Product Name: Cedrol
Catalog Number: T5594
CAS Number: 77-53-2
Molecular Formula: C15H26O
Molecular Weight: 222.37

Description: Cedrol is a cedrane sesquiterpenoid and a tertiary alcohol. Cedrol inhibits the cytochrome P450 (CYP) isoforms CYP2B6 and CYP3A4 (Kis = 0.9 and 3.4 μM, respectively).

Storage: 2 years -80°C in solvent; 3 years -20°C powder;

Solubility
DMSO 44 mg/mL (197.86 mM)
(< 1 mg/ml refers to the product slightly soluble or insoluble)

Receptor (IC50)
- CYP3A4: 0.9μM (ki)
- CYP2B6: 3.4 μM (ki)

In vitro Activity
Cedrol inhibits the growth of L. sulphureus, G. trabeum, L. betulina, and T. versicolor wood decay fungi when used at a concentration of 100 μg/ml[1]. Cedrol inhibits the cytochrome P450 (CYP) isoforms CYP2B6 and CYP3A4 (Kis = 0.9 and 3.4 μM, respectively)[2].

In vivo Activity
In vivo, cedrol (200 mg/kg) prevents hair follicle dystrophy and reduces hair loss in a mouse model of alopecia induced by cyclophosphamide[3].

Cell Assay
The inhibitory potencies (IC50 values) of β-cedrene, cedrol, thujopsene, and a CYP2B6 inhibitor, thioTEPA, of CYP2B6-catalyzed bupropion hydroxylase activity were evaluated in pooled human liver microsomes and cDNA-expressed CYP2B6 using LCMS/MS. Incubation mixtures were prepared in a total volume of 100 μl, including 1 mM NADPH, 10 mM MgCl2, 50 mM potassium phosphate buffer (pH 7.4), various concentrations of β-cedrene, cedrol, thujopsene, or thioTEPA, pooled human liver microsomes (0.2 mg/ml) or human cDNA-expressed CYP2B6 (0.4 pmol), and a CYP2B6-selective substrate 50 μM bupropion. After a 3-min preincubation at 37 °C, the reactions were initiated by adding NADPH and were incubated for 15 min at 37 °C in a shaking water bath. The reaction was terminated by placing tubes on ice and adding 100 μl icecold d9-1-hydroxybufuralol (internal standard) in methanol. Incubation mixtures were then centrifuged at 13,000×g for 4 min at 4 °C. All incubations were performed in triplicate, and average values were used. To evaluate NADPH-dependent mechanism-based inhibition, various concentrations of β-cedrene, cedrol, thujopsene, and thioTEPA were preincubated for 30 min with pooled human liver microsomes in the presence of NADPH. The reaction was started by bupropion addition[2].

Cell line:

Animal Experiment

Reference

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