

Expression of Tissue Inhibitor of Metalloproteinase-4 in Normal Human Corneal Cells and Experimental Corneal Neovascularization

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摘要

Abstract

PURPOSE: To study the expression of TIMP-4 in cultured corneal cells and in corneal neovascularization. **METHODS:** Human limbo-corneal epithelial cells, fibroblasts, and endothelial cells were cultured in serum-free, PMA- or basic fibroblast growth factor (bFGF)-treated condition. Neovascularization in rat cornea was induced by suturing. The expression of TIMP-4 was examined by immunohistochemistry, Western blot and RT-PCR. **RESULTS:** TIMP-4 was constitutively expressed in cultured human corneal cells. The expression was only mildly enhanced after mitogen treatment. TIMP-4 immunoreactivity was predominantly expressed in normal rat corneal epithelium, and also in ingrowing blood vessels following suturing, which persisted up to day 28. Increased staining in corneal epithelium and blood vessels were also noted in vascularized human corneas. **CONCLUSIONS:** TIMP-4 is expressed in the cornea, which may play a role in modulating extracellular matrix remodeling associated with corneal wound healing and angiogenesis. Copyright 2003 S. Karger AG, Basel