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Broccoli Sprout Extract

National Cancer Institute

Source

National Cancer Institute. *Broccoli Sprout Extract*. NCI Thesaurus. Code C52174.

A cruciferous vegetable extract with potential chemopreventive activities. Broccoli sprout extract contains a high amount of sulforaphane, a naturally occurring isothiocyanate. Sulforaphane activates the transcription factor NF-E2-related factor 2 (Nrf2), a member of the basic leucine zipper family, which binds to and activates antioxidant-response elements (AREs). Subsequently, activated AREs mediate the transcription of antioxidant enzymes (particularly glutathione-S-transferase and quinone oxidoreductase), resulting in the detoxification of highly reactive carcinogens. AREs are cis-acting regulatory enhancer elements found in the 5' flanking region of many phase II detoxification enzymes.