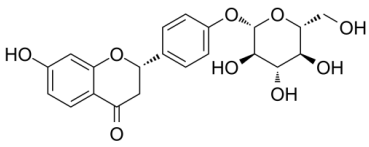
Data Sheet

Product Name:	Liquiritin
Cat. No.:	CS-0008920
CAS No.:	551-15-5
Molecular Formula:	C21H22O9
Molecular Weight:	418.39
Target:	Reactive Oxygen Species
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Solubility:	DMSO : 150 mg/mL (358.52 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Liquiritin, a flavonoid isolated from Glycyrrhiza, is a potent and competitive **AKR1C1** inhibitor with **IC_{50}**s of 0.62 μM, 0.61 μM, and 3.72 μM for AKR1C1, AKR1C2 and AKR1C3, respectively. Liquiritin efficiently inhibits progesterone metabolism mediated by AKR1C1 in vivo [1]. Liquiritin acts as an antioxidant and has neuroprotective, anti-cancer and anti-inflammatory activity[2]. IC50 & Target: IC50: 0.62 μM (AKR1C1), 0.61 μM (AKR1C2) and 3.72μM (AKR1C3)[1] **In Vitro:** Liquiritin can target the residues Ala-27, Val-29, Ala-25, and Asn-56 of AKR1C1[1].

Liquiritin (50 μM; 6 hours) results in 85.00% of reduction in progesterone metabolism, which is mediated by Aldo-keto reductase family 1 member C1 (AKR1C1) enzymatic activity in HEC-1-B cells[1].

Liquiritin (100 μM) increases glucose-6-phosphate dehydrogenase expression on B65 neuroblastoma cells[2].

References:

[1]. Nakatani Y, et al. Neuroprotective effect of liquiritin as an antioxidant via an increase in glucose-6-phosphate dehydrogenase expression on B65 neuroblastoma cells. Eur J Pharmacol. 2017 Nov 15;815:381-390.

[2]. Zeng C, et al. Liquiritin, as a Natural Inhibitor of AKR1C1, Could Interfere With the Progesterone Metabolism. Front Physiol. 2019 Jul 3;10:833.

CAIndexNames:

4H-1-Benzopyran-4-one, 2-[4-(β-D-glucopyranosyloxy)phenyl]-2,3-dihydro-7-hydroxy-, (2S)-

SMILES:

O=C1C[C@@H](C2=CC=C(O[C@H]3[C@@H]([C@H]([C@@H]([C@@H](CO)O3)O)O)O)C=C2)OC4=CC(O)=CC=C14

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