Suppression of cancer cell growth in vitro by the protein-bound polysaccharide of Coriolus versicolor QUEL (PS-K) with SOD mimicking activity.

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Abstract
The protein-bound polysaccharide of Coriolus versicolor QUEL (PS-K) expresses the mimicking activity of superoxide dismutase (SOD). Examination was made of the suppressive effects of PS-K on cancer cell lines cultured in vitro. The SOD activity of LLC-WRC-256 (Walker 256 fibrosarcoma) cell lines was less than that of NRK-49F (rat normal kidney fibroblast), H4-II-E (rat hepatoma) and H4-II-E-C3 (rat hepatoma) cell lines. This activity in Walker 256 fibrosarcoma cells increased by 3.6 times and H2O2 concentration, by 2.56 times by PS-K 500 micrograms/ml. Cell proliferation was consequently suppressed and living cells decreased to less than 50% of the cells cultured without PS-K. Catalase and glutathione peroxidase activity changed little by PS-K. The sensitivity of cancer cells to PS-K can be predetermined based on SOD activity in tumor tissue.

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MeSH Terms, Substances

LinkOut - more resources