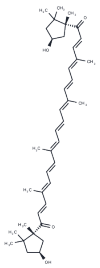
Data Sheet (Cat.No.T35982)

TargetMol

Capsorubin

Chemical Properties



CAS No. : 470-38-2

Formula: C40H56O4

Molecular Weight: 600.87

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	Capsorubin is a carotenoid with a variety of biological activities. capsorubin inhibited lipid peroxidation induced by 2,2′-azino(2,4-dimethylvaleronitrile) (AMVN) at a concentration of 167 μM. capsorubin (1 μM) reduced uvb-induced DNA strand breaks and apoptosis in human dermal fibroblasts. formation. It also inhibited the activation of ebvirus early antigen (EBV-EA) induced by 12-carnosine 13-acetate fobo in Raji cells.
Targets(IC50)	Apoptosis,Others,Antiviral
In vitro	Preincubation of human dermal fibroblasts (HDF) with capsorubin significantly counteracted UVB-induced cytotoxicity at doses between 0 and 300 mJ cm(-2). Pretreatment of HDF with capsorubin (1 μM) significantly decreased the formation of DNA strand breaks following irradiation with UVB light. Capsorubin studied decreased caspase-3 cleavage (a marker for UVB-induced apoptosis), however, caspase-dependent PARP-1 cleavage was not affected suggesting that the remaining caspase activity is sufficient to promote UVB-induced apoptosis. It is conceivable that capsorubin selectively interferes with cellular responses activated by UVB-mediated damage. Our findings indicate that capsorubin exhibits similar properties to lutein and could be used as a dietary supplement to improve natural photoprotection.[1]

Solubility Information

Solubility	DMSO: Soluble DMF: Soluble (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6643 mL	8.3213 mL	16.6425 mL
5 mM	0.3329 mL	1.6643 mL	3.3285 mL
10 mM	0.1664 mL	0.8321 mL	1.6643 mL
50 mM	0.0333 mL	0.1664 mL	0.3329 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

Fernández-García E, et al. Carotenoids exclusively synthesized in red pepper (capsanthin and capsorubin) protect human dermal fibroblasts against UVB induced DNA damage. Photochem Photobiol Sci. 2016;15(9):1204-1211.
Nishino A, et al. Reaction of Paprika Carotenoids, Capsanthin and Capsorubin, with Reactive Oxygen Species. J Agric Food Chem. 2016;64(23):4786-4792.
Shim YS, et al. Simultaneous determination of free capsorubin and capsanthin in red pepper powder using u-HPLC. J AOAC Int. 2013;96(2):341-345.
Maeda H, et al. Biological Activities of Paprika Carotenoids, Capsanthin and Capsorubin. Adv Exp Med Biol. 2021;1261:285-293.