Natural Products



Campesterol Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Campesterol

Catalog No.: CFN92204

Cas No.: 474-62-4

Purity: > 98%

M.F: C₂₈H₄₈O

M.W: 400.7

Physical Description: Cryst.

Synonyms:

17-[(5R)-5,6-dimethylheptan-2-yl]-10,13-dimethyl-2,3,4,7,8,9,11,12,14,15,16,17-dodecah

 $ydro-1H-cyclopenta[a] phenanthren-3-ol; (24R)-Ergost-5-en-3\beta-ol;$

(3S,8S,9S,10R,13R,14S,17R)-17-[(2R,5R)-5,6-dimethylheptan-2-yl]-10,13-dimethyl-2,3,4,

7,8,9,11,12,14,15,16,17-dodecahydro-1H-cyclopenta[a]phenanthren-3-ol.

[Intended Use]

- 1. Reference standards;
- 2. Pharmacological research;
- 3. Food research;
- 4. Synthetic precursor compounds;
- 5. Intermediates & Fine Chemicals;
- 6. Ingredient in supplements,
- 7. Care and daily chemicals;

8. Others.

[Source]

The seeds of Brassica campestris.

[Biological Activity or Inhibitors]

Dietary campest-5-en-3-one (campestenone), an oxidized derivative of campesterol, can activate PPAR alpha, promote energy consumption and significantly reduce visceral fat weight and the concentration of triacylglycerol in serum and liver of rats.^[1]

Campesterol oxidised derivatives and dihydrobrassicasterol have toxicity in U937 and HepG2 cells.^[2]

Campesterol oxidation products have different antioxidant effects.^[3]

At higher sterol concentrations, campesterol (Camp) and brassicasterol (Bras) are less miscible and less effective than cholesterol (Chol) at ordering the hydrocarbon chains of the sterol-enriched fluid DPPC bilayers, overall, these alkyl side chain modifications generally reduce the ability of Chol to produce its characteristic effects on DPPC bilayer physical properties. ^[4]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, Acetone, etc.

[HPLC Method]^[5]

Mobile phase: Methanol -H2O=95:5 ; Flow rate: 0.8 ml/min; Column temperature: Room Temperature; The wave length of determination: 210 nm.

[Storage]

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

[References]

[1] Ikeda I, Konno R, Shimizu T, et al. B.B.A.-Biomembranes1 , 2006, 1760(5):800-7.

- [2] O'Callaghan Y, Kenny O, O'Connell N M, et al. Biochimie, 2013, 95(3):496-503.
- [3] Kmiecik D, Korczak J, Rudzińska M, et al. Food Chem., 2011, 128(4):937-42.
- [4] Benesch M G K, Mcelhaney R N. B.B.A.-BiomembranesI, 2014, 1838(7):1941-9.
- [5] Jia M Q, Tang H, Cui-Hua L I, et al. Food Sci. Technol., 2013, 12(4):651.

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