Natural Products

ChemFaces

Auraptene Datasheet

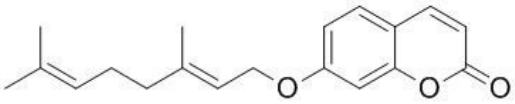
4th Edition (Revised in July, 2016)

[Product Information]

Name: Auraptene

Catalog No.: CFN98787

Cas No.: 495-02-3



Purity: > 95%

M.F: $C_{19}H_{22}O_3$

M.W: 298.4

Physical Description: Powder

Synonyms: 7-[[(3E)-3,7-Dimethyl-2,6-octadienyl]oxy]-2H-1-benzopyran-2-one;Aurapten.

[Intended Use]

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

[Source]

The peel of *Poncirus trifoliata.*

[Biological Activity or Inhibitors]

Dietary auraptene, a citrus antioxidant, it is effective in inhibiting the development of esophageal tumors by N -nitrosomethylbenzylamine (NMBA) when given during the initiation as well as post-initiation phases, and such inhibition is related to suppression of cell proliferation in the esophageal epithelium.[1]

Auraptene can inhibit 12-0-Tetradecanoylphorbol-13-acetate-induced tumor promotion in ICR mouse skin, possibly through suppression of superoxide generation in Leukocytes, indicates that it is a chemopreventer of skin tumorigenesis, and implies that suppression of leukocyte activation might be the mechanism through which it inhibits tumor promotion.[2]

Citrus auraptene and nobiletin have protective effects in transgenic rats developing adenocarcinoma of the prostate (TRAP) and human prostate carcinoma cells. [3]

Auraptene has immunomodulatory action on macrophage functions and cytokine production of lymphocytes in female BALB/c mice.[4]

Auraptene acts as a peroxisome proliferator-activated receptor-alpha (PPARalpha) agonist in hepatocytes and that auraptene may improve lipid abnormality through PPARalpha activation in the liver.[5]

Auraptene can effectively inhibit microglia activation, cyclooxygenase-2 expression by astrocytes, and neuronal cell death in the hippocampus following ischemic insults, suggests that auraptene acts as a neuroprotective agent in the ischemic brain, which may be mediated by suppression of the inflammatory response.[6]

[Solvent]

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

[HPLC Method][7]

Mobile phase: 0.1% Formic acid in water- Acetonitrile= 84.5:15.5;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 322 nm.

[Storage]

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

[References]

[1] Kawabata K, Tanaka T, Yamamoto T, *et al. J.Exp. Clin. Canc. Res., 2000, 19(1):45-52.*

[2] Murakami A, Kuki W, Takahashi Y, *et al. Cancer Sci., 1997, 88(5):443-52.*

[3] Tang M, Ogawa K, Asamoto M, *et al. Cancer Sci., 2007, 98(4):471-7.*

[4] Tanaka T, Sugiura H, Inaba R, *et al. Carcinogenesis, 1999, 20(8):1471-6.*

[5] Takahashi N, Kang M S, Kuroyanagi K, *et al. BioFactors, 2008, 33(1):25-32.*

[6] Okuyama S, Minami S, Shimada N, *et al. Eur. J.Pharmacol., 2013, 699(1-3):118-23.*

[7] Yuan J, Li M, Chen H, *et al. Lat. Am.J. Pharm., 2012, 31(2):251-6.*

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