

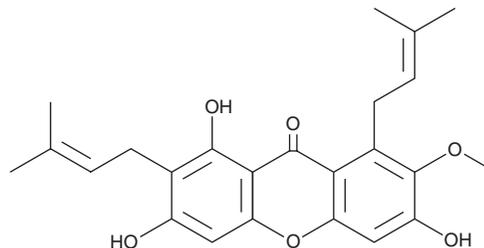
# PRODUCT INFORMATION



## $\alpha$ -Mangostin

Item No. 29108

**CAS Registry No.:** 6147-11-1  
**Formal Name:** 1,3,6-trihydroxy-7-methoxy-2,8-bis(3-methyl-2-buten-1-yl)-9H-xanthen-9-one  
**Synonyms:** NSC 27593, NSC 139154  
**MF:** C<sub>24</sub>H<sub>26</sub>O<sub>6</sub>  
**FW:** 410.5  
**Purity:**  $\geq$ 95%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 245, 318 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years  
**Item Origin:** Plant/*Garcinia mangostana* L.



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

### Laboratory Procedures

$\alpha$ -Mangostin is supplied as a crystalline solid. A stock solution may be made by dissolving the  $\alpha$ -mangostin in the solvent of choice, which should be purged with an inert gas.  $\alpha$ -Mangostin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of  $\alpha$ -mangostin in ethanol and DMF is approximately 30 mg/ml and approximately 10 mg/ml in DMSO.

$\alpha$ -Mangostin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers,  $\alpha$ -mangostin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice.  $\alpha$ -Mangostin has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

$\alpha$ -Mangostin is a xanthone that has been found in *G. mangostana* and has diverse biological activities.<sup>1-5</sup> It inhibits fatty acid synthase and HIV-1 protease (IC<sub>50</sub>s = 5.54 and 5.12  $\mu$ M, respectively).<sup>2,3</sup>  $\alpha$ -Mangostin is active against methicillin-sensitive and -resistant *S. aureus* strains (MICs = 1.57-12.5  $\mu$ g/ml).<sup>1</sup> It inhibits nitric oxide and prostaglandin E<sub>2</sub> (PGE<sub>2</sub>; Item No. 14010) production in LPS-stimulated RAW 264.7 cells (IC<sub>50</sub>s = 12.4 and 11.08  $\mu$ M, respectively).<sup>4</sup>  $\alpha$ -Mangostin is an agonist of stimulator of interferon genes (STING) that binds to the C-terminal domain of STING (H232 variant) with a K<sub>d</sub> value of 137  $\mu$ M and induces expression of an IFN- $\beta$ -luciferase reporter in HEK293T cells transfected with human STING (H232 variant) to a greater extent than cells expressing murine STING or human STING (R232 variant) when used at a concentration of 25  $\mu$ M.<sup>6</sup>  $\alpha$ -Mangostin (20 mg/kg) prevents carrageenan-induced paw edema in mice. It decreases the viability of LNCaP, 22Rv1, DU145, and PC3 prostate cancer cells *in vitro* (IC<sub>50</sub>s = 5.9, 6.9, 22.5, and 12.7  $\mu$ M, respectively) and reduces tumor growth in a 22Rv1 mouse xenograft model when administered at a dose of 100 mg/kg.<sup>5</sup>

### References

1. Iinuma, M., Tosa, H., Tanaka, T., et al. *J. Pharm. Pharmacol.* **48(8)**, 861-865 (1996).
2. Jiang, H.Z., Quan, X.F., Tian, W.X., et al. *Bioorg. Med. Chem. Lett.* **20(20)**, 6045-6047 (2010).
3. Chen, S.-X., Wan, M., and Loh, B.-N. *Planta Med.* **62(4)**, 381-382 (1996).
4. Chen, L.-G., Yang, L.-L., and Wang, C.-C. *Food Chem. Toxicol.* **46(2)**, 688-693 (2008).
5. Johnson, J.J., Petiwala, S.M., Syed, D.N., et al. *Carcinogenesis* **33(2)**, 413-419 (2012).
6. Zhang, Y., Sun, Z., Pei, J., et al. *ChemMedChem* **13(19)**, 2057-2064 (2018).

#### 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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