Natural Products

ChemFaces

Stigmasterol Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Stigmasterol

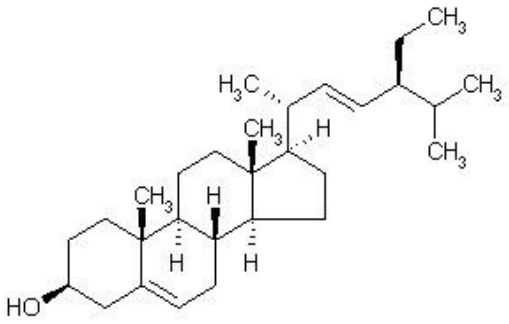
Catalog No.: CFN97326

Cas No.: 83-48-7

Purity: > 98%

M.F: $C_{29}H_{48}O$

M.W: 412.7



Physical Description: Cryst.

Synonyms:(3S,8S,9S,10R,13R,14S,17R)-17-[(E,2R,5S)-5-ethyl-6-methylhept-3-en-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. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Ingredient in supplements;
8. Others.

[Source]

The herb of *Delphinium grandiflorum L.*

[Biological Activity or Inhibitors]

Stigmasterol, isolated from the bark of Butea monosperma, has thyroid inhibitory,antiperoxidative and hypoglycemic effects;the synergism of β-sitosterol and stigmasterol to produce hypoglycaemic activity and their occurrence in Parkia speciosa Hassk.[1,2]

Stigmasterol, a soy lipid-derived phytosterol, is an antagonist of the bile acid nuclear receptor FXR.[3]

Stigmasterol has anti-inflammatory effect, it inhibits several pro-inflammatory and matrix degradation mediators typically involved in osteoarthritis (OA)-induced cartilage degradation, at least in part through the inhibition of the NF-kappaB pathway.[4]

Stigmasterol has cholesterol-lowering activity, when fed, lowers plasma cholesterol levels, inhibits intestinal cholesterol and plant sterol absorption, and suppresses hepatic cholesterol and classic bile acid synthesis in Wistar as well as wild-type Kyoto (WKY) rats.[5]

Stigmasterol can inhibit tumour promotion in mouse skin two-stage carcinogenesis.[6]

Stigmasterol has ameliorating effects on scopolamine-induced memory impairments in mice, stigmasterol-induced cognitive ameliorative effects are mediated by the enhancement of cholinergic neurotransmission system via the activation of estrogen or NMDA receptors.[7]

[Solvent]

Chloroform, Dichloromethane, Diethyl ether, DMSO, Acetone, etc.

[HPLC Method][8]

Mobile phase: Methanol -H2O=99:1 ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 202 nm.

[Storage]

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

[References]

[1] Panda S, Jafri M, Kar A, *et al. Fitoterapia, 2009, 80(2):123-6.*

[2] Jamaluddin F, Mohamed S, Lajis M N. *Food Chem.., 1994, 49(4):339-45.*

[3] De-Eknamkul W, Potduang B. *Phytochemistry, 2003, 62(3):389-98.*

[4] Gabay O, Sanchez C, Salvat. *Osteoarthr. Cartilage, 2010, 18(1):106-16.*

[5] Batta A K, Xu G, Honda A, *et al. Metabolism., 2006, 55(3):292-9.*

[6] Kasahara Y, Kumaki K, Katagiri S, *et al. Phytother. Res., 1994, 8(6):327-31.*

[7] Park S J, Dong H K, Jung J M, *et al. Eur. J. Pharmacol., 2012, 676(1-3):64-70.*

[8] Liu S Y, Sun L J, Guo X. *Advanced Materials Research, 2011, 233-235:1206-9.*

[Contact]

Address:
S5-3 Building, No. 111, Dongfeng Rd.,
Wuhan Economic and Technological Development Zone,
Wuhan, Hubei 430056,
China

Email: info@chemfaces.com
Tel: +86-27-84237783
Fax: +86-27-84254680
Web: www.chemfaces.com
Tech Support: service@chemfaces.com