

The distribution of interleukin-19 in healthy and neoplastic tissue.

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摘要

Abstract

The influence of interleukin (IL)-19, a recently discovered cytokine in the IL-10 family, on tissue is still unclear. Our aim was to determine the distribution of IL-19 expression and to delineate the cell types that express IL-19 in healthy and neoplastic tissue, because this information will significantly facilitate the exploration of its pathophysiological functions. We used tissue microarray technology and an immunohistochemical survey with an anti-IL-19 monoclonal antibody to examine the expression of IL-19 in 28 healthy and 15 neoplastic tissues. IL-19 protein was positively stained in 15 healthy tissue types and three major cell types: epithelial cells, endothelial cells, and macrophages. We also found that several types of tumor cells were positively stained for IL-19, especially in squamous cell carcinoma (SCC) of the skin, tongue, esophagus, and lung. SCC of the oral cavity expressed IL-19 mRNA and its receptors. In two cell lines derived from SCC of oral cavity tumor tissue, IL-19 specifically activated an intracellular signal and induced proliferation of the cells, which indicated that IL-19 may act in an autocrine manner in SCC tumors. This study provides important references for further investigation of the biological functions and clinical implications of IL-19 in humans.