# **PRODUCT** INFORMATION



## **β-Mangostin**

Item No. 25071

CAS Registry No.:	20931-37-7	
Formal Name:	1,6-dihydroxy-3,7-dimethoxy-2,8-bis(3-	
	methyl-2-buten-1-yl)-9H-xanthen-9-one	
MF:	$C_{25}H_{28}O_{6}$	
FW:	424.5	
Purity:	≥95%	
UV/Vis.:	λ <sub>max</sub> : 244, 259, 316 nm	
Supplied as:	A crystalline solid	
Storage:	-20°C	О ОН
Stability:	≥4 years	
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis		

#### Laboratory Procedures

 $\beta$ -Mangostin is supplied as a crystalline solid. A stock solution may be made by dissolving the  $\beta$ -mangostin in the solvent of choice, which should be purged with an inert gas.  $\beta$ -Mangostin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of β-mangostin in ethanol is approximately 1 mg/ml and approximately 20 mg/ml in DMSO and DMF.

β-Mangostin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers,  $\beta$ -mangostin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice.  $\beta$ -Mangostin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

#### Description

β-Mangostin is a xanthone originally isolated from G. mangostana with diverse biological activites.<sup>1-6</sup> It inhibits growth of methicillin-resistant S. aureus (MRSA) and methicillin-susceptible S. aureus (MSSA; MICs = 6.25-12.5 and 6.25-25 µg/ml, respectively), P. falciparum (IC<sub>50</sub> = 3 µg/ml), and M. tuberculosis (MIC = 6.25  $\mu$ g/ml).<sup>1-3</sup>  $\beta$ -Mangostin inhibits fatty acid synthase (FASN) with an IC<sub>50</sub> value of 24.83  $\mu$ M.<sup>4</sup> It induces cell cycle arrest at the  $G_2/M$  phase and intrinsic and mitochondrial apoptosis in MCF-7 breast cancer cells.<sup>5</sup>  $\beta$ -Mangostin also inhibits LPS-induced nitric oxide and prostaglandin E<sub>2</sub> (PGE<sub>2</sub>) production in RAW264.7 cells and reduces neutrophil infiltration and TNF- $\alpha$  and IL-1 $\beta$  production in a mouse model of carrageenan-induced peritonitis.<sup>6</sup>

#### References

- 1. linuma, M., Tosa, H., Tanaka, T., et al. J. Pharm. Pharmacol. 48(8), 861-865 (1996).
- 2. Likhitwitayawuid, K., Phadungcharoen, T., and Krungkrai, J. Planta. Med. 64(1), 70-72 (1998).
- 3. Suksamrarn, S., Suwannapoch, N., Phakhodee, W., et al. Chem. Pharm. Bull. (Tokyo) 51(7), 857-859 (2003).
- Jiang, H.Z., Quan, X.F., Tian, W.X., et al. Bioorg. Med. Chem. Lett. 20(20), 6045-6047 (2010).
- 5. Syam, S., Bustamam, A., Abdullah, R., et al. J. Funct. Foods 6(1), 290-304 (2014).
- 6. Syam, S., Bustamam, A., Abdullah, R., et al. J. Ethnopharmacol. 153(2), 435-445 (2014).

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.

#### WARRANTY AND LIMITATION OF REMEDY

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