

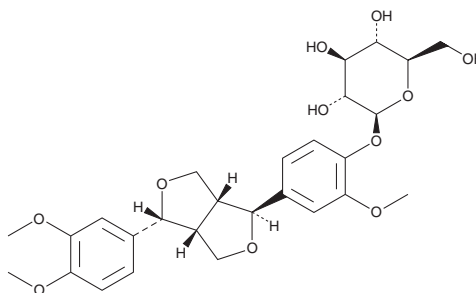
PRODUCT INFORMATION



Phillyrin

Item No. 29654

CAS Registry No.: 487-41-2
Formal Name: 4-[(1S,3aR,4R,6aR)-4-(3,4-dimethoxyphenyl)tetrahydro-1H,3H-furo[3,4-c]furan-1-yl]-2-methoxyphenyl, β -D-glucopyranoside
MF: C₂₇H₃₄O₁₁
FW: 534.6
Purity: \geq 98%
UV/Vis.: λ_{max} : 230 nm
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years
Item Origin: Plant/*Forsythiae fructus*



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

Laboratory Procedures

Phillyrin is supplied as a solid. A stock solution may be made by dissolving the phillyrin in the solvent of choice, which should be purged with an inert gas. Phillyrin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of phillyrin in these solvents is approximately 30 mg/ml.

Phillyrin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, phillyrin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Phillyrin has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Phillyrin is a lignan that has been found in *F. suspense* and has diverse biological activities.¹⁻⁵ It reduces hydrogen peroxide-induced caspase activation, increases in malondialdehyde (MDA) levels, and production of reactive oxygen species (ROS), as well as increases glutathione peroxidase (GPX) and superoxide dismutase (SOD) activities in PC12 cells.¹ Phillyrin is active against *P. aeruginosa in vitro* (MIC = 0.5 mg/ml) and increases survival in a *C. elegans* model of *P. aeruginosa* infection.² Intragastric administration of phillyrin (10 and 20 mg/kg) reduces pulmonary NF- κ B activation, neutrophil infiltration, and levels of TNF- α , IL-1 β , and IL-6, as well as interstitial edema, in a mouse model of LPS-induced acute lung injury.³ It decreases body weight, hepatic total cholesterol, free fatty acid, and triglyceride levels, and serum insulin levels in obese mice.⁴ Phillyrin (20 mg/kg) also prolongs survival time, decreases viral titers, and attenuates pulmonary tissue damage in a mouse model of influenza A infection.⁵

References

1. Wei, T., Tian, W., Yan, H., et al. *Cell Mol. Neurobiol.* **34**(8), 1165-1173 (2014).
2. Zhou, S., Zhang, A., and Chu, W. *J. Vet. Med. Sci.* **81**(3), 473-479 (2019).
3. Zhong, W.-t., Wu, Y.-c., Xie, X.-x., et al. *Fitoterapia* **90**, 132-139 (2013).
4. Xiao, H.-B., Sui, G.-G., and Lu, X.-Y. *Obes. Res. Clin. Pract.* **12**(Suppl. 2), 71-79 (2018).
5. Qu, X.Y., Li, Q.J., Zhang, H.M., et al. *Arch. Pharm. Res.* **39**(7), 998-1005 (2016).

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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