

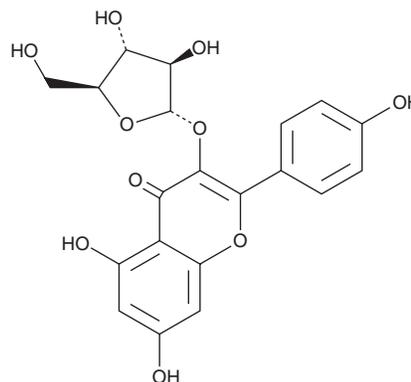
PRODUCT INFORMATION



Juglanin

Item No. 39824

CAS Registry No.: 5041-67-8
Formal Name: 3-(α -L-arabinofuranosyloxy)-5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonym: Kaempferol-3-O-arabinofuranose
MF: C₂₀H₁₈O₁₀
FW: 418.4
Purity: \geq 98%
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years
Item Origin: Plant/*Juglans regia* L.



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

Laboratory Procedures

Juglanin is supplied as a solid. A stock solution may be made by dissolving the juglanin in the solvent of choice, which should be purged with an inert gas. Juglanin is soluble in the organic solvent methanol.

Description

Juglanin is a flavonol that has been found in *J. mandshurica* and has diverse biological activities.¹⁻³ It reduces the levels of reactive oxygen species (ROS) increased by oscillatory shear stress (OSS) in human aortic endothelial cells (HAECs) when used at concentrations of 2.5 and 5 μ M.¹ It also reduces OSS-induced increases in VCAM-1 and E-selectin protein levels in HAECs and decreases the attachment of THP-1 monocytes to HAECs. Juglanin (2.5, 5, and 10 μ M) inhibits the proliferation of MCF-7 human breast cancer cells, as well as induces JNK activation, autophagosome formation, apoptosis, and cell cycle arrest at the G₂/M phase in the same cells.² It reduces tumor growth in an MCF-7 mouse xenograft model when administered at doses of 10 and 20 mg/kg. Juglanin (15 and 30 mg/kg) reduces body weight, renal fibrosis, and blood glucose levels, as well as serum and renal levels of Tnf- α , Il-1 β , Il-6, and chemokine (C-C motif) ligand 2 (Ccl2), and improves glucose tolerance in a mouse model of high-fat diet- and obesity-induced kidney disease.³

References

1. Zhao, J., Quan, X., Xie, Z., *et al.* Juglanin suppresses oscillatory shear stress-induced endothelial dysfunction: An implication in atherosclerosis. *Int. Immunopharmacol.* **89**(Pt B), 107048 (2020).
2. Sun, Z.-L., Dong, J.-L., and Wu, J. Juglanin induces apoptosis and autophagy in human breast cancer progression via ROS/JNK promotion. *Biomed. Pharmacother.* **85**, 303-312 (2017).
3. Li, Q., Ge, C., Tan, J., *et al.* Juglanin protects against high fat diet-induced renal injury by suppressing inflammation and dyslipidemia via regulating NF- κ B/HDAC3 signaling. *Int. Immunopharmacol.* **95**, 107340 (2021).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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