

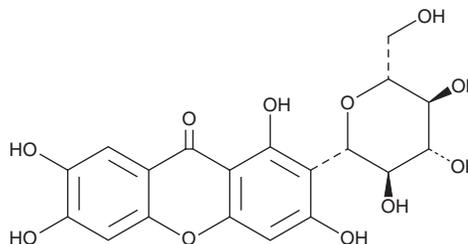
PRODUCT INFORMATION



Mangiferin

Item No. 22360

CAS Registry No.: 4773-96-0
Formal Name: 2-β-D-glucopyranosyl-1,3,6,7-tetrahydroxy-9H-xanthen-9-one
Synonym: NSC 248870
MF: C₁₉H₁₈O₁₁
FW: 422.3
Purity: ≥98%
UV/Vis.: λ_{max}: 242, 258, 316, 364 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Mangifera indica* L.



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

Laboratory Procedures

Mangiferin is supplied as a crystalline solid. A stock solution may be made by dissolving the mangiferin in the solvent of choice, which should be purged with an inert gas. Mangiferin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of mangiferin in these solvents is approximately 5 and 2 mg/ml, respectively. Mangiferin is slightly soluble in ethanol.

Description

Mangiferin is a xanthone glucoside that has been found in *M. indica* with diverse biological activities.¹ It increases survival of HIV-1-infected MT-2 human leukemia cells (EC₅₀ = 3.59 μg/ml).² In an ascitic fibrosarcoma (AFS) mouse xenograft model, mangiferin (10 μg/g) inhibits tumor growth by 47% at 15 days post inoculation and increases lifespan by 38% relative to control. Mangiferin (50 mg/kg, p.o.) reduces the production of hydrogen peroxide induced by phorbol 12-myristate 13-acetate (TPA; Item No. 10008014) in mouse peritoneal macrophages by 40% *ex vivo*.³ It also decreases TPA-induced DNA fragmentation in mouse liver and brain by 35 and 22%, respectively. Mangiferin (0.25-2 mg/kg, i.p.) dose-dependently increases survival of γ-irradiated mice.⁴ Mangiferin (10 mg/kg, i.p.) reduces fasting plasma glucose, total cholesterol, triglycerides, and LDL cholesterol (LDL-C) levels in a rat model of diabetes induced by streptozotocin (Item No. 13104) by 50, 57, 38.5, and 70%, respectively.¹

References

1. Muruganandan, S., Srinivasan, K., Gupta, S., *et al.* Effect of mangiferin on hyperglycemia and atherogenicity in streptozotocin diabetic rats. *J. Ethnopharmacol.* **97(3)**, 497-501 (2005).
2. Guha, S., Ghosal, S., and Chattopadhyay, U. Antitumor, immunomodulatory and anti-HIV effect of mangiferin, a naturally occurring glucosylxanthone. *Chemotherapy* **42(6)**, 443-451 (1996).
3. Sánchez, G.M., Re, L., Giuliani, A., *et al.* Protective effects of *Mangifera indica* L. extract, mangiferin and selected antioxidants against TPA-induced biomolecules oxidation and peritoneal macrophage activation in mice. *Pharmacol. Res.* **42(6)**, 565-573 (2000).
4. Jagetia, G.C. and Baliga, M.S. Radioprotection by mangiferin in DBAxC₅₇BL mice: A preliminary study. *Phytomedicine* **12(3)**, 209-215 (2005).

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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