

Catalog Number: CM00336

产品信息

Catalog Number:
CM00336

CAS号:
2216-51-5

分子式:
C₁₀H₂₀O

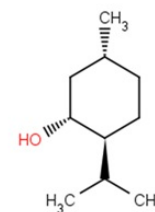
主要靶点:
Endogenous
Metabolite|TRP/TRPV
Channel|Opioid Receptor

主要通路:
代谢|G蛋白偶联受体|离子通道|内
分泌与激素|神经科学

分子量:
156.27

溶解度:

Ethanol:29 mg/mL (185.6
mM),DMSO:29 mg/mL (185.6
mM),H₂O:13 mg/mL (83.2 mM)



体外活性

(-)-Menthol induces cytotoxicity against murine leukemia WEHI-3 cells in vitro in a dose-dependent manner. (-)-Menthol inhibits the growth of rat liver epithelial tumor cells and acts as a potent chemopreventive agent during DMBA initiation of rat mammary tumors. (-)-Menthol inhibits N-acetyltransferase activity. It also is found to inhibit the DNA topoisomerase I, II alpha and beta and to promote NF-kappaB expression in human gastric cancer SNU-5 cells. Additionally, (-)-menthol induces human promyelocytic leukemia HL-60 cell death through the Ca²⁺ release from the endoplasmic reticulum[1].

体内活性

The effects of (-)-menthol on WEHI-3 cells in vivo (BALB/c mice) were also examined, and it was observed that the Mac-3 and CD11b markers were decreased, indicating inhibition of differentiation of the precursor of macrophage and granulocyte. The weights of liver and spleen samples from mice treated with (-)-menthol were found to be decreased compared to untreated animals. (-)-Menthol has been shown to be toxic in animals, but in humans, it is considered to be safe, with a small cardio-accelerating effect. At high doses (-)-menthol may exert a depressant effect on the central nervous system in rodents. (-)-menthol statistically decreases the weights of the liver and spleen in the examined animals and also decreases the percentage of MAC-3 and CD11b cells in the blood.[1].

细胞实验

Approximately 2x10⁵ cells (WEHI-3) are incubated in 12-well plates containing medium for 24 h without (control) or with various concentrations (0, 25, 50, 75 and 100 μM) of (-)-menthol. The cells are harvested and washed with PBS before PI staining. The percentage of viable WEHI-3 cells is determined by trypan blue exclusion and flow cytometry. (Only for Reference)

描述

(-)-Menthol (Levomenthol) is a levo isomer of menthol, an organic compound made synthetically or obtained from peppermint or mint oils with flavoring and local anesthetic properties. When added to pharmaceuticals and foods, menthol functions as a fortifier for peppermint flavors. It also has a counterirritant effect on skin and mucous membranes, thereby producing a local analgesic or anesthetic effect.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years