

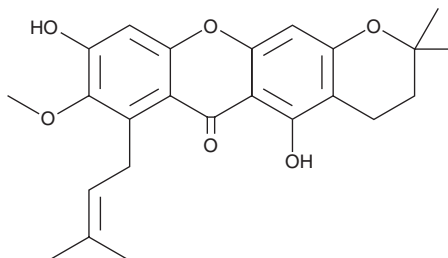
# PRODUCT INFORMATION



## 3-Isomangostin

Item No. 36484

**CAS Registry No.:** 19275-46-8  
**Formal Name:** 3,4-dihydro-5,9-dihydroxy-8-methoxy-2,2-dimethyl-7-(3-methyl-2-butenyl)-2H,6H-pyrano[3,2-b]xanthen-6-one  
**MF:** C<sub>24</sub>H<sub>26</sub>O<sub>6</sub>  
**FW:** 410.5  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥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

3-Isomangostin is supplied as a solid. A stock solution may be made by dissolving the 3-isomangostin in the solvent of choice, which should be purged with an inert gas. 3-Isomangostin is soluble in acetone, chloroform, dichloromethane, DMSO, and ethyl acetate.

### Description

3-Isomangostin is a xanthone and  $\alpha$ -mangostin (Item No. 29108) derivative that has been found in *G. mangostana* and has diverse biological activities.<sup>1-6</sup> It is an inhibitor of mutT homolog 1 (MTH1; IC<sub>50</sub> = 52 nM).<sup>1</sup> 3-Isomangostin also inhibits aldose reductase (IC<sub>50</sub> = 3.48  $\mu$ M), acetylcholinesterase (AChE; IC<sub>50</sub> = 2.36  $\mu$ g/ml), and butyrylcholinesterase (BChE; IC<sub>50</sub> = 5.32  $\mu$ g/ml).<sup>2,3</sup> It inhibits the growth of *P. falciparum* strains D6 and W2 in isolated and infected red blood cells (IC<sub>50</sub>s = 3.23 and 2.52  $\mu$ g/ml, respectively).<sup>4</sup> 3-Isomangostin inhibits cyclin D2/Cdk4 and cyclin E1/Cdk2 (EC<sub>50</sub>s = 15.6 and 34.92  $\mu$ M, respectively) and reduces viability of HCC1937 and HCT116 cells (IC<sub>50</sub>s = 59.9 and 47.4  $\mu$ M, respectively).<sup>5,6</sup>

### References

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2. Khaw, K.Y., Choi, S.B., Tan, S.C., et al. Prenylated xanthenes from mangosteen as promising cholinesterase inhibitors and their molecular docking studies. *Phytomedicine* **21(11)**, 1303-1309 (2014).
3. Fatmawati, S., Ersam, T., and Shimizu, K. The inhibitory activity of aldose reductase *in vitro* by constituents of *Garcinia mangostana* Linn. *Phytomedicine* **22(1)**, 49-51 (2015).
4. Lyles, J.T., Negrin, A., Khan, S.I., et al. *In vitro* antiplasmodial activity of benzophenones and xanthenes from edible fruits of *Garcinia* species. *Planta Med.* **80(8-9)**, 676-681 (2014).
5. Vemu, B., Nauman, M.C., Veenstra, J.P., et al. Structure activity relationship of xanthenes for inhibition of cyclin dependent kinase 4 from mangosteen (*Garcinia mangostana* L.). *Int. J. Nutr.* **4(2)**, 38-45 (2019).
6. Nauman, M.C., Tocmo, R., Vemu, B., et al. Inhibition of CDK2/CyclinE1 by xanthenes from the mangosteen (*Garcinia mangostana*): A structure-activity relationship study. *Nat. Prod. Res.* **35(23)**, 5429-5433 (2021).

#### 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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