

Product Data Sheet

Product Name: α -Carotene

Cat. No.: GC41183

Chemical Properties

Cas. No. 7488-99-5

Chemical Name (6'R)- β , ϵ -carotene

SMILES CC1(C)[C@@H](/C=C/C(C)=C/C=C/C(C)=C/C=C/C=C(C)/C=C/C=C(C)/C=C/C2=C(C)CCCC2(C)C)C(C)=CCC1

Formula C₄₀H₅₆

M.Wt 536.9

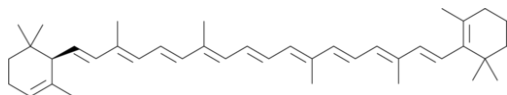
Solubility DMF: 0.1 mg/ml, DMSO: 1 mg/ml,
DMSO:PBS (pH 7.2) (1:10): 0.1
mg/ml

Storage Store at -20°C, protect from light,
stored under nitrogen

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

α -Carotene is a precursor of vitamin A that has been found in various fruits and vegetables.[1] It inhibits proliferation of GOTO human neuroblastoma cells more potently than β -carotene and halts the cell cycle at the G0/G1 phase concomitantly with a reduction in the mRNA expression of the protooncogene N-Myc.[2] It is also more potent than β -carotene in mouse models of skin and lung carcinogenesis and decreases the number of hepatomas in mice with spontaneous liver carcinogenesis when administered in drinking water at a concentration of 0.05%. [3] α -Carotene levels are increased in patients with coronary heart disease and are inversely correlated with the risk of estrogen receptor-negative breast cancer.[4][5]

Reference:

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

- [1]. Bushway, R.J., and Wilson, A.M. Determination of α - and β -carotene in fruit and vegetables by high performance liquid chromatography. Can. Inst. Food Sci. Technol. J. 15(3), 165-169 (1982).
- [2]. Murakoshi, M., Takayusa, J., Kimura, O., et al. Inhibitory effects of α -carotene on proliferation of the human neuroblastoma cell line GOTO. J. Natl. Cancer Inst. 81(21), 1649-1652 (1989).
- [3]. Murakoshi, M., Nishino, H., Satomi, Y., et al. Potent preventive action of α -carotene against carcinogenesis: spontaneous liver carcinogenesis and promoting stage of lung and skin carcinogenesis in mice are suppressed more effectively by α -carotene than by β -carotene. Cancer Res. 52(23), 6583-6587 (1992).
- [4]. Kontush, A., Spranger, T., Reich, A., et al. Lipophilic antioxidants in blood plasma as markers of atherosclerosis: The role of α -carotene and γ -tocopherol. Atherosclerosis 144(1), 117-122 (1999).
- [5]. Zhang, X., Spiegelman, D., Baglietto, L., et al. Carotenoid intakes and risk of breast cancer defined by estrogen receptor and progesterone receptor status: A pooled analysis of 18 prospective cohort studies. Am. J. Clin. Nutr. 95(3), 713-725 (2012).

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA