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Dexanabinol

National Cancer Institute

Source

National Cancer Institute. *Dexanabinol*. NCI Thesaurus. Code C99381.

A synthetic, terpene-based cannabinoid derivative devoid of cannabinoid receptors 1 and 2 agonist activity and with potential neuroprotective, antiinflammatory and antineoplastic activities. Functioning as an N-Methyl-D-aspartate (NMDA) receptor antagonist, dexanabinol protects neuronal cells against NMDA and glutamate neurotoxicity. This agent also scavenges peroxy radicals and protects neurons from the damages of reactive oxygen species. Furthermore, dexanabinol inhibits the activity of nuclear factor kappa B (NF- κ B), thereby preventing the expression of NF- κ B target genes, such as tumor necrosis factor alpha, cytokines and inducible nitric oxide synthase. As a result, this agent may restore apoptotic processes in cancerous cells. NF- κ B is activated in a variety of cancer cells and plays a key role in the regulation of apoptosis and cellular proliferation.