Regulation of interleukin-18 (IL-18) expression in keratinocytes (HaCaT): implications for early wound healing

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INTRODUCTION
After injury, tissue regeneration is characterized by overlapping phases that involve hemostasis, inflammation, cell proliferation, and the remodeling phase of repair. These processes encompass macrophage accumulation, fibroblast ingrowth, matrix deposition, and angiogenesis into the wound site [1, 2]. The inflammatory phase is central to healing, as infiltrating immune cells initiate and trigger repair by secretion of growth [...]
IL-22Rα was increased in HaCaT and primary human keratinocytes after UVB irradiation through the translocation of IL-22Rα from the cytosol to the membrane. This increase in the expression of IL-22Rα was mediated by the PI3K/Akt pathway. Although IL-22 has anti-inflammatory properties, such as preserving epithelial integrity and promoting wound healing responses, it is also expressed in many chronic inflammatory conditions, such as psoriasis and rheumatoid arthritis, and its upregulation often correlates with disease activity. UVB increases IL-22Rα expression on keratinocytes in mouse and human skin. IL-1α, IL-6, and IL-18 production may be important in the mechanism of inflammatory skin diseases.