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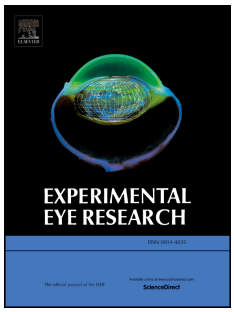

Peptide GC31 inhibits chemokines and ICAM-1 expression in corneal fibroblasts exposed to LPS or poly(I:C) by blocking the NF-κB and MAPK pathways

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Peptide GC31 inhibits chemokines and ICAM-1 expression in corneal fibroblasts exposed to LPS or poly(I:C) by blocking the NF-κB and MAPK pathways

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Abstract

In keratitis, corneal fibroblasts play a vital role by releasing inflammatory cytokines and expressing intercellular cell adhesion molecule-1(ICAM-1). GC31 is a novel peptide derived from thrombomodulin, an endogenous protein with potential anti-inflammation properties. We evaluated the protective effect of GC31 in LPS- or poly(I:C)-induced corneal fibroblasts. Cultured corneal fibroblasts were treated with either LPS or poly(I:C); The mRNA and protein expressions of IL-6, IL-8, MCP-1, and IFN-γ were determined by real-time PCR (RT-PCR) and ELISA. The expression level of ICAM-1 was estimated by RT-PCR, immunofluorescence, and western blot. The underlying pathways were investigated by detecting NF-κB p65 translocation and phosphorylation of IκBα, p65, p38, JNK, and ERK. The MTS assay was used to measure cell viability of corneal fibroblasts after GC31 incubation. The elevation of