



Renew peptide 147

Catalog No. GB-40006 **Quantity:** 5~9/100/500/1000 mg **Bioactivity (ED₅₀):** 0.3 µg/ml

Form: lyophilized peptide **Assays tested:** collagen I & TGF-β1 elevated expression

Target description

Renew peptide 147 can induce the regeneration of fibroblast, and reduce the appearance of wrinkles. Its biological activities mediated by inducing the TGF-beta 1 expression, which up regulate the matrix protein (collagen I, III and IV and Fibronectin) expression in fibroblasts, and improving regularity of collagen IV at the dermal-epidermal junction. More than one third of the body's protein is collagen, which comprises 75% of our skin. Nature's most abundant protein polymer is collagen. It is also the most important building block in the entire animal world.

Potential Applications

1. To increase the regeneration of fibroblast, and reduce the appearance of wrinkles.
2. It offers improvement in wrinkles and other age-related complaints, age spots, and skin roughness, without the redness and other side effects associated with retinol-based products. It is a very safe and effective agent for improving the appearance of photo aged facial skin.

Comments

Renew peptide 147 is a synthetic peptide (M.W. < 1,000) with >95% purity analyzed by HPLC.

(A). Fibroblast regeneration induced by treatment of GB-40006 (Renew peptide 147)



Control



**GB-40006 treatment
(2µg/ml)**

Immunocytochemistry staining of human fibroblasts with anti-collagen I antibody. The left is the control without treatment with Renew peptide 147, and the right is the Renew peptide 147 treated human

fibroblast. The dark brown color indicated the elevated expression of Collagen I after the Renew peptide 147 treatment (right panel) (DAB as a substrate for HRP-labeled 2nd antibody).

Biological Activity

- The ED₅₀ is defined as the effective concentration that elicits a 50% increase in collagen I expression in a cell based bioassay.
- Relative Activity: ED₅₀ for cell culture application is 0.3 µg/ml

Compare Renew peptide 147 with EGF

	EGF	Renew peptide 147
Wound repair	absence	presence
To promote epithelium growth	yes	yes
To penetrate skin barrier	medium	high
To promote collagen synthesis	no	yes

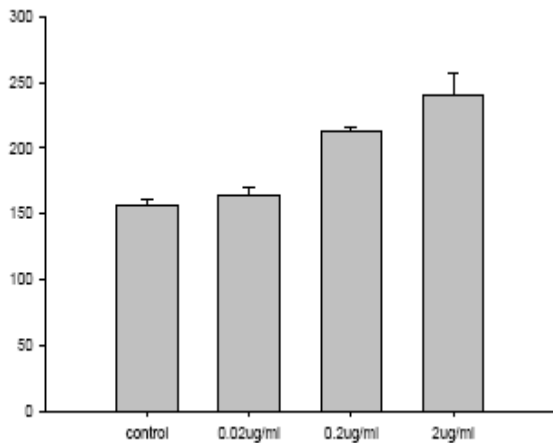
Storage

For short-term storage keep at 4 °C if the peptide had been dissolved in sterile H₂O. For long-term storage, aliquot and keep at -20 °C.

Related Products

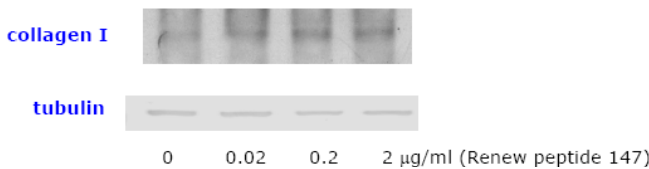
1. IGF-1 (insulin-like growth factor-1) (PG-30011).
2. PDGF-B (platelet-derived growth factor B-chain) (PG-30012).
3. bFGF (basic fibroblast growth factor) (PG-30013).
4. TNF (Tumor necrosis factor) (PG-30016).
5. Fibronectin (PG-30018).

(B). TGF-β1 elevated expression induced by treatment of GB-40006 (Renew peptide 147)



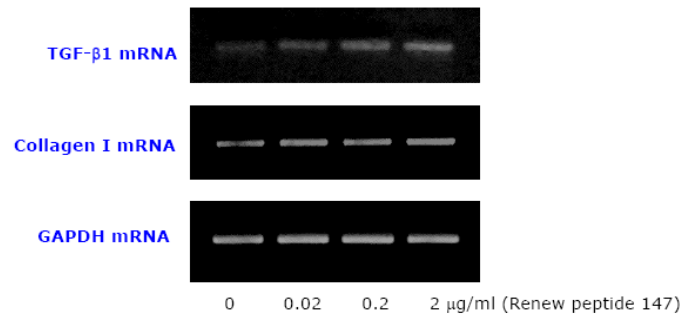
TGF-β1 expression analyzed by ELISA kit in different treatments of Renew peptide 147. The longitudinal scale is the concentration (pg/ml) of TGF-β1. The four groups of human fibroblast cells were treated with Renew peptide 147, from the concentration of 0 μg/ml (control group), 0.02 μg/ml, 0.2 μg/ml, to 2 μg/ml (treatment group).

(C). Collagen I elevated expression induced by treatment of GB-40006 (Renew peptide 147)



Collagen I expression analyzed by Western Blot analysis (WB). The upper panel is WB of collagen I by anti-collagen I antibody, the lower panel is WB of house-keeping gene expression of tubulin by anti-tubulin antibody as a comparative control. The four groups of human fibroblast cells were treated with Renew peptide 147, from the concentration of 0 μg/ml (control group), 0.02 μg/ml, 0.2 μg/ml, to 2 μg/ml (treatment group).

(D). TGF-β1 mRNA and collagen I mRNA elevated expression induced by treatment of GB-40006 (Renew peptide 147)



TGF-β1 mRNA and collagen I mRNA elevated expression were analyzed by Reverse-Transcription Polymerase Chain Reaction (RT-PCR). The upper panel is RT-PCR of TGF-β1 mRNA, the second panel is RT-PCR of collagen I mRNA, and the third panel is RT-PCR of house-keeping gene expression of GAPDH as a comparative control. The four groups of human fibroblast cells were treated with Renew peptide 147, from the concentration of 0 μg/ml (control group), 0.02 μg/ml, 0.2 μg/ml, to 2 μg/ml (treatment group).

(E). High purity of GB-40006 (Renew peptide 147) analyzed by HPLC

Date: Mon, Jun 19, 2006 10:32 AM
 Data: 0-100 pepanal-19JUN106-011
 Sample: 25 μg injected
 Column: Polaris C18, 2ml/min
 Buffers: A = 0.1%TFA; B = 0.1% TFA in 99.9%CH3CN
 Gradient: 0-100% B 20'
 Monitor: 220 nm
 Lot10064062-2
 Processing File: profile#1
 Method: 0-100 pepanal
 Sampling Int: 0.1 Seconds
 Date:

