

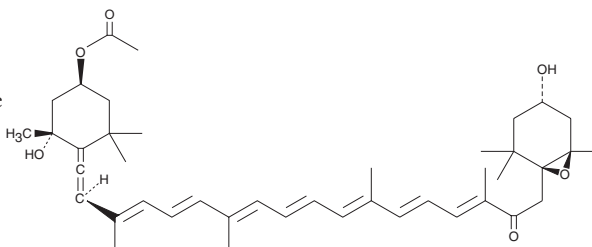
Product Information



Fucoxanthin

Catalog No. 13068

CAS Registry No.: 3351-86-8
Formal Name: 6'R,7'-didehydro-5R,6-epoxy-4',5',6S,7-tetrahydro-3S,3'S,5'R-trihydroxy-β,β-caroten-8(5H)-one
Synonym: α-Carotene
MF: C₄₂H₅₈O₆
FW: 658.9
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that fucoxanthin be stored as supplied at -20°C. It should be stable for at least two years.

Fucoxanthin is supplied as a crystalline solid. A stock solution may be made by dissolving the fucoxanthin in the solvent of choice. Fucoxanthin is soluble in organic solvents such as acetone and DMSO, which should be purged with an inert gas. The solubility of fucoxanthin in these solvents is approximately 10 mg/ml. Fucoxanthin has limited stability when stored in solvents, we recommend preparing stock solutions immediately prior to use.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Fucoxanthin is a carotenoid that occurs naturally in certain algae. It significantly reduces abdominal white adipose tissue (WAT) in mice and rats when included in their diet. Fucoxanthin increases the amount of mitochondrial uncoupling protein 1 (UCP1), a fatty acid-stimulated protein involved in respiration and thermogenesis in WAT of mice and rats.¹ In KK-Ay mice, which are used to model obese Type 2 diabetics with hyperinsulinemia, fucoxanthin reduces WAT gain and also decreases blood glucose and plasma insulin levels.^{1,2}

References

1. Maeda, H., Hosokawa, M., Sashima, T., *et al.* Fucoxanthin from edible seaweed, *Undaria pinnatifida*, shows antiobesity effect through UCP1 expression in white adipose tissues. *Biochem. Biophys. Res. Commun.* **332**, 392-397 (2005).
2. Chen, J.-K., Chen, J., Imig, J.D., *et al.* Identification of novel endogenous cytochrome p450 arachidonate metabolites with high affinity for cannabinoid receptors. *J. Biol. Chem.* **283(36)**, 24514-24524 (2008).

Related Products

Astaxanthin - Cat. No. 70685 • Zeaxanthin - Cat. No. 10009992 • Lutein - Cat. No. 10010811

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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