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

Kobayashi Y, Kariya K, Saigenji K, Nakamura K.

Molecular Biology Laboratory, Kotasato University School of Medicine, Kanagawa, Japan.

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

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