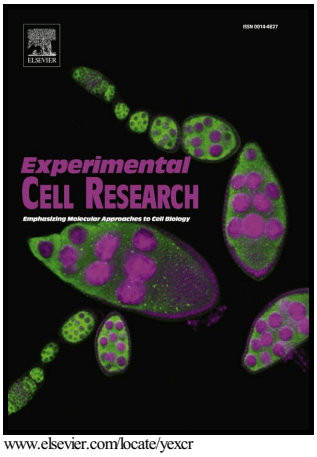

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Abstract

Guanylate-binding protein-1 (GBP-1) is an interferon-inducible large GTPase involved in the epithelial barrier at tight junctions. To investigate the role of GBP-1 in the epithelial barrier, primary human salivary gland duct epithelial cells were treated with the the proinflammatory cytokines IFNγ, IL-1β, TNFα and the growth factor TGF-β. Treatment with IFNγ, IL-1β, or TNFα markedly enhanced GBP-1 and the epithelial barrier function, and induced not only CLDN-7 but also the tricellular tight junction molecule lipolysis-stimulated lipoprotein receptor (LSR). Knockdown of GBP-1 by its

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