

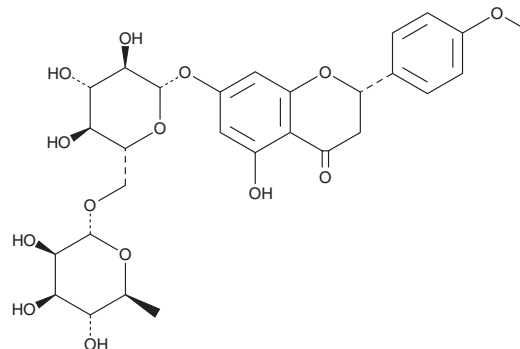
PRODUCT INFORMATION



Didymin

Item No. 25197

CAS Registry No.: 14259-47-3
Formal Name: (2S)-7-[[6-O-(6-deoxy- α -L-mannopyranosyl)- β -D-glucopyranosyl]oxy]-2,3-dihydro-5-hydroxy-2-(4-methoxyphenyl)-4H-1-benzopyran-4-one
MF: C₂₈H₃₄O₁₄
FW: 594.6
Purity: \geq 98%
UV/Vis.: λ_{max} : 214, 224, 282 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

Didymin is supplied as a crystalline solid. A stock solution may be made by dissolving the didymin in the solvent of choice, which should be purged with an inert gas. Didymin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of didymin in these solvents is approximately 0.1, 5, and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of didymin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of didymin in PBS, pH 7.2, is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Didymin is a flavonoid that has been found in citrus fruits with diverse biological activities.¹⁻³ It reduces hydrogen peroxide-induced production of reactive oxygen species (ROS) and cell death and increases superoxide dismutase (SOD), glutathione peroxidase (GPX), and catalase (CAT) activity in SH-SY5Y cells differentiated into a neuronal phenotype.¹ Didymin reduces survival of A549 and H460 lung cancer cells in a concentration-dependent manner *via* induction of cell cycle arrest at the G₀/G₁ phase and Fas-mediated apoptosis.² *In vivo*, didymin (6 mg/kg) inhibits tumor growth in an A549 mouse xenograft model. It also reduces hepatic collagen deposition, the number of hepatic lesions, and serum levels of alanine aminotransferase (ALT), aspartate aminotransferase (AST), and TNF- α in a rat model of CCL₄-induced hepatic fibrosis.³

References

1. Morelli, S., Piscioneri, A., Salerno, S., *et al.* Neuroprotective effect of didymin on hydrogen peroxide-induced injury in the neuronal membrane system. *Cells Tissues Organs* **199(2-3)**, 184-200 (2014).
2. Hung, J.-Y., Hsu, Y.-L., Ko, Y.-C., *et al.* Didymin, a dietary flavonoid glycoside from citrus fruits, induces Fas-mediated apoptotic pathway in human non-small-cell lung cancer cells *in vitro* and *in vivo*. *Lung Cancer* **68(3)**, 366-374 (2010).
3. Lin, X., Bai, F., Nie, J., *et al.* Didymin alleviates hepatic fibrosis through inhibiting ERK and PI3K/Akt pathways *via* regulation of Raf kinase inhibitor protein. *Cell Physiol. Biochem.* **40(6)**, 1422-1432 (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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