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Zuschläge

- Mindermengenzuschlag
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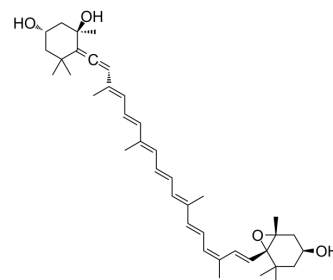
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Neoxanthin

Cat. No.:	HY-N7523
CAS No.:	14660-91-4
Molecular Formula:	C ₄₀ H ₅₆ O ₄
Molecular Weight:	600.87
Target:	DNA/RNA Synthesis; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Apoptosis
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



BIOLOGICAL ACTIVITY

Description	Neoxanthin is a major xanthophyll carotenoid and a precursor of the plant hormone abscisic acid in dark green leafy vegetables. Neoxanthin is a potent antioxidant and light-harvesting pigment. Neoxanthin induces apoptosis and has anticancer actions ^{[1][2]} .
In Vitro	Neoxanthin (20 μM; 72 h) treatment significantly reduces cell viability to 10.9% for PC-3 cells, 15.0% for DU 145 cells, and nearly zero for LNCaP cells, respectively ^[1] . Neoxanthin strongly inhibits cell growth by suppressing DNA synthesis in C3H10T1/2 cells ^[1] . In photosynthetic organisms, Neoxanthin is the essential component of both the photosystem I (PSI) and photosystem II (PSII) reaction centers of oxygenic photosynthetic apparatus ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The gastrointestinal metabolism of Neoxanthin in mice is investigated. Two hours after the oral administration of Neoxanthin (40 nmol/mouse), Neoxanthin is found in the plasma and livers of mice. The concentrations of Neoxanthin is 13.6-9.0 nM in plasma, and 7.3 3.6 pmol/g in liver, respectively. (R/S)-Neochrome is also found in the small intestinal contents of Neoxanthin-administered mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. E Kotake-Nara, et al. Carotenoids Affect Proliferation of Human Prostate Cancer Cells. *J Nutr.* 2001 Dec;131(12):3303-6.
- [2]. Ramesh Kumar Saini, et al. An Efficient One-Step Scheme for the Purification of Major Xanthophyll Carotenoids From Lettuce, and Assessment of Their Comparative Anticancer Potential. *Food Chem.* 2018 Nov 15;266:56-65.
- [3]. Akira Asai, et al. An Epoxide-Furanoid Rearrangement of Spinach Neoxanthin Occurs in the Gastrointestinal Tract of Mice and in Vitro: Formation and Cytostatic Activity of Neochrome Stereoisomers. *J Nutr.* 2004 Sep;134(9):2237-43.

Caution: Product has not been fully validated for medical applications. For research use only.

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