

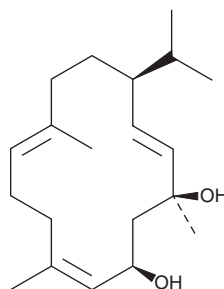
PRODUCT INFORMATION



α -Cembrenediol

Item No. 36042

CAS Registry No.: 57605-80-8
Formal Name: (1S,3R,4E,8E,12S,13E)-1,5,9-trimethyl-12-(1-methylethyl)-4,8,13-cyclotetradecatriene-1,3-diol
Synonym: α -CBD
MF: $C_{20}H_{34}O_2$
FW: 306.5
Purity: $\geq 90\%$
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

α -Cembrenediol is supplied as a solid. A stock solution may be made by dissolving the α -cembrenediol in the solvent of choice, which should be purged with an inert gas. α -Cembrenediol is slightly soluble in chloroform and methanol.

Description

α -Cembrenediol is a diterpenoid that has been found in *N. tabacum* and has diverse biological activities.¹⁻⁴ It inhibits induction of the early antigen of Epstein-Barr virus (EA-EBV) by 12-O-tetradecanoylphorbol-13-acetate (TPA) in Raji cells ($IC_{50} = 25.2 \mu\text{M}$).² α -Cembrenediol is active against the plant pathogenic fungus *V. mali* ($IC_{50} = 18 \text{ mg/L}$).³ Dermal application of α -cembrenediol ($3.3 \mu\text{mol}$) reduces the tumor promoting effects of TPA on 7,12-demethylbenz[a]anthracene-induced papilloma formation by 53% in mice.⁴ It has been found in cigarette smoke condensate.

References

1. Sui, J., Wang, C., Liu, X., *et al.* Formation of α - and β -cembratriene-diols in tobacco (*Nicotiana tabacum* L.) is regulated by jasmonate-signaling components via manipulating multiple cembranoid synthetic genes. *Molecules* **23**(10), 2511 (2018).
2. Saito, Y., Tsujino, Y., 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. Yan, N., Du, Y., Liu, X., *et al.* Analyses of effects of α -cembratrien-diol on cell morphology and transcriptome of *Valsa mali* var. *mali*. *Food Chem.* **214**, 110-118 (2017).
4. 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).

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, 12/19/2022

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