

Bloomcolla™

Recombinant Human Collagen III

- Repair
- Regeneration
- Non-animal Source

Product Introduction

Bloomcolla™ Recombinant Human Collagen III is obtained by yeast synthetic biology using recombinant technology. It is 100% homologous to the selected functional amino acid sequence of human collagen III with high activity. Collagen III plays an important role in the repair and healing of skin and mucosal wounds, inhibiting scar formation, improving skin problems, enhancing skin elasticity and tenderness, etc. Bloomcolla™ can be widely used in skin rejuvenation, wound healing, aesthetics, tissue engineering, and other products.

Characters of Bloomcolla™

High Safety: no animal immunogenicity, good biocompatibility, low endotoxin level. Bloomcolla™ from yeast fermentation has no risk of viral infection.

High purity: >90% with great batch-to-batch consistency.

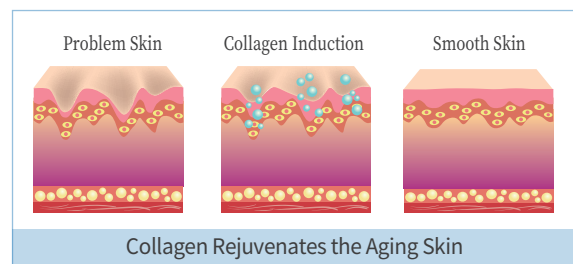
Excellent processability: solubility in water >5% at 20°C.

Composition and structure: Bloomcolla™ consists of water-soluble collagen peptide and has the characteristic structure of collagen: a repetition of the G-X-Y triplet, where G is Glycine and Y is mainly Proline.

Homology: 100% amino acid sequence homology with that of human collagen III.

Mechanism of Action - Repair and Regeneration

Bloomcolla™ can promote cell migration and stimulate angiogenesis and cell proliferation, thus promoting wound healing. It can adhere platelets and activate clotting factors to promote hemostasis. It can stimulate the formation of dermis and basement membrane, and regulate the expression of growth factors, thereby preventing hypertrophic scars. It can favor the survival and growth of fibroblasts and induce the regeneration of collagen.

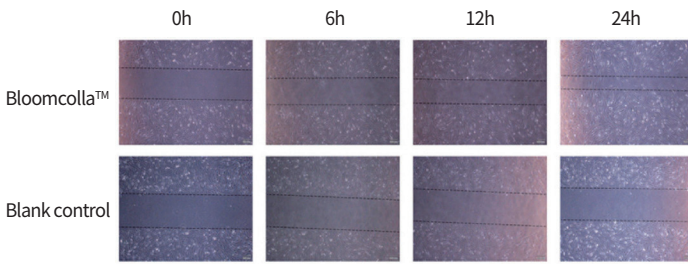


Efficacy Experiments

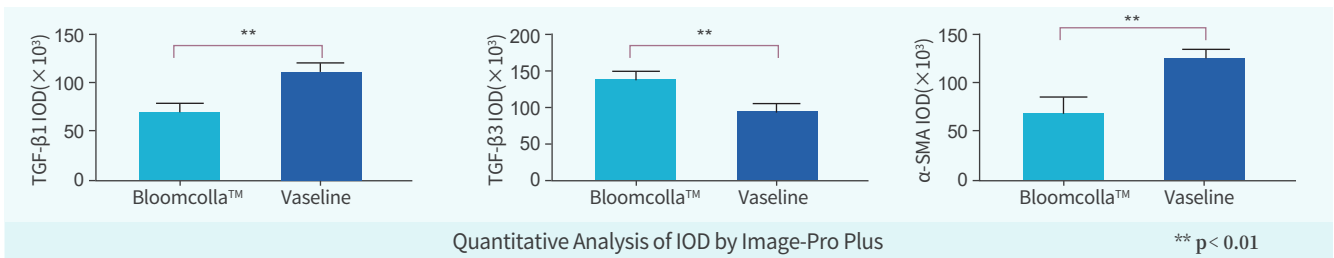
Repair

① Repair of Tissue Injury (In Vitro Study)

Compared with Blank control, Bloomcolla™ can significantly promote cell migration, indicating its tissue repairing ability.

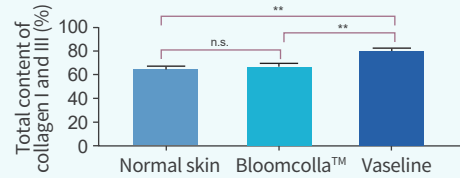


Wound Healing Assay with Fibroblasts (In Vitro)



② Repair by Preventing Scar (In Vivo Study)

Inhibition of excess collagen accumulation, downregulated expression of TGF-β1 and α-SMA, and increased level of TGF-β3 are essential to prevent scars. The study shows Bloomcolla™ can prevent scar formation during dermal tissue regeneration.

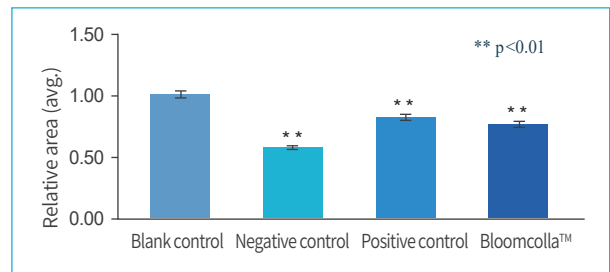
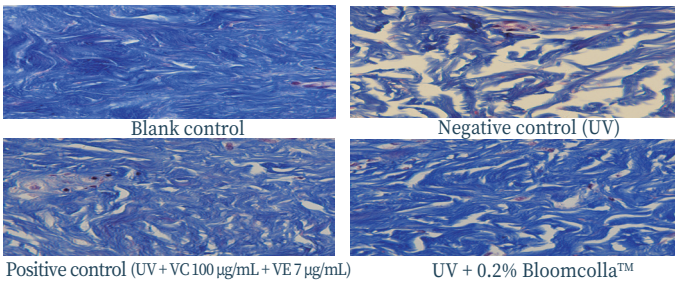


Comparison of the Total Expression of Collagen I and III

Regeneration

UV radiation can cause collagen to break down and induce skin aging. In the study Bloomcolla™ group (0.2 wt.%) significantly increased the collagen fiber (+33%) compared with the Negative control, indicating its great ability to promote collagen regeneration in skin.

Blue-purple staining: collagen fiber



Masson Trichrome Stain Test (The ex Vivo Tissue with UVA+UVB Radiation)

Recommended Use

Item	Bloomcolla™ Recombinant Human Collagen III Sponge MS1 (Medical Grade)	Recombinant Human Collagen III Sponge MS2 (Injection Grade)
Application	· Wound Repair & Healing · Skin Regeneration · Tissue Engineering · Ulcer Treatment	· Skin Regeneration · Aesthetics
Recommended Dosage	0.05%~10.0%	

REF: Liu *et al.* Burns. 2022 Feb 25



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CREATIVE TECHNOLOGY FOR VIBRANT LIFE

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