Data Sheet (Cat.No.T19224)

TargetMol

C-Phycocyanin

Chemical Properties

CAS No. : 11016-15-2

Formula:

Molecular Weight:

Storage: 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	C-Phycocyanin (C-PC) is a water-soluble protein pigment that is also used as a nutrient supplement for human beings.
Targets(IC50)	Others
In vitro	For the combination experiments, when cells treated with All-trans retinoic acid (ATRA) combined with C-phycocyanin, the IC50 value is lower than that in the ATRA group. But under the same IC50, the more C-phycocyanin is used, the less ATRA is needed. C-phycocyanin combined with ATRA can significantly decrease the CDK-4 mRNA level (P<0.05). The combination index (CI) value of the C-phycocyanin+ATRA combination group is 0.852 which is less than 1, indicating that the two drugs are synergetic under the action concentration (88 μg/L C-phycocyanin+0.102 mM ATRA). The expression of caspase-3 in the C-phycocyanin group is more than that in the control group but is similar to that in the ATRA group, whereas the expression in the combination group is maximum.
In vivo	Compared to the control group, mice treated with either C-phycocyanin or ATRA demonstrated a significant reduction in average tumor weights, with an even greater decrease observed in the group receiving a combination of C-phycocyanin and ATRA. While C-phycocyanin alone was found to increase spleen weight, ATRA produced the opposite effect. Moreover, C-phycocyanin not only enhances the growth of immune organs in mice but also boosts immune function. Both C-phycocyanin and ATRA individually significantly suppress the expression of Cyclin D1, with the combination therapy exhibiting an enhanced inhibitory effect.

Solubility Information

Solubility	H2O: 20 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Reference

Li B, et al. The synergistic antitumor effects of all-trans retinoic acid and C-phycocyanin on the lung cancer A549 cells in vitro and in vivo. Eur J Pharmacol. 2015 Feb 15;749:107-14.

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