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: C_{19}H_{18}O_{11}
FW: 422.3
Purity: ≥98%
UV/Vis.: λ_{max}: 242, 258, 316, 364 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

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. Mangiferin is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of mangiferin in these solvents is approximately 5 and 2 mg/ml, respectively. Mangiferin is also 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 (EC_{50} = 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.\(^5\)

References