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Topical Keratin

National Cancer Institute

Source

National Cancer Institute. *Topical Keratin*. NCI Thesaurus. Code C116717.

A topical formulation containing the naturally-derived biomaterial keratin that has wound repair promoting, hemostatic, moisturizing and potential radioprotective activities. Upon topical application to an injured site, keratin adheres to the injured tissue, and forms an extracellular matrix that mimics the structure and function of the native tissue. This exogenous extracellular matrix is able to absorb fluid, accelerate thrombus formation through beta1 integrin-mediated platelet adhesion and forms a physical seal on the wound. This facilitates tissue regeneration by promoting cellular proliferation and migration, reducing pro-inflammatory cytokine and chemokine expression and altering the expression of extracellular matrix components and adhesion molecules. Altogether, this promotes wound healing and provides protection from damage due to thermal or radiation exposure. Keratin is an essential component in nails, hair and skin.