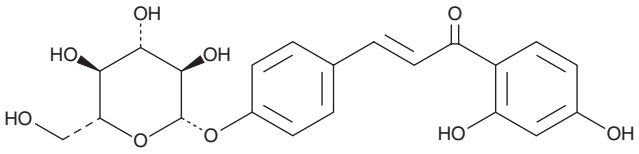
PRODUCT INFORMATION

Isoliquiritin

Item No. 30270

CAS Registry No.: 5041-81-6
Formal Name: (2E)-1-(2,4-dihydroxyphenyl)-3-[4-(β-D-glucopyranosyloxy)phenyl]-2-propen-1-one
Synonym: Isoliquiritoside
MF: $C_{21}H_{22}O_9$
FW: 418.4
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 362 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Glycyrrhiza glabra*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Isoliquiritin is supplied as a crystalline solid. A stock solution may be made by dissolving the isoliquiritin in the solvent of choice, which should be purged with an inert gas. Isoliquiritin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of isoliquiritin in these solvents is approximately 20 mg/ml.

Isoliquiritin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, isoliquiritin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Isoliquiritin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Isoliquiritin is a flavonoid that has been found in *G. uralensis* roots and has diverse biological activities.[1,2,3] It inhibits LPS-induced nitrite and prostaglandin E_2 (PGE_2; Item No. 14010) production in RAW 264.7 cells when used at a concentration of 1.6 µM.[1] Isoliquiritin (5-500 µg/ml) inhibits tube formation by isolated rat aortic endothelial cells.[2] *In vivo*, isoliquiritin reduces carmine content, a marker of blood vessel formation, and pouch fluid weight in a mouse model of adjuvant-induced pouch granuloma formation (ED_{50}s = 1.46 and 0.771 mg/kg, respectively). It increases cortical, hippocampal, and hypothalamic serotonin (5-HT) and norepinephrine levels and decreases immobility time in the forced swim and tail suspension tests in mice when administered at doses ranging from 10 to 40 mg/kg.[3]

References

1. Kim, J.Y., Park, S.J., Yun, K.J., *et al.* Isoliquiritigenin isolated from the roots of *Glycyrrhiza uralensis* inhibits LPS-induced iNOS and COX-2 expression *via* the attenuation of NF-κB in RAW 264.7 macrophages. *Eur. J. Pharmacol.* **584(1)**, 175-184 (2008).
2. Kobayashi, S., Miyamoto, T., Kimura, I., *et al.* Inhibitory effect of isoliquiritin, a compound in licorice root, on angiogenesis *in vivo* and tube formation *in vitro*. *Biol. Pharm. Bull.* **18(10)**, 1382-1386 (1995).
3. Wang, W., Hu, X., Zhao, Z., *et al.* Antidepressant-like effects of liquiritin and isoliquiritin from *Glycyrrhiza uralensis* in the forced swimming test and tail suspension test in mice. *Prog. Neuropsychopharmacol. Biol. Psychiatry* **32(5)**, 1179-1184 (2008).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM