

alpha-Mangostin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: alpha-Mangostin

Catalog No.: CFN97050

Cas No.: 6147-11-1

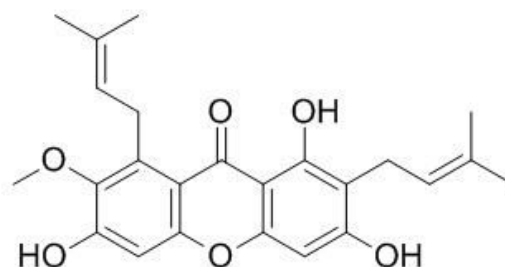
Purity: > 98%

M.F: C₂₄H₂₆O₆

M.W: 410.5

Physical Description: Yellow powder

Synonyms: 1,3,6-Trihydroxy-7-methoxy-2,8-bis(3-methylbut-2-enyl)-9-xanthenone.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Ingredient in supplements, beverages;
8. Others.

[Source]

The fruit hull of *Garcinia mangostana* L.

[Biological Activity or Inhibitors]

alpha-Mangostin, a xanthone from the pericarps of mangosteen, induces caspase-3-dependent apoptosis in HL60 cells, it and its analogs would be candidates for preventive and therapeutic application for cancer treatment.^[1]

alpha-Mangostin shows the features of the mitochondrial apoptotic pathway such as mitochondrial membrane depolarization and cytochrome c release, it inhibits the sarco(endo)plasmic reticulum Ca^{2+} -ATPase markedly, suggests that alpha-mangostin inhibits Ca^{2+} -ATPase to cause apoptosis through the mitochondrial pathway.^[2]

alpha-Mangostin is a novel competitive histamine H1 receptor antagonist in smooth muscle cells.^[3]

alpha-Mangostin is able to scavenge directly several ROS and has a neuroprotective effect against 3-nitropropionic acid (3-NP) in primary cultures of CGNs, which is associated with its ability to ameliorate 3-NP-induced ROS production.^[4]

alpha-Mangostin has renoprotection, which is related to the attenuation in renal oxidative/nitrosative stress induced by cisplatin nephrotoxicity.^[5]

alpha-Mangostin exerts a robust anti-peroxidative effect in brain tissue preparations probably through its properties as a free radical scavenger; the protective effect of alpha-mangostin on lipid peroxidation and antioxidant tissue defense system during ISO-induced myocardial infarction in rats.^[6,7]

alpha-Mangostin has strong antifungal activity and low toxicity against *Candida albicans*, it is a promising agent for treatment of oral candidiasis.^[8]

alpha-Mangostin suppresses phorbol 12-myristate 13-acetate-induced MMP-2/MMP-9 expressions via $\alpha_5\beta_3$ integrin/FAK/ERK and NF- κ B signaling pathway in human lung adenocarcinoma A549 cells.^[9]

alpha-Mangostin enhances betulinic acid cytotoxicity and inhibits cisplatin cytotoxicity on HCT 116 colorectal carcinoma cells, it may as chemopreventive agents against carcinogens, irradiation and oxidative stress, or to neutralize cisplatin side effects.^[10]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method]^[11]

Mobile phase: Methanol: H₂O=83:17;

Flow rate: 1.0 ml/min;

Column temperature: 25 °C;

The wave length of determination: 317 nm.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]

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