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## **Product Information**

Product ID A7476 CAS No. 472-61-7

Chemical Name (3S,3'S)-3,3'-Dihydroxy-B,B-carotene-4,4'-dione

Synonym 3,3'-Dihydroxy-B-carotene-4,4'-dione, all-trans-Astaxanthin, Ovoester,

NSC635689, CCRIS 7118, HSDB 7468

Formula C<sub>40</sub>H<sub>52</sub>O<sub>4</sub> Formula Wt. 596.85 **Melting Point** 

Purity ≥97%

Solubility Soluble in DMSO, chloroform

or DMF. Soluble in ethanol or methanol if heated. Insoluble in water

Store Temp -20°C Ship Temp Ambient

**Description** Astaxanthin is a carotenoid found in sea-dwelling creatures such as shrimp, salmon, and algae; it displays neuroprotective, anti-

inflammatory, anti-hyperlipidemic, antioxidative, anti-diabetic, and cognition enhancing activities. Astaxanthin enhances performance in animals undergoing the water maze test, increases neuronal survival, and decreases hippocampal expression of TNF-a. Astaxanthin also decreases total cholesterol and triglyceride levels and increases levels and activity of glutathione and catalase in animal models. In diabetic animals, this compound decreases blood glucose levels, suppresses oxidative stress, and

improves cognitive function. Additionally, astaxanthin protects against glutamate-induced neurotoxicity in vivo.

Bulk quanitites available upon request

Product ID Size A7476 5 mg A7476 25 mg

References Wen X, Huang A, Hu J, et al. Neuroprotective effect of astaxanthin against glutamate-induced cytotoxicity in HT22 cells: Involvement of the Akt/GSK-3β pathway. Neuroscience. 2015 Sep 10;303:558-68. PMID: 26197224.

> Zhou X, Zhang F, Hu X, et al. Inhibition of inflammation by astaxanthin alleviates cognition deficits in diabetic mice. Physiol Behav. 2015 Aug 10;151:412-420. PMID: 26272354.

Chen YY, Lee PC, Wu YL, et al. In Vivo Effects of Free Form Astaxanthin Powder on Anti-Oxidation and Lipid Metabolism with High-Cholesterol Diet. PLoS One. 2015 Aug 11;10(8):e0134733. PMID: 26262684.

Xu L. Zhu J. Yin W. et al. Astaxanthin improves cognitive deficits from oxidative stress, nitric oxide synthase and inflammation through upregulation of PI3K/Akt in diabetes rat. Int J Clin Exp Pathol. 2015 Jun 1;8(6):6083-94. PMID: 26261486.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.