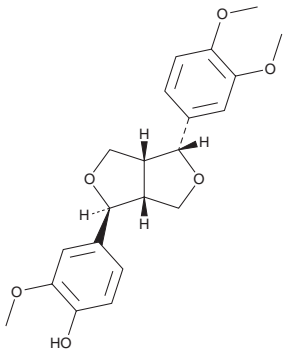
PRODUCT INFORMATION

Phillygenin

Item No. 30698

CAS Registry No.: 487-39-8
Formal Name: 4-[(1S,3aR,4R,6aR)-4-(3,4-dimethoxyphenyl) tetrahydro-1H,3H-furo[3,4-c]furan-1-yl]-2-methoxy-phenol
Synonyms: Epipinoresinol methyl ether, (+)-Phillygenin
MF: $C_{21}H_{24}O_6$
FW: 372.4
Purity: ≥95%
UV/Vis.: λ_{max}: 232 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Forsythia suspensa* (Thunb.) Vahl



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

Laboratory Procedures

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

Phillygenin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, phillygenin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Phillygenin has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Phillygenin is a lignan that has been found in *F. fructus* and has diverse biological activities.[1-3] It scavenges peroxide and DPPH (Item No. 14805) radicals in cell-free assays (IC_{50}s = 10.5 and 19.1 µM, respectively).[1] Phillygenin (25-200 µg/ml) inhibits LPS-induced production of IL-1β, IL-6, TNF-α, and the fibrosis markers collagen I and α-SMA in LX-2 hepatic stellate cells.[2] It also reduces serum levels of alanine aminotransferase (ALT), aspartate aminotransferase (AST), superoxide dismutase (SOD), and malondialdehyde (MDA) and prevents hepatic necrosis in a mouse model of carbon tetrachloride-induced liver injury.[3]

References

1. Hung, C.-Y., Tsai, Y.-C., and Li, K.-Y. Phenolic antioxidants isolated from the flowers of *Osmanthus fragrans*. *Molecules* **17(9),** 10724-10737 (2012).
2. Hu, N., Wang, C., Dai, X., *et al.* Phillygenin inhibits LPS-induced activation and inflammation of LX2 Cells by TLR4/MyD88/NF-κB signaling pathway. *J. Ethnopharmacol.* **248,** 112361 (2020).
3. Song, W., Wu, J., Yu, L., *et al.* Evaluation of the pharmacokinetics and hepatoprotective effects of phillygenin in mouse. *Biomed. Res. Int.* 7964318 (2018).

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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