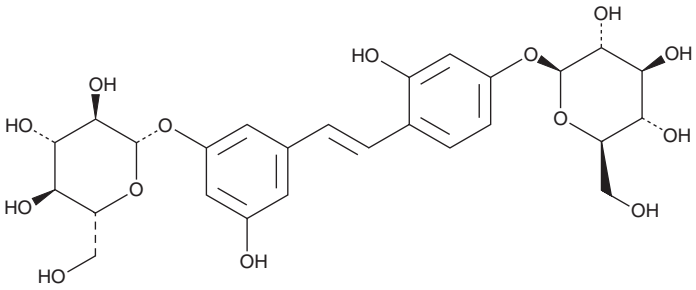
PRODUCT INFORMATION

Mulberroside A

Item No. 27545

CAS Registry No.:	102841-42-9
Formal Name:	3-[(1E)-2-[4-(β-D-glucopyranosyloxy)-2-hydroxyphenyl]ethenyl]-5-hydroxyphenyl, β-D-glucopyranoside
MF:	$C_{26}H_{32}O_{14}$
FW:	568.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 216, 301, 324 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Cortex mori*



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

Laboratory Procedures

Mulberroside A is supplied as a crystalline solid. A stock solution may be made by dissolving the mulberroside A in the solvent of choice, which should be purged with an inert gas. Mulberroside A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of mulberroside A in ethanol is approximately 2 mg/ml and approximately 25 mg/ml in DMSO and DMF.

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 mulberroside A can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of mulberroside A in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Mulberroside A is a phenol and stilbene glucoside form of oxyresveratrol (Item No. 12028) originally isolated from *M. alba* (mulberry) roots that has diverse biological activities.[1-4] It inhibits pregnane X receptor-mediated P-glycoprotein (P-gp) luciferase reporter activity induced by rifampicin (Item No. 14423) in LS174T cells when used at concentrations ranging from 5 to 20 µM.[1] Mulberroside A decreases expression of TNF-α, IL-1β, and IL-6, inhibits caspase-1 activation, and increases cell viability in an isolated rat cortical neuron model of oxygen-glucose deprivation-induced ischemia and reperfusion injury.[2] Topical administration of mulberroside A (2 and 5% v/v) reduces UVB-induced hyperpigmentation, levels of the melanogenesis enzymes tyrosinase, tyrosinase-related protein 1 (TRP-1), and microphthalmia-associated transcription factor (MITF), and tyrosinase activity in brown guinea pig skin.[3] Mulberroside A (10, 20, and 40 mg/kg) decreases serum levels of uric acid, creatinine, and urea nitrogen, reduces renal vacuolar and granular degeneration, and increases fractional excretion of uric acid and urinary urate excretion in hyperuricemic mice.[4]

References

1. Li, Y., Huang, L., Sun, J., *et al. J. Biochem. Mol. Toxicol.* (2016).
2. Wang, C.-P., Zhang, L.-Z., Li, G.-C., *et al. J. Neurosci. Res.* **92(7)**, 944-954 (2014).
3. Park, K.-T., Kim, J.-K., Hwang, D., *et al. Food Chem. Toxicol.* **49(12)**, 3038-3045 (2011).
4. Wang, C.-P., Wang, Y., Wang, X., *et al. Planta Med.* **77(8)**, 786-794 (2011).

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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