

Liquiritigenin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Liquiritigenin

Catalog No.: CFN99156

Cas No.: 578-86-9

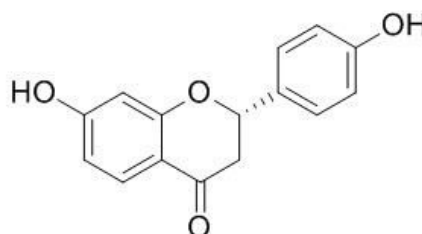
Purity: > 98%

M.F: C₁₅H₁₂O₄

M.W: 256.25

Physical Description: Cryst.

Synonyms: (-)-Liquiritigenin; (2S)-Liquiritigenin; 4',7-Dihydroxyflavanone;
(2S)-2,3-dihydro-7-hydroxy-2-(4-hydroxyphenyl)-4H-1-Benzopyran-4-one.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Care and daily chemicals;
7. Intermediates & Fine Chemicals;
8. Ingredient in supplements, beverages;
9. Others.

[Source]

The root of *Glycyrrhiza uralensis* Fisch.

[Biological Activity or Inhibitors]

Liquiritigenin, an aglycone of liquiritin in *G. radix*, exerts cytoprotective effects against heavy metal-induced toxicity in vitro, can protect the liver from acute injuries induced by APAP or from APAP-induced severe injuries during GSH deficiency.^[1]

Liquiritigenin is a highly selective estrogen receptor beta agonist, activates multiple ER regulatory elements and native target genes with ERbeta but not ERalpha; the ERbeta-selectivity is due to the selective recruitment of the coactivator steroid receptor coactivator-2 to target genes.^[2]

Liquiritigenin dose dependently alleviated mechanical, thermal and cold hyperalgesia, and daily repeated treatment with liquiritigenin did not demonstrate significant antinociceptive tolerance in the measures of hyperalgesia, and did not significantly affect motor performance, suggests that liquiritigenin may be potentially useful novel treatments for neuropathic pain.^[3]

Liquiritigenin may induce mitochondrial biogenesis, it might exert its therapeutic effects via enhancement of glyoxalase I activity and mitochondrial function, and anti-oxidant and anti-inflammatory activities; taken together, liquiritigenin has potential as a preventive agent against the development of diabetic osteopathy related to MG-induced oxidative stress in diabetes; and in vivo the derivatives of isoliquiritigenin and liquiritigenin has anti-diabetic activity, shows significant blood glucose lowering effect.^[4,5]

Liquiritigenin exhibits neuroprotective effects against A β 25-35-induced neurotoxicity and that it can decrease the secretion of A β 1–40, therefore, it may be useful for further study as a prodrug for treatment of Alzheimer's disease.^[6]

Liquiritigenin and its derivatives have hepatoprotective activity, the isoliquiritigenin exhibits better hepatoprotective activity than others.^[7]

[Solvent]

Chloroform, Dichloromethane, DMSO, Acetone.

[HPLC Method]^[8]

Mobile phase: Methanol-0.5% Glacial acetic acid H₂O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 276 nm.

[Storage]

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

[References]

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- [8] Zhang K W, Hao W U, Cui X B, *et al. Chinese J. Exp. Trad. Med .Formulae*, 2008, 14(10):8-11.

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