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- Trockeneiszuschlag
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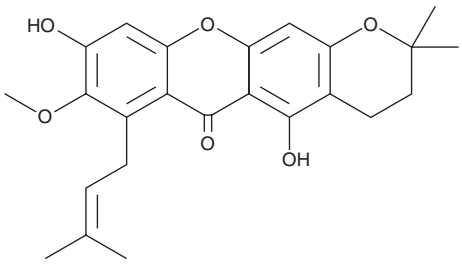
PRODUCT INFORMATION

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:	$C_{24}H_{26}O_6$
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 α-mangostin (Item No. 29108) derivative that has been found in *G. mangostana* and has diverse biological activities.[1-6] It is an inhibitor of mutT homolog 1 (MTH1; IC_{50} = 52 nM).[1] 3-Isomangostin also inhibits aldose reductase (IC_{50} = 3.48 µM), acetylcholinesterase (AChE; IC_{50} = 2.36 µg/ml), and butyrylcholinesterase (BChE; IC_{50} = 5.32 µg/ml).[2,3] It inhibits the growth of *P. falciparum* strains D6 and W2 in isolated and infected red blood cells (IC_{50}s = 3.23 and 2.52 µg/ml, respectively).[4] 3-Isomangostin inhibits cyclin D2/Cdk4 and cyclin E1/Cdk2 (EC_{50}s = 15.6 and 34.92 µM, respectively) and reduces viability of HCC1937 and HCT116 cells (IC_{50}s = 59.9 and 47.4 µM, respectively).[5,6]

References

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2. Khaw, K.Y., Choi, S.B., Tan, S.C., *et al.* Prenylated xanthones 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).
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5. Vemu, B., Nauman, M.C., Veenstra, J.P., *et al.* Structure activity relationship of xanthones 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 xanthones from the mangosteen (*Garcinia mangostana*): A structure-activity relationship study. *Nat. Prod. Res.* **35(23)**, 5429-5433 (2021).

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