

# Bloomcolla™

## Recombinant Human Collagen III

(Medical Device Grade)

- Repair
- Regeneration
- High Safety & Stability

### Product Introduction

Bloomcolla™ Recombinant Human Collagen III ("COL3-MD") is obtained by yeast synthetic biology based on recombinant technology. It is 100% homologous to the selected functional amino acid sequence of human collagen III with high activity and stability. 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™ COL3-MD can be widely used in wound repair & healing, skin rejuvenation, treatment of skin problems such as acne and dermatitis, private care, and other medical products.

### Characters of Bloomcolla™ COL3-MD

**Granted Invention:** Patented amino acid sequence and preparation method (China Invention Patent No. ZL202210739807.1; PCT patent is filed)

**Composition and structure:** consisting of water-soluble collagen peptide and has the characteristic structure of collagen: a repetition of the G-X-Y sequence, where G is Glycine and Y is Proline. Molecular weight: 45.5 KDa.

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

**High safety:** no animal immunogenicity, no risk of viral infection, low endotoxin level, with good biocompatibility (more than 14 test items evaluated as per ISO 10993).

**High purity:** >95% with great batch-to-batch consistency.

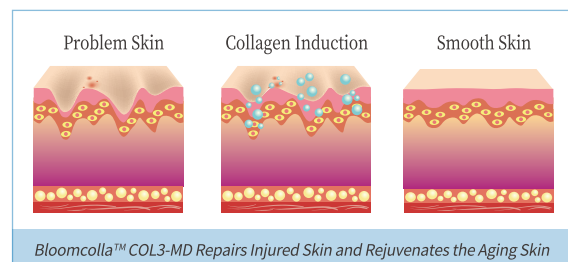
**High potency:** Excellent ability in cell proliferation, migration and adhesion

**Excellent processability:** solubility in water >10% at 20°C and more stable for processing.

### Mechanism of Action - Repair and Regeneration

**Repair & Healing:** Bloomcolla™ COL3-MD can promote cell proliferation, migration, and adhesion, accelerating the wound healing process. Also it effectively inhibits cellular apoptosis, ensuring the vitality and integrity of cells.

**Collagen Regeneration and Anti-aging:** Collagen acts as the "scaffolding" of the skin. Bloomcolla™ COL3-MD activates the gene expression of collagen I and III within the skin, inducing their regeneration and thereby preserving the skin's firmness and elasticity.

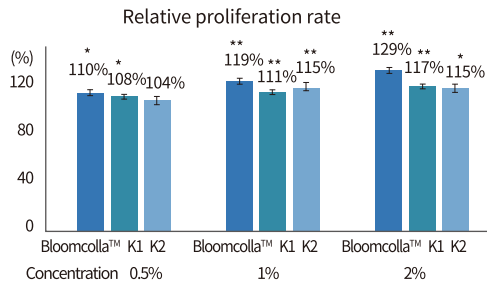


# Efficacy Experiments

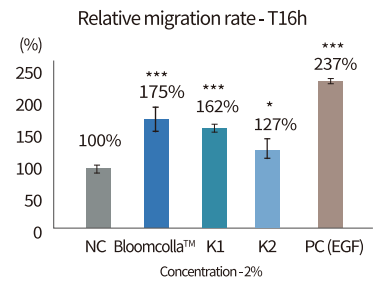
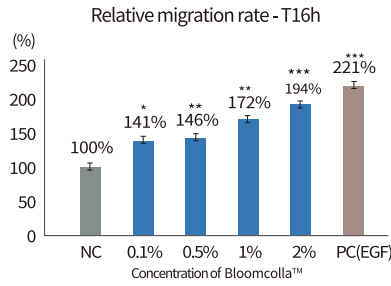
## Repair & Healing

Bloomcolla™ COL3-MD can significantly promote cell proliferation, migration and adhesion, indicating the greater tissue repairing ability.

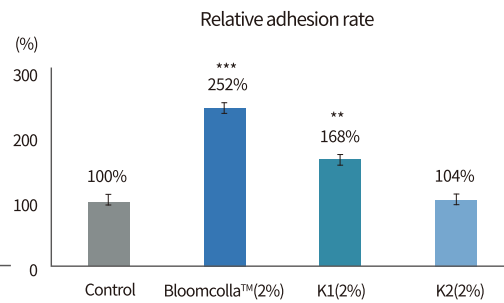
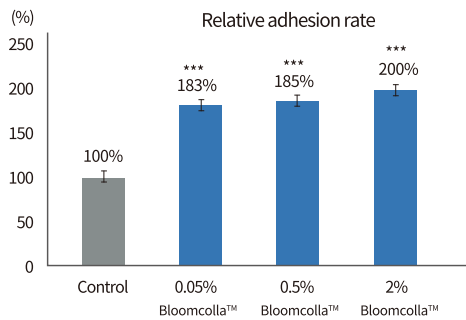
### 1 Excellent Cell Proliferation



### 2 Remarkable Cell Migration



### 3 Superior Cell Adhesion



#### Remark

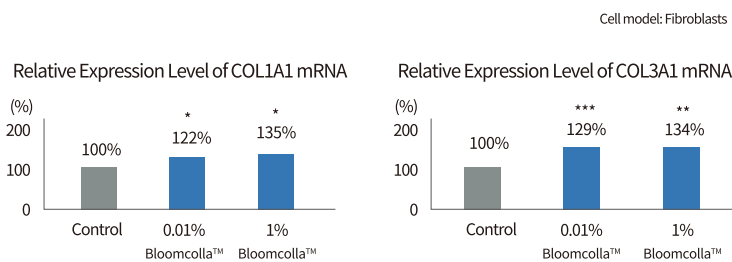
- Bloomcolla™ COL3-MD
- K1: Key competitor (Recombinant collagen)
- K2: Key competitor (Animal-derived collagen)

Cell model: HaCaT  
NC: Negative Control; PC: Positive Control

\* P < 0.05, \*\* P < 0.01, \*\*\* P < 0.001

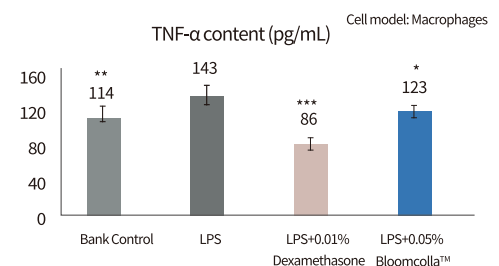
## Regeneration

Bloomcolla™ COL3-MD significantly increases the gene expression of collagen I & III, indicating its promotion of collagen fiber formation and great potency for anti-aging.



## Anti-inflammatory

Bloomcolla™ COL3-MD at 0.05% significantly inhibits the secretion of TNF-α (16%↓), indicating its great anti-inflammatory potential.



Data source: Tested by Bloomage Biotechnology or accredited third-party laboratories.

## Recommended Use

Application	<ul style="list-style-type: none"> <li>· Wound repair &amp; healing</li> <li>· Dermatitis, Eczema and Acne Treatment</li> </ul>	<ul style="list-style-type: none"> <li>· Skin Rejuvenation</li> <li>· Private Care</li> </ul>
Recommended Dosage	0.05%~2.0%	



CREATIVE TECHNOLOGY FOR VIBRANT LIFE

### BLOOMAGE BIOTECHNOLOGY CORPORATION LIMITED

Add: No.678 Tianchen St., High-Tech Development Zone, Jinan, China 250101  
Tel: +86 531 82685998 Fax: +86 531 82685988  
www.bloomagebioactive.com E-mail: customer@bloomagebioactive.com  
Copyright © Aug. 2023, Bloomage Biotechnology

