

[Biochem. J., 242, 211 (1987)]

Characterization of interleukin 2-stimulated phosphorylation of 67 and 63 kDa proteins in human T-cells.

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we have investigated rapid and marked phosphorylation of cellular proteins induced by IL-2 in human T-cell lines bearing human T-cell leukemia virus type I. IL-2 stimulated the phosphorylation of Mr=67,000 (pp67) and Mr=63,000 (pp63) proteins. The stimulation of pp67 phosphorylation was observed within 5 min after addition of IL-2 and was maximal after 15 min. In IL-2-dependent cells, IL-2 dose responses of pp67 phosphorylation and cell proliferation were exactly correlated. Phosphoamino acid analysis showed that the phosphorylation site of pp67 and pp63 was a serine residue. Subcellular fractionation studies indicated that pp67 was localized in cytosol, whereas pp63 was in nuclei.

[Blood, 66, 430 (1987)]

A monoclonal antibody detecting a novel antigen expressed in the HTLV-I-infected cells.

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A monoclonal antibody was prepared by hybridizing murine myeloma cells and spleen cells of Balb/c mice immunized with cultured cells derived from an adult T cell leukemia (ATL) patient. This monoclonal antibody reacted with all of the human T cell leukemia virus I-infected cell lines tested but did not react with other T cell lines derived from acute lymphocytic leukemia, Epstein-Barr virus-transformed B cell lines, or an erythroleukemic cell line. This monoclonal antibody was not directed to viral antigens. The antigen, mainly expressed on the cell membrane, was analyzed by metabolic labeling with ^3H -leucine followed by cell lysis and immunoprecipitation with the antibody, revealing Mr=50,000 and Mr=74,000 proteins on SDS-PAGE.

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Serum Calcium and Phosphorus Levels of Inhabitants in a Rural Area.

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A study on serum total protein (T.P.), total calcium (T.Ca), ionized calcium (Ca^{++}) and phosphorus (P) was carried out on the inhabitants of a rural area located at the foot of the Yamizo mountain range on the border between Tochigi and Ibaragi prefectures.

1) The serum T.P. level was significantly lower in the males than in the females. The $\text{Ca}^{++}/\text{T.Ca}$ (%) was significantly lower in the females than in the males. No sex differences were found in serum T.Ca, corrected Ca, Ca^{++} , P or Ca/P . 2) Serum Ca exhibited highly positive correlations with Ca^{++} , $\text{T.Ca}/\text{P}$ and T.P. in both sexes.

These results suggest that the improvement of calcium intake is particularly important for inhabitants of rural areas.