

Gomisin J Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Gomisin J

Catalog No.: CFN90124

Cas No.: 66280-25-9

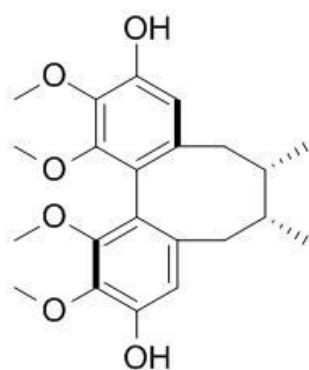
Purity: > 98%

M.F: C₂₂H₂₈O₆

M.W: 388.19

Physical Description: Powder

Synonyms: (-)-GomisinJ; (6R,7S,12aS)-5,6,7,8-Tetrahydro-1,2,11,12-tetramethoxy-6,7-dimethyldibenzo[a, c]cyclooctene-3,10-diol.



[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 J (GJ), a lignan from Kadsura medicinal plants, it can inhibit L-type calcium channels in ventricular cells of guinea pig.^[1]

Gomisin J has anti-inflammatory effects, can reduce the expression of mRNA and the secretion of pro-inflammatory cytokines; the inhibitory effects were found to be 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.^[2]

Halogenated gomisin J (a derivative of lignan compound), is a potent inhibitor of the cytopathic effects of human immunodeficiency virus type 1 (HIV-1) on MT-4 human T cells (50% effective dose, 0.1 to 0.5 microM); gomisin J derivatives are active in preventing p24 production from acutely HIV-1-infected H9 cells.^[3]

Gomisin J is a well-known medicinal herb for improvement of cardiovascular symptoms in Korean, it has endothelium (ED)-dependent vasorelaxant effects, which mediated mainly by calcium-dependent activation of eNOS with subsequent production of endothelial nitric oxide.^[4]

Gomisin J has preventive effects on angiotensin II-induced hypertension via an increased nitric oxide bioavailability.^[5]

Gomisin J can suppress lipid accumulation by regulating the expression of lipogenic and lipolytic enzymes and inflammatory molecules through activation of AMPK, LKB1, and Ca(2+)/calmodulin-dependent protein kinase II and inhibition of fetuin-A in HepG2 cells; suggests that gomisin J has potential benefits in treating nonalcoholic fatty liver disease.^[6]

Gomisin J has anti-oxidant activity, it can inhibit lipid peroxidation (LPO) induced by hydroxy free radical in rat liver mitochondria and scavenge the superoxide anion radical; it has protective effect against t-BHP-induced oxidative damage in HT22 cells from *Schizandra chinensis*.^[7,8]

Gomisin J is an important anti-cancer drug, it is a good substrate of cytochrome P450 3A4(CYP3A4), and drug-drug interaction between Gomisin J and the inhibitors of

CYP3A4 should be given much attention.^[9]

Gomisin J is an anti-diabetes drug, it exhibits strong inhibition towards the glucuronidation of SN-38.^[10]

[Solvent]

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

[HPLC Method]^[11]

Mobile phase: Acetonitrile- H₂O, gradient elution;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 217 nm.

[Storage]

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

[References]

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