

Isoliquiritigenin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Isoliquiritigenin

Catalog No.: CFN97542

Cas No.: 961-29-5

Purity: > 98%

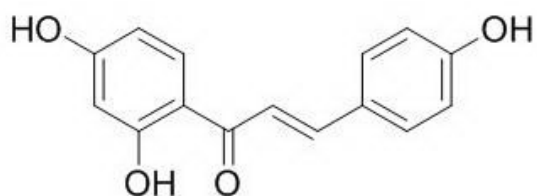
M.F: C₁₅H₁₂O₄

M.W: 256.3

Physical Description: Yellow powder

Synonyms: (E)-1-(2,4-dihydroxyphenyl)-3-(4-hydroxyphenyl)-2-propen-1-one;

6'-Deoxychalcone; 2',4,4'-Trihydroxychalcone.



[Intended Use]

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

[Source]

The roots of *Glycyrrhiza uralensis*.

[Biological Activity or Inhibitors]

Isoliquiritigenin(ILTG), a flavonoid constituent in the root of Glycyrrhiza glabra, has vasorelaxant effect, anti-platelet, anti-allergic and antiviral activities, also has protective effects in transient middle cerebral artery occlusion-induced focal cerebral ischemia in rats.^[1]

Insamapadoksan is a traditional herbal medicine used for antipyretic and antiinflammatory diseases, thus, it has bioactivity effects such as antioxidant, estrogenic and anticancer. ^[2]

Isoliquiritigenin significantly inhibits the proliferation of prostate and lung cancer cell lines in a dose-dependent and time-dependent manner, suggests that it is a candidate agent for the treatment of prostate, lung cancer and GADD153 may play an important role in isoliquiritigenin-induced cell cycle arrest and cell growth inhibition.^[3,4]

Isoliquiritigenin inhibits proliferation and induces apoptosis of U87 human glioma cells in vitro, through cell cycle arrest and the caspase-mediated apoptosis pathway by regulating the expression of specific molecules.^[5]

Isoliquiritigenin can inhibit I κ B kinase activity and ROS generation to block TNF- α induced expression of cell adhesion molecules on human endothelial cells, these results have important implications for using ILTG or its derivatives towards the development of effective anti-inflammatory molecules.^[6]

Isoliquiritigenin has the anti-inflammatory properties, caused by iNOS, COX-2, TNF- α , and IL-6 down-regulation due to NF- κ B inhibition via the suppression of IKK, ERK1/2 and p38 phosphorylation in RAW 264.7 cells.^[7]

Isoliquiritigenin has the ability to protect cells from AA+iron-induced H₂O₂ production and mitochondrial dysfunction, which is mediated with GSK3 β phosphorylation downstream of AMPK.^[8]

[Solvent]

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

[HPLC Method]^[9]

Mobile phase: Acetonitrile - 1.0% Acetic acid H₂O=32:68;

Flow rate: 1.0 ml/min;

Column temperature: 40 °C;

The wave length of determination: 350 nm.

[Storage]

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

[References]

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- [3] Kanazawa M, Satomi Y, Mizutani Y, *et al. Eur. Urology*, 2003, 43(5):580-6.
- [4] Li T, Satomi Y, Katoh D, *et al. Cancer Lett.*, 2004, 207(1):27-35.
- [5] Zhou G S, Song L J, Yang B. *Mol. Med. Rep.*, 2013, 7(2):531-6(6).
- [6] Kumar S, Sharma A, Madan B, *et al. Biochem. Pharmacol.*, 2007, 73(10):1602-12.
- [7] Kim J Y, Park S J, Yun K J, *et al. Eur. J. Pharmacol.*, 2008, 584(1):175-84.
- [8] Song H C, Kim Y W, Sang G K. *Biochem. Pharmacol.*, 2010, 79(9):1352-62.
- [9] Zhao X S, Meng H, Feng J D. *Lishizhen Med. Materia Medica Res.*, 2011, 22(4):888-9.

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