Natural Products

ChemFaces

Perillyl alcohol Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Perillyl alcohol

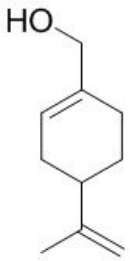
Catalog No.: CFN93581

Cas No.: 536-59-4

Purity: > 95%

M.F: $C_{10}H_{16}O$

M.W: 152.23



Physical Description: Oil

Synonyms: [4-(prop-1-en-2-yl)cyclohex-1-en-1-yl]methanol; 1,8-p-Menthadien-7-ol.

[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Others.

[Source]

The herbs of *Cymbopogon citratus.*

[Biological Activity or Inhibitors]

Perillyl alcohol has potential chemopreventive activity against colon carcinogenesis, the chemopreventive activity of perillyl alcohol is mediated through the tumor cell loss by apoptosis.[1]

Perillyl alcohol inhibits umor incidence and multiplicity, average tumor size and inhibits UVB-induced AP-1 transactivation in both cultured human keratinocytes and transgenic mice that stably express a luciferase reporter driven by AP-1 elements, suggests that perillyl alcohol may be used for chemoprevention of human skin cancer, and that inhibition of AP-1 activity is functionally related to inhibition of skin carcinogenesis.[2]

Perillyl alcohol can suppress antigen-induced immune responses in the lung, it could be a novel preventive or therapeutic option for immunologic lung disorders such as asthma with minimal side effects. [3]

Perillyl alcohol pre-treatment significantly ameliorates ethanol induced acute liver injury possibly by inhibition of lipid peroxidation, replenishment of endogenous enzymatic and non-enzymatic defense system, downregulation of TNF-α as well as NF&kappa-B.[4]

Perillyl alcohol has antileukemia activity, which-mediated cell cycle arrest precedes apoptosis and raises the possibility that that the primary effect of perillyl alcohol is to induce G0/G1 arrest with apoptosis being a consequence of the growth arrest.[5]

Perillyl alcohol has anti-metastatic activity.[6]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method][7]

Mobile phase: Acetonitrile-H2O=40:60 ;

Flow rate: 0.35 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 210 nm.

[Storage]

2-8℃, Protected from air and light, refrigerate or freeze.

[References]

[1] Reddy B S, Wang C X, Samaha H, *et al. Cancer Res., 1997, 53(15):3493-8.*

[2] Barthelman M, Chen W, Gensler H L, *et al. Cancer Res., 1998, 58(4):711-6.*

[3] Imamura M, Sasaki O, Okunishi K, *et al. Int. Res., 2002, 443(5):266-71.*

[4] Khan A Q, Nafees S, Sultana S. *Toxicology, 2011, 279(1-3):108-14.*

[5] Perman S M. *Leukemia, 2002, 16(2):213-22.*

[6] Teruszkin B I, Alves d P S, Henriques S N, *et al. Int. J. Mol. Med., 2002, 10(6):785-8.*

[7] Gupta A, Stratton S P, Myrdal P B. *J. Pharmaceut. Biomed., 2005, 37(37):447-52.*

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