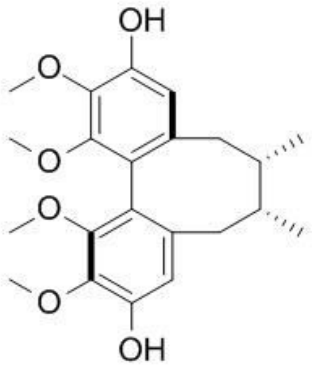
Natural Products

ChemFaces

Gomisin N Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Gomisin N

Catalog No.: CFN90125

Cas No.: 69176-52-9

Purity: > 98%

M.F: $C_{23}H_{28}O_6$

M.W: 400.46

Physical Description: Powder

Synonyms: (6R,7S)-1,2,3,13-Tetramethoxy-6,7-dimethyl-5,6,7,8-tetrahydrobenzo[3',4']cycloocta[1',2':4,5]benzo[1,2-d][1,3]dioxole.

[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, beverages;
8. Others.

[Source]

The fruits of *Schizandra chinensis.*

[Biological Activity or Inhibitors]

Gomisin N, isolated from Schisandria chinensis, has been prescribed as anti-oxdiant, anti-cancer and anti-hepatitis treatments in Chinese medicine, it is an anti-cancer drug candidate capable of inhibiting the proliferation and inducing the apoptosis of human hepatic carcinomas.[1]

Gomisin N induces the apoptosis of U937 cells through a signaling cascade of mitochondria-mediated intrinsic caspase pathways and gomisin N may be a useful chemotherapeutic agent.[2]

Gomisin N can potentiate TRAIL-induced apoptosis through ROS-mediated up-regulation of death receptors 4 and 5.[3]

Gomisin N has anti-inflammatory activity, can reduce nitric oxide (NO) production from lipopolysaccharide (LPS)-stimulated Raw 264.7 cells with low cytotoxic effects,the anti-inflammatory effects caused by blockage of p38 mitogen-activated protein kinase (MAPK), extracellular signal-regulated kinases 1 and 2 (ERK 1/2), and c-Jun N-terminal kinase (JNK) phosphorylation.[4]

Gomisin N has hepatoprotective effect , it can suppress inducible nitric oxide synthase gene via C/EBPβ and NF-κB in rat hepatocytes, it has protective effect against endoplasmic reticulum stress-induced hepatic steatosis.[5,6]

Gomisin N has anti-allergic effect, it inhibits PMA + A23187-induced production of IL-6, and inhibits the production of allergic mediators including prostaglandin D(2) (PGD(2)), leukotriene C(4) (LTC(4)), β-hexosaminidase (β-Hex), and cyclooxygenase-2 (COX-2) protein.[7]

[Solvent]

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

[HPLC Method][8]

Mobile phase: Acetonitrile-0.03%Phosphoric acid H2O, gradient eiution ;

Flow rate: 1.0 ml/min;

Column temperature: 35 ℃;

The wave length of determination: 280 nm.

[Storage]

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

[References]

[1] Yim S Y, Lee Y J, Lee Y K, *et al. Mol. Med. Rep., 2013, 2(5):725-32.*

[2] Kim J H, Choi Y W, Park C, *et al. Food Chem. Toxicol. , 2010, 48(3):807-13.*

[3] Inoue H, Waiwut P, Saiki I, *et al. Int. J. Oncol., 2011, 40(4):1058-65.*

[4] Oh S Y, Kim Y H, Bae D S, *et al. Biosci. Biotech. Bioch., 2010, 74(2):285-91.*

[5] Takimoto Y, Qian H Y, Yoshigai E, *et al. Nitric. Oxide., 2012, 28:47-56.*

[6] Jang M K, Yun Y R, Kim S H, *et al. Biol. Pharmaceut. Bull., 2016, 39(5):832-8.*

[7] Chae H S, Kang O H, Oh Y C, *et al. Immunopharm. Immunot., 2011, 33(4):709-13.*

[8] Ying Z, Diao Y P, You X M, *et al. J. Med .Plants Res., 2010, 4(16):1628-36.*

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