

Recombinant human keratin (Type: hair keratin)

Cat. No. CEFX-404

Lot. No. (See product label)

Introduction

Description The keratin K31 encoded by the KRT31 gene belongs to type I hair keratin, which is mainly expressed in hair follicle tissues and is one of the most abundant structural components of human hair. It not only maintains the structural integrity of hair, but also can promote cell adhesion, proliferation and migration. Recombinant human keratin K31 plays a key role in skin growth and regenerative repair. It can significantly stimulate the proliferation and differentiation of skin cells and accelerate the healing process. At the same time, it can also effectively promote the regeneration of blood vessels and skin appendages, and enhance the skin's self-repair ability. It has a broad application prospect in the field of wound care and repair, beauty care and skin care.

Applications 1. Skin barrier moisturisation, repair Cosmetic Grade: Skin Moisturising, Skin Barrier Repair Medical Device Grade: Skin Wound Care and Repair Medical device grade (water-soluble modification): chronic wound repair 2. Oral and Nasal Mucosa Repair Cosmeceutical: Oral and Nasal Care Medical grade: Oral and nasal mucous membrane care and repair

Product Information

Species Human KRT31 gene

Source Escherichia coli

Appearance Light yellow transparent colour liquid or powder Characteristic odour of protein

Form Powder or liquid

CAS No. 68238-35-7

Function 1. Hair follicle regeneration and repair function Recombinant human keratin regulates hair follicle growth through the PI3K/Akt/Nf-kB signalling axis and contributes to peripheral angiogenesis. Recombinant human keratin can regulate the microenvironment of hair follicle development and growth, which is important for promoting hair growth, preventing hair loss and improving hair quality. 2. Anti aging function 80% of skin aging process is caused by photoaging, only 20% is caused by natural aging. Recombinant human keratin can precisely inhibit the UV-induced expression of collagenases MMP-1 and MMP-13, and thus inhibit the degradation of key extracellular matrices such as collagen and elastin, forming an effective defence mechanism against photo-ageing. 3. Repair function (epidermal barrier repair, wound repair, oral repair, nerve repair) Recombinant human keratin-mediated modulation of the EMT process can precisely regulate protein expression in the wound tissue, as evidenced by the down-regulation of E-cadherin, a marker of epithelialisation, and the up-regulation of a series of mesenchymal cell markers (Vimentin, Snail, Fibronectin, α -SMA). Promotes the migration of fibroblasts and keratinocytes to the wound area, accelerates wound closure and tissue regeneration, and improves the speed and quality of wound healing. 4. Hemostatic function (superficial wound haemostasis, aortic haemostasis) Recombinant human keratin can promote platelet adhesion in the first phase of haemostasis, and activate plasminogen through endogenous (APTT) and exogenous (PT) pathways in the second phase, shorten the formation time of plasminogen activator, and finally form fibrin network to accelerate blood coagulation and haemostasis.

Usage and Packaging

Package 1kg/bottle

Storage and Shipping Information

Storage Store at -20°C for 12 months, and 4-8°C for 30 days. Thaw at 4-8°C. Avoid repeated freezing and thawing.