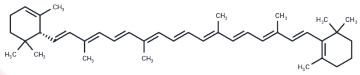
Data Sheet (Cat.No.T13472)

TargetMol

α-Carotene

Chemical Properties



CAS No. : 7488-99-5

Formula: C40H56

Molecular Weight: 536.87

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	α-Carotene is a natural carotenoid and precursor to vitamin A, exhibiting antioxidant and potential anti-cancer properties; high dietary intake of α-carotene may reduce prostate cancer risk.
Targets(IC50)	Antioxidant
In vitro	α-Carotene (0.5-2.5 μM, 24 hours) can significantly upregulate the protein levels of TIMP-1 and TIMP-2 in LLC cells depending on the concentration. α-Carotene (0.5-2.5 μM) also markedly increases PAI-1 protein expression. Furthermore, at 2.5 μM, α-Carotene significantly inhibits integrin β1-mediated FAK phosphorylation, which reduces the phosphorylation levels of the MAPK family [1]. α-Carotene (0.5, 1, 2.5 μM, 48 hours) significantly suppresses the invasive ability of LLC cells in a concentration-dependent manner over the 48-hour incubation period [1]. α-Carotene (0.5, 1, 2.5 μM, 24 hours) significantly decreases the activities of MMP-9, MMP-2, and uPA in LLC cells depending on the concentration [1]. α-Carotene (2, 5, 10 μM, 7 days) inhibits the proliferation of the human neuroblastoma cell line GOTO in a dose- and time-dependent manner. Among these, 5 μM α-Carotene (Daucus carota var. sativus) causes GOTO cell cycle arrest at the G0/G1 phase after 48 hours of treatment, along with a decrease in the mRNA levels of the proto-oncogene N-Myc [2].
In vivo	α-Carotene monotherapy (5 mg/kg, orally administered twice weekly for an additional 3 weeks) effectively inhibited lung metastasis without affecting the growth of primary tumors [1].

Solubility Information

Solubility	DMSO: 0.7 mg/mL (slightly soluble),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8626 mL	9.3132 mL	18.6265 mL
5 mM	0.3725 mL	1.8626 mL	3.7253 mL
10 mM	0.1863 mL	0.9313 mL	1.8626 mL
50 mM	0.0373 mL	0.1863 mL	0.3725 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Liu YZ, et al. Alpha-carotene inhibits metastasis in Lewis lung carcinoma in vitro, and suppresses lungmetastasis and tumor growth in combination with taxol in tumor xenografted C57BL/6 mice. J Nutr Biochem. 2015 Jun;26(6):607-15.

Murakoshi M, et al. Inhibitory effects of alpha-carotene on proliferation of the human neuroblastoma cell line GOTO. J Natl Cancer Inst. 1989 Nov 1;81(21):1649-52.