



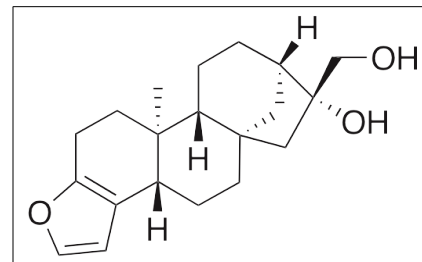
LKT Laboratories, Inc.

Cafestol

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Product Information

Product ID C0020
CAS No. 469-83-0
Chemical Name [3b,S-(3b α ,5a8,7b,8b,10a α ,10b8)]-3b,4,5,6,7,8,9,10- 10a,10b,11,12-Dodecahydro-7-hydroxy-10b-methyl- 5a,8-methano-5aH-cyclohepta [5,6]naphtho[2,1-b]furan-7-methanol
Synonym Cafesterol



Formula C₂₀H₂₈O₃
Formula Wt. 316.44
Melting Point 156-158 °C
Purity ≥98%
Solubility Insoluble in water. Soluble in DMSO (3 mg/mL), ethanol (3 mg/mL), DMF (12 mg/mL), ethyl acetate or acetone.

Store Temp -20 °C
Ship Temp Ambient

Description Cafestol is a diterpene found in brewed, unfiltered coffee that exhibits anti-angiogenic, anticancer, chemopreventive, neuromodulatory, anti-inflammatory, and hyperlipidemic activities. Cafestol inhibits proliferation, migration, and tube formation in vitro, potentially through decreasing phosphorylation of FAK and Akt. In renal carcinoma cells, cafestol induces G1 phase cell cycle arrest and apoptosis, decreases the mitochondrial membrane potential, increases activation of caspase 3, downregulates expression of Bcl-2, Bcl-cl, Mcl-1, and FLIP, suppresses Akt pathway signaling, and inhibits cellular proliferation. In other cellular models, cafestol decreases aflatoxin B1-induced DNA adduct formation and increases levels of glutathione-S-transferase. Additionally, cafestol activates Nrf2 and displays protective benefit in models of Parkinson's disease. In LPS-stimulated macrophages, this compound inhibits ERK2 and MEK1 and decreases production of COX-2 and prostaglandin E2 (PGE2). In vivo, cafestol upregulates expression of genes involved in cholesterol homeostasis by acting as an agonist at the farnesoid X receptor (FXR) and pregnane X receptor (PXR).

Bulk quantities available upon request

Product ID	Size
C0020	50 mg
C0020	100 mg
C0020	500 mg

References Wang S, Yoon YC, Sung MJ, et al. Antiangiogenic properties of cafestol, a coffee diterpene, in human umbilical vein endothelial cells. *Biochem Biophys Res Commun.* 2012 May 11;421(3):567-71. PMID: 22525673.

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Shen T, Lee J, Lee E, et al. Cafestol, a coffee-specific diterpene, is a novel extracellular signal-regulated kinase inhibitor with AP-1-targeted inhibition of prostaglandin E2 production in lipopolysaccharide-activated macrophages. *Biol Pharm Bull.* 2010;33(1):128-32. PMID: 20045950.

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Caution: This product is intended for laboratory and research use only. It is not for human or drug use.