

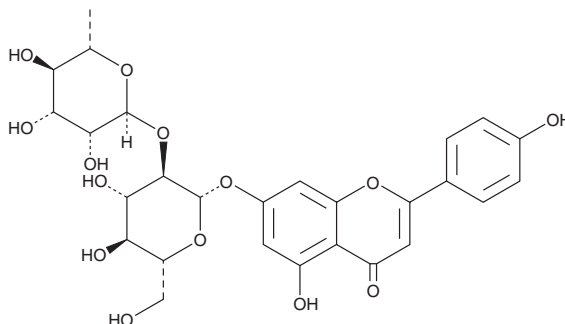
PRODUCT INFORMATION



Rhoifolin

Item No. 35583

CAS Registry No.: 17306-46-6
Formal Name: 7-[[2-O-(6-deoxy- α -L-mannopyranosyl)- β -D-glucopyranosyl]oxy]-5-hydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonym: Apigenin 7-O-Neohesperidoside
MF: C₂₇H₃₀O₁₄
FW: 578.5
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 268, 334 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Plant/Exocarpium *Citri Grandis*



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

Laboratory Procedures

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

Description

Rhoifolin is a flavonoid glycoside that has been found in *C. nudiflora* and has diverse biological activities.¹⁻⁵ It inhibits Ezrin phosphorylation, cell migration, and TGF- β 1-induced epithelial-to-mesenchymal transition (EMT) in MDA-MB-231 cells when used at concentrations of 10 and 40 μM .¹ Rhoifolin inhibits severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) main protease (M^{pro}), also known as 3C-like protease (3CL^{pro}; IC₅₀ = 27.45 μM).² It reverses scopolamine-induced memory deficits and inhibits acetylcholinesterase (AChE) activity in zebrafish when administered in the tank water at concentrations of 1, 3, and 5 $\mu\text{g/L}$.³ Rhoifolin (20 and 40 mg/kg) reduces paw edema and IL-1 β , IL-6, and TNF- α levels in a rat model of carrageenan-induced inflammation.⁴ It also ameliorates cartilage damage in a rat model of osteoarthritis, an effect that can be reversed by the autophagy inhibitor 3-methyladenine (Item No. 13242).⁵

References

1. Xiong, L., Lu, H., Hu, Y., *et al.* *In vitro* anti-motile effects of rhoifolin, a flavonoid extracted from *Callicarpa nudiflora* on breast cancer cells via downregulating podocalyxin-ezrin interaction during epithelial mesenchymal transition. *Phytomedicine* **93**, 153486 (2021).
2. Jo, S., Kim, S., Shin, D.H., *et al.* Inhibition of SARS-CoV 3CL protease by flavonoids. *J. Enzyme Inhib. Med. Chem.* **35**(1), 145-151 (2020).
3. Brinza, I., Abd-Alkhalik, A.M., El-Raey, M.A., *et al.* Ameliorative effects of rhoifolin in scopolamine-induced amnesic zebrafish (*Danio rerio*) model. *Antioxidants (Basel)* **9**(7), 580 (2020).
4. Fang, J., Cao, Z., Song, X., *et al.* Rhoifolin alleviates inflammation of acute inflammation animal models and LPS-Induced RAW264.7 cells via IKK β /NF- κ B signaling pathway. *Inflammation* **43**(6), 2191-2201 (2020).
5. Yan, J., Ni, B., Sheng, G., *et al.* Rhoifolin ameliorates osteoarthritis via regulating autophagy. *Front. Pharmacol.* **12**, 661072 (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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