

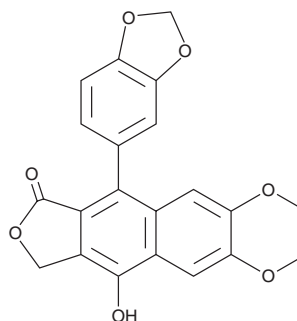
PRODUCT INFORMATION



Diphyllin

Item No. 27826

CAS Registry No.: 22055-22-7
Formal Name: 9-(1,3-benzodioxol-5-yl)-4-hydroxy-6,7-dimethoxy-naphtho[2,3-c]furan-1(3H)-one
Synonym: NSC 309691
MF: C₂₁H₁₆O₇
FW: 380.4
Purity: ≥98%
UV/Vis.: λ_{max}: 231, 268 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Nelumbo nucifera*



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

Laboratory Procedures

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

Description

Diphyllin is a lignan that has been found in *C. collinus* and has diverse biological activities.¹⁻³ It reduces viral titers in Vero cells infected with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; EC₅₀ = 1.92 μM).² It inhibits bovine chromaffin granule V-ATPase (IC₅₀ = 17 nM) and lysosomal acidification in primary human osteoclasts.³ Diphyllin (1, 5, and 10 μM) induces apoptosis in and inhibits the growth of SGC-7901 gastric adenocarcinoma cells.¹ *In vivo*, diphyllin (20 mg/kg) reduces intratumoral expression of V-ATPase and tumor volume in an SGC-7901 mouse xenograft model.

References

1. Shen, W., Zou, X., Chen, M., *et al.* Effects of diphyllin as a novel V-ATPase inhibitor on gastric adenocarcinoma. *Eur. J. Pharmacol.* **667(1-3)**, 330-338 (2011).
2. Stefanik, M., Strakova, P., Haviernik, J., *et al.* Antiviral activity of vacuolar ATPase blocker diphyllin against SARS-CoV-2. *Microorganisms* **9(3)**, 471 (2021).
3. Sorensen, M.G., Henriksen, K., Neutzsky-Wulff, A.V., *et al.* Diphyllin, a novel and naturally potent V-ATPase inhibitor, abrogates acidification of the osteoclastic resorption lacunae and bone resorption. *J. Bone Miner. Res.* **22(10)**, 1640-1648 (2007).

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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