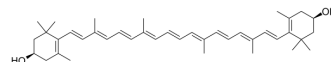


Zeaxanthin

| | |
|--------------------|--|
| Cat. No.: | HY-120318 |
| CAS No.: | 144-68-3 |
| Molecular Formula: | C ₄₀ H ₅₆ O ₂ |
| Molecular Weight: | 568.87 |
| Target: | Endogenous Metabolite |
| Pathway: | Metabolic Enzyme/Protease |
| Storage: | -20°C, protect from light |

* The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

THF : ≥ 10 mg/mL (17.58 mM)
 DMSO : < 1 mg/mL (ultrasonic) (insoluble or slightly soluble)
 * "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Solvent Concentration | Mass | 1 mg | 5 mg | 10 mg |
|---------------------------|-----------------------|-----------|-----------|-----------|------------|
| | | 1 mM | 1.7579 mL | 8.7894 mL | 17.5787 mL |
| 5 mM | 0.3516 mL | 1.7579 mL | 3.5157 mL | | |
| 10 mM | 0.1758 mL | 0.8789 mL | 1.7579 mL | | |

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Zeaxanthin, a diet-obtained carotenoid, presents in the macula region of the eye. Zeaxanthin shows antioxidant effects^{[1][2]}.

IC₅₀ & Target

Microbial Metabolite Human Endogenous Metabolite

In Vitro

Much of the Lutein and Zeaxanthin in the leaves of plants is protein-bound. In fruits and flower petals, the xanthophylls are esterified and are concentrated into chromoplasts where they are found to be solubilized in the membranes. In humans and higher animals, Lutein and Zeaxanthin are accumulated in lipophilic tissues such as adipose tissue and are carried in the blood by the lipoproteins, probably in a nonspecific manner similar to cholesterol. Lutein and Zeaxanthin are distributed equally between LDL and HDL fractions in human blood, in contrast to the hydrocarbon carotenoids that are preferentially found in LDL fractions, up to 75%^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Bone RA, et al. Distribution of lutein and zeaxanthin stereoisomers in the human retina. *Exp Eye Res.* 1997 Feb;64(2):211-8.

[2]. Elbaz-Hayoun S, et al. Evaluation of antioxidant treatments for the modulation of macrophage function in the context of retinal degeneration. *Mol Vis.* 2019 Sep 5;25:479-488.

[3]. Krinsky NI, et al. Biologic mechanisms of the protective role of lutein and zeaxanthin in the eye. *Annu Rev Nutr.* 2003;23:171-201.

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

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