Natural Products

ChemFaces

Medicarpin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Medicarpin

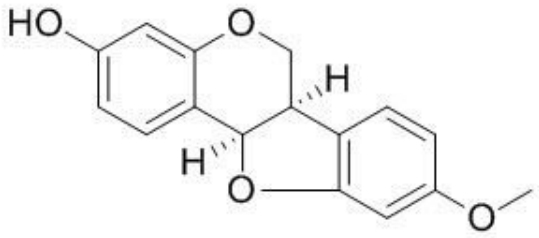
Catalog No.: CFN98411

Cas No.: 32383-76-9

Purity: > 98%

M.F: $C_{16}H_{14}O_4$

M.W: 270.3



Physical Description: Oil

Synonyms:(6aR,11aR)-9-methoxy-6a,11a-dihydro-6H-benzofuro[3,2-c][1]benzopyran-3-ol;3-Hydroxy-9-methoxypterocarpan.

[Intended Use]

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

[Source]

The herb of *Hedysarum polybotrys Hand. -Mazz.*

[Biological Activity or Inhibitors]

Medicarpin, a legume phytoalexin, acts as an estrogen receptor (ER) agonist, can stimulate osteoblast differentiation likely via ERβ, promote achievement of peak bone mass, and is devoid of uterine estrogenicity; in addition, given its excellent oral bioavailability, it can be potential osteogenic agent.[1]

Medicarpin exhibits no uterine estrogenicity, however it can inhibit osteoclastogenesis and has nonestrogenic bone conserving effect in ovariectomized mice.[2]

Medicarpin and maackiain and two of their biosynthetic precursors inhibit the constitutive and phenobarbital (PB)-induced types of AHH, but have little effect on the 3-methylcholanthrene (MC)-induced type of AHH, suggests the utility of medicarpin as a probe for different forms of cytochrome P-450 in animal tissues.[3]

Medicarpin sensitizes myeloid leukemia cells to TRAIL-induced apoptosis through the induction of DR5 and activation of the ROS-JNK-CHOP pathway.[4]

Medicarpin has antifungal activity. [5]

[Solvent]

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

[HPLC Method][6]

Mobile phase: Acetonitrile-0. 2% H3PO4 in H2O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 35 ℃;

The wave length of determination: 240 nm.

[Storage]

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

[References]

[1] Bhargavan B, Singh D, Gautam A K, *et al. J. Nutr. Biochem., 2011, 23(1):27-38.*

[2] Tyagi A M, Gautam A K, Kumar A, *et al. Mol. Cell Endocrinol., 2010, 325(1-2):101-9.*

[3] Friedman F K, West D, Dewick P M, *et al. Pharmacol., 1985, 31(5):289-93.*

[4] Trivedi R, Maurya R, Mishra D P. *Cell Death Dis., 2014, 5(10):1183-208.*

[5] Martínez-Sotres C, López-Albarrán P, Cruz-De-León J, *et al. Int. Biodeter. Biodegr., 2012, 69(4):38-40.*

[6] Zhao D, Wu X, Song P, *et al. China Pharmacist, 2015(01):44-6.*

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