Natural Products

ChemFaces

Psoralidin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Psoralidin

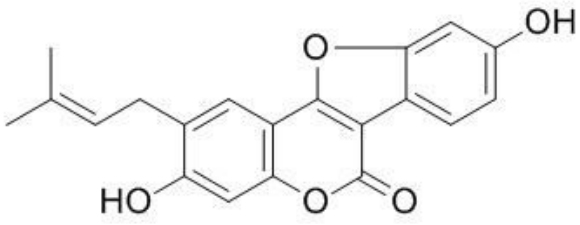
Catalog No.: CFN98592

Cas No.: 18642-23-4

Purity: > 98%

M.F: $C_{20}H_{16}O_5$

M.W: 336.34



Physical Description: Powder

Synonyms: 3,9-Dihydroxy-2-(3-methylbut-2-enyl)-6-benzofuro[3,2-c][1]benzopyranone; 3,9-Dihydroxy-2-prenylcoumestan.

[Intended Use]

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

[Source]

The seeds of *Psoralea corylifolia.*

[Biological Activity or Inhibitors]

Psoralidin, isolated from the seeds of Psoralea corylifolia, it possesses potent antidepressant-like properties that are mediated via the monoamine neurotransmitter and the hypothalamic-pituitary-adrenal (HPA) axis systems.[1]

Psoralidin is a naturally occurring furanocoumarin isolated from Psoralea corylifolia possessing anticancer and chemopreventive properties, it can augmente the anticancer effects of tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) and confirm a potential use of coumarins in cancer chemoprevention.[2]

Psoralidin has been reported to inhibit lipopolysaccharide (LPS)-induced nitric oxide (NO) production, the interfering with Syk-mediated PI3K phosphorylation might contribute to the NO inhibitory effect of psoralidin via blocking IKK/IκB signaling propagation in LPS-stimulated RAW 264.7 macrophages.[3]

Psoralidin is a dual inhibitor of COX-2 and 5-LOX, can regulate ionizing radiation (IR)-induced pulmonary inflammation, it may be useful as a potential lead compound for development of a better radiopreventive agent against radiation-induced normal tissue injury.[4]

Psoralidin is an agonist for both estrogen receptor (ER)α and ERβ agonist, it has been characterized as a full ER agonist, which activates the classical ER-signaling pathway in both ER-positive human breast and endometrial cell lines as well as non-human cultured cells transiently expressing either ERα or ERβ. [5]

Psoralidin has cytotoxic activity against stomach carcinoma cell lines, the IC50 values of it against SNU-1 and SNU-16 carcinoma cell lines are 53 and 203 micrograms/ml, respectively.[6]

Psoralidin can inhibit phosphatidylinositol 3-kinase-mediated Akt signaling in androgen-independent prostate cancer cells.[7]

Psoralidin induces reactive oxygen species (ROS)-dependent DNA damage and protective autophagy mediated by NOX4 in breast cancer cells.[8]

Psoralidin is able to inhibit proliferation and enhance apoptosis of human esophageal carcinoma cells via the NF62κB and PI3K/Akt signaling pathways.[9]

[Solvent]

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

[HPLC Method][10]

Mobile phase: Methanol- H2O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 350 nm.

[Storage]

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

[References]

[1] Yi LT, Li YC, Pan Y, *et al. Prog. Neuro-Psychoph., 2008, 32(2):510-9.*

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[5] Liu X, Nam J W, Song Y S, *et al. Bioorg. Med. Chem. Lett., 2014, 24(5):1403-16.*

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[7] Kumar R, Srinivasan S, Koduru S, *et al. Cancer Prev. Res., 2009, 2(3):234-43.*

[8] Ren G, Luo W, Wen S, *et al. Phytomedicine, 2016, 23(9):939-47.*

[9] Jin Z, Yan W, Jin H, *et al. Oncol. Lett., 2016, 12(2):971-6.*

[10] Yin F Z, Li L, Lu T L, *et al. Indian J. Pharm .Sci., 2015, 77(6):715-22.*

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