

Licochalcone A Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Licochalcone A

Catalog No.: CFN99575

Cas No.: 58749-22-7

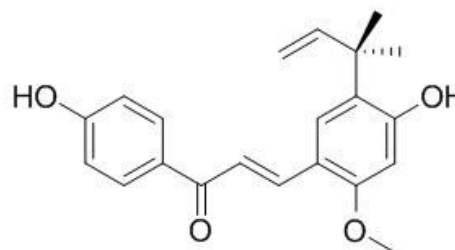
Purity: > 98%

M.F: C₂₁H₂₂O₄

M.W: 338.40

Physical Description: White powder

Synonyms: (E)-3-[4-hydroxy-2-methoxy-5-(2-methylbut-3-en-2-yl)phenyl]-1-(4-hydroxyphenyl)-2-propen-1-one.



[Intended Use]

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

[Source]

The roots of *Glycyrrhiza glabra* L.

[Biological Activity or Inhibitors]

Licochalcone A, isolated from Chinese licorice roots, it can inhibit the in vitro growth of both chloroquine-susceptible (3D7) and chloroquine-resistant (Dd2) Plasmodium falciparum strains, it exhibits potent antimalarial activity and might be developed into a new antimalarial drug.^[1]

Licochalcone A is a novel antiparasitic agent with potent activity against human pathogenic protozoan species of Leishmania.^[2]

Licochalcone A has positively effects on cell-aggregates ECM secretion and osteogenic differentiation during bone formation in metaphyseal defects in ovariectomized rats, it could be a promising strategy in treating osteoporotic weight-bearing bones fractures with defects.^[3]

Licochalcone A, the most cytotoxic licorice compound, it inhibits growth of gastric cancer cells by arresting cell cycle progression and inducing apoptosis, it inhibits gastric cancer cells growth in a dose-dependent manner, with an IC₅₀ value of approximately 40μM.^[4]

Licochalcone A has anti-inflammatory effects, it can suppress poly-IC-induced thymic stromal lymphopoietin (TSLP) expression and production by inhibiting the IKK/NF-κB signaling pathway, which might be involved in the pathogenesis of virus-exacerbated asthma, further elucidation of the mechanisms underlying these observations can help develop therapeutic strategies for virally induced asthma.^[5]

Licochalcone A significantly suppresses LPS signaling pathway through the inhibition of NF-kappa B p65 phosphorylation at serine 276, it might contribute to the potent anti-inflammatory effect of G. inflata through the unique mechanism of NF-kappaB inhibition.^[6]

Licochalcone A has antibacterial activity against spore-forming bacteria, it could be a useful compound for the development of antibacterial agents for the preservation of foods containing high concentrations of salts and proteases, in which cationic peptides might be less effective.^[7]

[Solvent]

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

[HPLC Method]^[8]

Mobile phase: Methanol- H₂O=60:40;

Flow rate: 1.0 ml/min;

Column temperature: 25 °C;

The wave length of determination: 377 nm.

[Storage]

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

[References]

[1] Chen M, Theander T G, Christensen S B, *et al. Antimicrob. Agents Ch.*, 1994, 38(7): 1470-5.

[2] Chen M, Christensen S B, Blom J, *et al. Antimicrob. Agents Ch.*, 1994, 37(12):2550-6.

[3] Shang F, Ming L, Zhou Z, *et al. Biomaterials*, 2014, 35(9):2789-97.

[4] Xiao X Y, Hao M, Yang X Y, *et al. Cancer Lett.*, 2011, 302(1):69-75.

[5] Kim S H, Yang M, Xu J G, *et al. Exp. Biol. Med.*, 2015, 240(1):26-33.

[6] Furusawa J, Funakoshi-Tago M, Tago K, *et al. Cell Signal*, 2009, 21(5):778-85.

[7] Ryoichi T, Nozomu H T, Makio K. *Antimicrob. Agents Ch.*, 2002, 46(5):1226-30.

[8] Li Y L , Bao J L, Yang Y, *et al. Food Sci. Tech.*, 2010(10):258-61.

[Contact]

Address:

S5-3 Building, No. 111, Dongfeng Rd.,
Wuhan Economic and Technological Development Zone,
Wuhan, Hubei 430056,
China

Email: info@chemfaces.com

Tel: +86-27-84237783

Fax: +86-27-84254680

Web: www.chemfaces.com

Tech Support: service@chemfaces.com