

Erucin

Erucin (E6880) is an isothiocyanate found in cruciferous vegetables such as broccoli and arugula. Isothiocyanates are phytochemicals with well known biological applications such as anticancer activity. Other examples of isothiocyanates include **Sulforaphane (S8044)** and **Iberin (I0416)**.

Erucin and sulforaphane display chemopreventive activity, inhibiting development of bladder cancer¹. This activity is associated with downregulation of survivin, EGFR, and HER2/neu (EGFR2). Erucin also inhibits survival of lung carcinoma cells by activating p53 and p21 signaling and inducing PARP-1 cleavage².

The anticancer activity of erucin has also been investigated in prostate cancer models. In prostate adenocarcinoma cells, erucin increases p21 expression and ERK1/2 phosphorylation, suppressing cell growth³.

Additionally, erucin upregulates activity of phase I and II enzymes, induces apoptosis and cell cycle arrest, and regulates androgen receptor signaling pathways⁴.

The ability of erucin to decrease oxidative stress and damage is also beneficial in preventing or delaying pathologies associated with neurodegenerative diseases. By increasing the levels of glutathione and antioxidative enzymes, erucin may show benefit in research models of Parkinson's disease⁵.

References:

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