



## Product Information

Product ID I7559

CAS No. 961-29-5

Chemical Name (E)-1-(2,4-Dihydroxyphenyl)-3-(4-hydroxyphenyl)-2-propen-1-one

Synonym 4,2',4'-Trihydroxychalcone

Formula  $C_{15}H_{12}O_4$

Formula Wt. 256.25

Melting Point

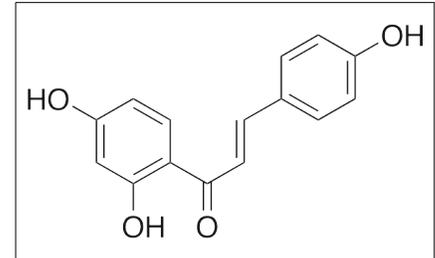
Purity  $\geq 99\%$

Solubility

Store Temp 4°C

Ship Temp Ambient

**Description** Isoliquiritigenin is a chalcone with a wide variety of targets; it exhibits anticancer, anti-angiogenic, antioxidative, and neuroprotective activities. Isoliquiritigenin inhibits NMDA receptors, histone deacetylases (HDACs), VEGFR2, and NF- $\kappa$ B (via inhibition of I $\kappa$ B kinase). In vitro, this compound increases Nrf2 expression. Additionally, isoliquiritigenin downregulates expression of arachidonic acid-metabolizing enzymes cyclooxygenase-2 (COX-2) and phospholipase A2 (PLA2), increasing mitochondria- and/or caspase-mediated apoptosis, and inhibiting proliferation of breast cancer cells. Isoliquiritigenin also modulates sirtuins and acts as a positive allosteric modulator at GABA-A receptors.



**Bulk quantities available upon request**

Product ID	Size
I7559	1 mg
I7559	5 mg
I7559	10 mg
I7559	25 mg

**References** Chen H, Zhang B, Yuan X, et al. Isoliquiritigenin-induced effects on Nrf2 mediated antioxidant defence in the HL-60 cell monocytic differentiation. *Cell Biol Int.* 2013 Nov;37(11):1215-1224. PMID: 23881796.

Wang Z, Wang N, Han S, et al. Dietary compound isoliquiritigenin inhibits breast cancer neoangiogenesis via VEGF/VEGFR-2 signaling pathway. *PLoS One.* 2013 Jul 5;8(7):e68566. PMID: 23861918.

Li Y, Zhao H, Wang Y, et al. Isoliquiritigenin induces growth inhibition and apoptosis through downregulating arachidonic acid metabolic network and the deactivation of PI3K/Akt in human breast cancer. *Toxicol Appl Pharmacol.* 2013 Oct 1;272(1):37-48. PMID: 23747687.

Yuan X, Zhang B, Gan L, et al. Involvement of the mitochondrion-dependent and the endoplasmic reticulum stress-signaling pathways in isoliquiritigenin-induced apoptosis of HeLa cell. *Biomed Environ Sci.* 2013 Apr;26(4):268-76. PMID: 23534467.

Orlikova B, Schneckeburger M, Zloh M, et al. Natural chalcones as dual inhibitors of HDACs and NF- $\kappa$ B. *Oncol Rep.* 2012 Sep;28(3):797-805. PMID: 22710558.

Cho S, Kim S, Jin Z, et al. Isoliquiritigenin, a chalcone compound, is a positive allosteric modulator of GABA<sub>A</sub> receptors and shows hypnotic effects. *Biochem Biophys Res Commun.* 2011 Oct 7;413(4):637-42. PMID: 21945440.

Kawakami Z, Ikarashi Y, Kase Y. Isoliquiritigenin is a novel NMDA receptor antagonist in kampo medicine yokukansan. *Cell Mol*

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.