

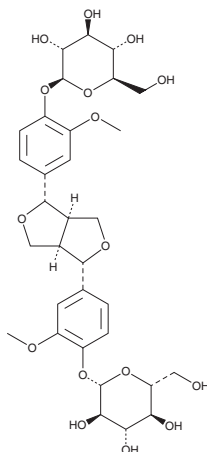
PRODUCT INFORMATION



Pinoresinol Diglucoside

Item No. 27708

CAS Registry No.: 63902-38-5
Formal Name: [(1S,3aR,4S,6aR)-tetrahydro-1H,3H-furo[3,4-c]furan-1,4-diyl]bis(2-methoxy-4,1-phenylene) bis-β-D-glucopyranoside
Synonym: (+)-Pinoresinol di-O-β-D-glucopyranoside
MF: C₃₂H₄₂O₁₆
FW: 682.7
Purity: ≥98%
UV/Vis.: λ_{max}: 274 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Eucommia ulmoides* Oliver



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

Laboratory Procedures

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

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 pinoresinol diglucoside can be prepared by directly dissolving the solid in aqueous buffers. The solubility of pinoresinol diglucoside in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Pinoresinol diglucoside is a lignan that has been found in *E. ulmoides* and has diverse biological activities.¹⁻³ It inhibits peroxidation of a linoleic acid emulsion by 64.2% when used at a concentration of 20 µg/ml, scavenges hydrogen peroxide and 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805), ABTS (Item No. 27317), and superoxide anion free radicals, and has ferrous ion metal chelating activity in cell-free assays.¹ *In vivo*, pinoresinol diglucoside (10, 20, and 40 mg/kg) inhibits increases in serum levels of inorganic phosphate, IL-6, and TNF-α and decreases in serum calcium levels and transverse diameter, weight, bone mineral content, and bone mineral density of the right femur in a rat model of osteoporosis induced by dexamethasone (Item No. 11015).³

References

- Gülçin, İ., Elias, R., Gepdiremen, A., *et al.* Antioxidant activity of lignans from fringe tree (*Chionanthus virginicus* L.). *Eur. Food Res. Technol.* **223**, 759 (2006).
- Deyama, T., Nishibe, S., Kitagawa, S., *et al.* Inhibition of adenosine 3',5'-cyclic monophosphate phosphodiesterase by lignan glucosides of *Eucommia* bark. *Chem. Pharm. Bull. (Tokyo)* **36(1)**, 435-439 (1988).
- Zhang, Z.-F., Min, J.-K., Wang, D., *et al.* Pinoresinol diglucoside exhibits protective effect on dexamethasone-induced osteoporosis in rats. *Trop. J. Pharma. Res.* **15(11)**, 2451-2457 (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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM