Natural Products

ChemFaces

Costunolide Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Costunolide

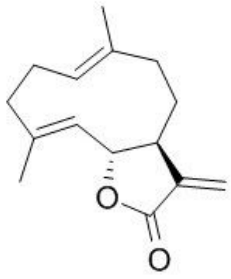
Catalog No.: CFN98928

Cas No.: 553-21-9

Purity: > 98%

M.F: $C_{15}H_{20}O_2$

M.W: 232.3



Physical Description: Cryst.

Synonyms:(3aS,6E,10E,11aR)-6,10-dimethyl-3-methylene-3a,4,5,8,9,11a-hexahydrocyclodeca[b]furan-2-one.

[Intended Use]

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

[Source]

The roots of *Inula helenium L.*

[Biological Activity or Inhibitors]

Costunolide, a sesquiterpene lactone isolated from the root of Saussurea lappa Clarke, has a variety of biological activities, including anti-carcinogenic and anti-fungal activities, it inhibits IL-1beta gene expression by blocking the activation of MAPKs and DNA binding of AP-1 in LPS-stimulated RAW 264.7 cells. [1]

Costunolide induces the ROS-mediated mitochondrial permeability transition and resultant cytochrome c release,which is one mechanism of the anticancer effect of costunolide. [2]

Costunolide has antipyretic and anti-inflammatory activities, intraplantar injection of costunolide also reduced the paw oedema, myeloperoxidase. [3]

Costunolide(20mg/kg bw) possesses normo-glycemic and hypolipidemic activity and hence it could be used as a drug for treating diabetes. [4]

Costunolide can reduce the viability and arrest cell cycling at mitosis in hepatoma cells, also enhance the killing effect of radiotherapy against human HCC cells.[5]

[Solvent]

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

[HPLC Method][6]

Mobile phase: H2O-Methanol=30:70;

Flow rate: 0.5 ml/min;

Column temperature: Room temperature;

The wave length of determination: 205 nm.

[Storage]

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

[References]

[1] Jong Soon Kang, Yeo Dae Yoon, Ki Hoon Lee,*et al. Biochem. Bioph. Re.s Co., 2004, 313(1):171-7.*

[2] Lee M G, Lee K T, Chi S G, *et al. Biol. Pharm. Bull., 2001, 24(3):303-6.*

[3] Kassuya C A L, Cremoneze A, Barros L F L, *et al. J. Ethnopharmacol., 2009, 124(3): 369-76.*

[4] Eliza J, Daisy P, Ignacimuthu S, *et al. J. Ethnopharmacol., 2009, 179(2-3):329-34.*

[5] Liu C Y, Chang H S, Chen I S, *et al. Radiat. Oncol., 2011, 6(1):1-8.*

[6] Dong S, Liu Y T, Peng J B, *et al. Benthamscience Com., 2011, 2(1):74-8.*

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