

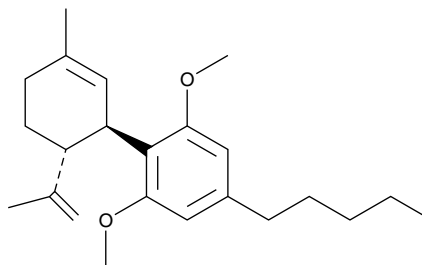
Product Information



Cannabidiol dimethyl ether

Item No. 13285

CAS Registry No.: 1242-67-7
Formal Name: 1,3-dimethoxy-2-[(1R,6R)-3-methyl-6-(1-methylethenyl)-2-cyclohexen-1-yl]-5-pentyl-benzene
Synonyms: CBDD, Cannabidiol-2',6'-dimethyl ether
MF: C₂₃H₃₄O₂
FW: 342.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that cannabidiol dimethyl ether (CBDD) be stored as supplied at -20°C. It should be stable for at least one year.

CBDD is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of CBDD is approximately 14, 1, and 2 mg/ml in ethanol, DMSO, and DMF, respectively.

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. If an organic solvent-free solution of CBDD is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of CBDD in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Lipoxygenases (LOs) are non-heme iron-containing dioxygenases that catalyze the oxidation of polyunsaturated fatty acids to generate unsaturated fatty acid hydroperoxides.¹ The immediate products of 15-LO fatty acid oxidation act as mediators in inflammation, thrombosis, and cancer.² CBDD is a cannabidiol derivative that potently and selectively inhibits 15-LO with an IC₅₀ value of 0.28 μM. It does not inhibit 5-LO effectively (IC₅₀ >200 μM).³

References

1. Hope, W.C., Welton, A.F., Fiedler-Nagy, C., *et al.* *In vitro* inhibition of the biosynthesis of slow reacting substance of anaphylaxis (SRS-A) and lipoxygenase activity by quercetin. *Biochem. Pharmacol.* **32**, 367-371 (1983).
2. Argentieri, D.C., Ritchie, D.M., Ferro, M.P., *et al.* Tepoxalin: A dual cyclooxygenase/5-lipoxygenase inhibitor of arachidonic acid metabolism with potent anti-inflammatory activity and a favorable gastrointestinal profile. *J. Pharmacol. Exp. Ther.* **271**, 1399-1408 (1994).
3. Takeda, S., Usami, N., Yamamoto, I., *et al.* Cannabidiol-2',6'-dimethyl ether, a cannabidiol derivative, is a highly potent and selective 15-lipoxygenase inhibitor. *Drug Metabolism Disposition*. [unpublished] (2009).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/13285

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

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