects of TPA on 7,12-demethylbenz[*a*]anthracene-induced papilloma formation *in vivo*.^{1,2} β-CBD is also released into soil by flue-cured tobacco plants and exerts autotoxicity as well as phytotoxic activity against *L. sativa* seedlings.³

References

1. Saito, Y., Takizawa, H., Konishi, S., *et al.* Identification of cembratriene-4,6-diol as antitumor-promoting agent from cigarette smoke condensate. *Carcinogenesis* **6**(8), 1189-1194 (1985).
2. Saito, Y., Tsujino, H., Kaneko, H., *et al.* Inhibitory effects of Cembratriene-4,6-diol derivatives on the induction of epstein-barr virus early antigen by 12-O-Tetradecanoylphorbol-13-acetate. *Agric. Biol. Chem.* **51**(3), 941-943 (1987).
3. Ren, X., He, X., Zhang, Z., *et al.* Isolation, identification, and autotoxicity effect of allelochemicals from rhizosphere soils of flue-cured tobacco. *J. Agric. Food Chem.* **63**(41), 8975-8980 (2015).

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
WWW.CAYMANCHEM.COM