

Xanthohumol Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Xanthohumol

Catalog No.: CFN98958

Cas No.: 569-83-5

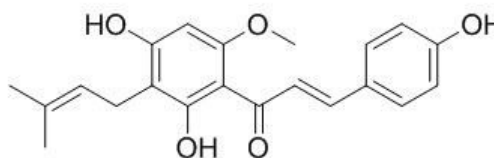
Purity: > 95%

M.F: C₂₁H₂₂O₅

M.W: 354.4

Physical Description: Yellow powder

Synonyms:



[Intended Use]

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

[Source]

The herbs of *Humulus lupulus*.

[Biological Activity or Inhibitors]

Xanthohumol(XN) is the principal prenylated flavonoid of the female inflorescences of the hop plant ('hops'), an ingredient of beer; it has been characterized a 'broad-spectrum' cancer chemopreventive agent in in vitro studies.^[1]

Xanthohumol has potential cancer chemopreventive activities, it can inhibit growth of a vascular tumor in vivo, it represses both the NF-kappaB and Akt pathways in endothelial cells, indicating that components of these pathways are major targets in the molecular mechanism of XN, XN interferes with several points in the angiogenic process, including inhibition of endothelial cell invasion and migration, growth, and formation of a network of tubular-like structures; suggest that XN can be added to the expanding list of antiangiogenic chemopreventive drugs.^[2]

Xanthohumol induces apoptosis in cultured 40-16 human colon cancer cells by activation of the death receptor- and mitochondrial pathway, concludes that induction of apoptosis by downregulation of Bcl-2 and activation of the caspase cascade may contribute to the chemopreventive or therapeutic potential of it.^[3]

Xanthohumol can inhibit HIV-1 induced cytopathic effects, the production of viral p24 antigen and reverse transcriptase in C8166 lymphocytes at non-cytotoxic concentration. The EC50 values were 0.82, 1.28 and 0.50 mug/ml, respectively; xanthohumol is effective against HIV-1 and might serve as an interesting lead compound, it may represent a novel chemotherapeutic agent for HIV-1 infection.^[4]

Xanthohumol has anti-carcinogenic, free radical-scavenging, and anti-inflammatory activities, it exerts anti-inflammatory activity through -ARE signaling and up-regulation of downstream , and could be an attractive candidate for the in the brain.^[5]

Xanthohumol lowers body weight and fasting plasma glucose in obese male Zucker fa/fa rats, suggests that xanthohumol has beneficial effects on markers of metabolic syndrome.^[6]

[Solvent]

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

[HPLC Method]^[7]

Mobile phase: Methanol - 0.2%Formic acid H₂O,gradient elution ;

Flow rate: 0.5 ml/min;

Column temperature:25 °C;

The wave length of determination: 370 nm.

[Storage]

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

[References]

[1] Stevens J F, Page J E. *Phytochemistry*, 2004, 65(10):1317-30.

[2] Albin A, Dell'Eva R, Vené R, *et al. Faseb J.*, 2006, 20(3):527-9.

[3] Pan L, Becker H, Gerhäuser C. *Mol.Nutr. Food Res.*, 2005, 49(9):837-43.

[4] Wang Q, Ding Z H, Liu J K, *et al. Antiviral Res.*, 2004, 64(3):189-94.

[5] Lee I S, Lim J, Gal J, *et al. Neurochem. Int.*, 2011, 58(2):153-60.

[6] Legette L L, Luna A Y M, Reed R L, *et al. Phytochemistry*, 2013, 91(12):236- 41.

[7] Wang N, Tao G J, Qin F, *et al. Sci. Tech. Food Ind.*, 2009, 30(5):323-5.

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