BLOOMAGE

「Designed for sensitive skin」

——Bio-Fermentation origin， Natural origin index=1

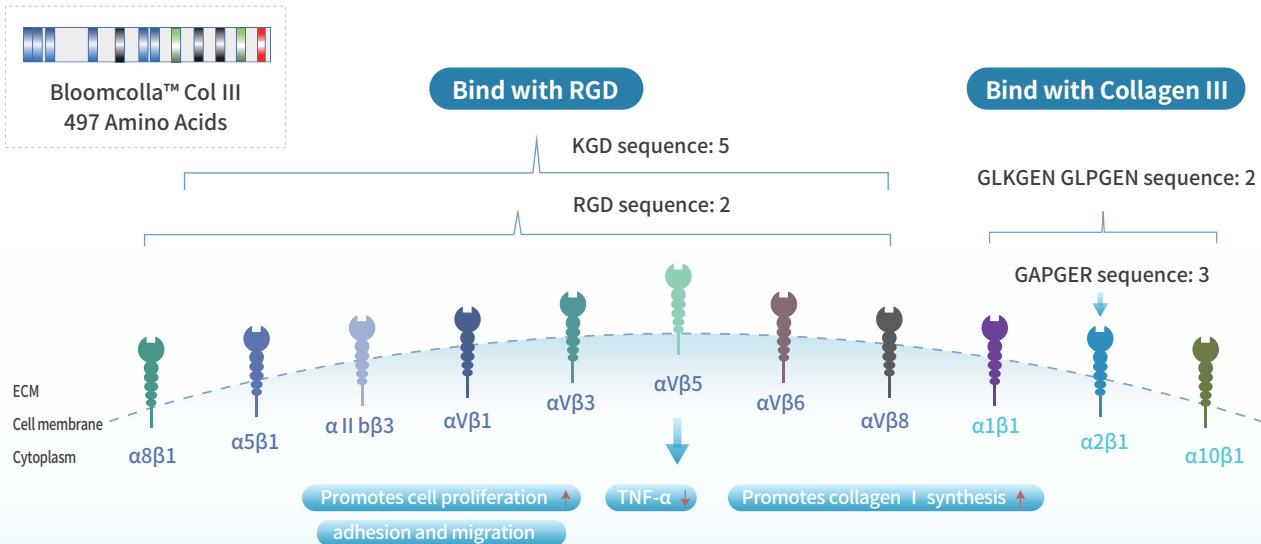# Bloomcolla™ Col III

Recombinant Collagen Ⅲ

- 100% homologous with human collagen
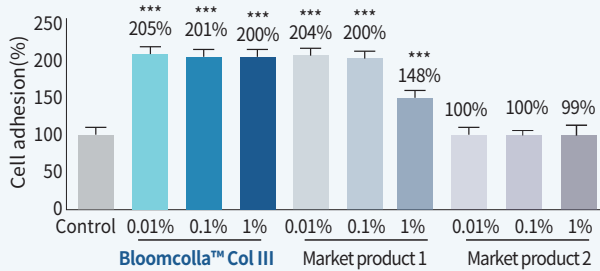- 11 kinds of integrin binding sites
- Significant repairing and soothing effects
- Higher purity and higher safety

Bloomcolla™ Col III
497 Amino Acids

Bind with RGD

Bind with Collagen III

KGD sequence: 5

GLKGEN GLPGEN sequence: 2

RGD sequence: 2

GAPGER sequence: 3

ECM
Cell membrane
Cytoplasm

α8β1   α5β1   α II bβ3   αVβ1   αVβ3   αVβ5   αVβ6   αVβ8   α1β1   α2β1   α10β1

Promotes cell proliferation ↑

TNF-α ↓

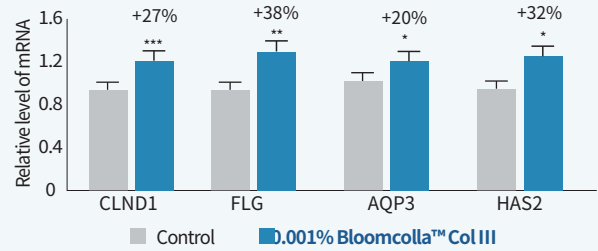Promotes collagen Ⅰ synthesis ↑

adhesion and migration

Bloomcolla™ Col III Recombinant Collagen III is expressed through fermentation of *Yeast* based on patented technology. Through AI-assisted sequence design and over 1000 tests, active site-enriched fragments were accurately screened from natural collagen sequences to ultimately select the optimal sequence. This sequence consists of 497 amino acids, including 11 types of integrin binding sites, which can promote cell proliferation, migration, and adhesion, inhibit the expression of inflammatory factors, provide a safe and effective repairing and soothing solution for sensitive skin.
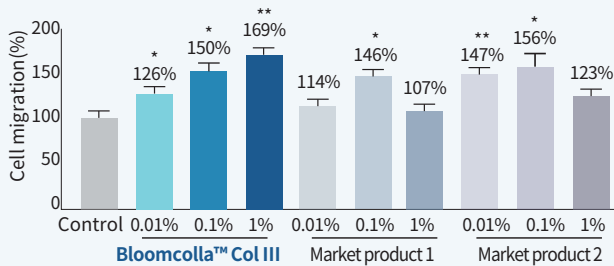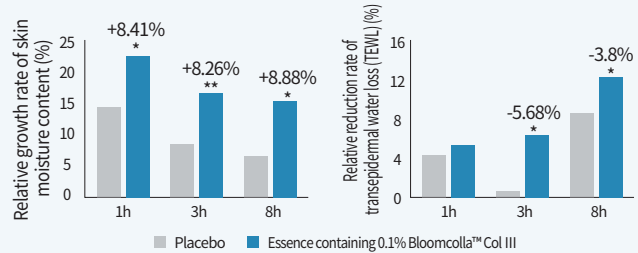
Promotes cell adhesion *(in-vitro)*

Bar chart — Cell adhesion (%) vs. Control, Bloomcolla™ Col III (0.01%, 0.1%, 1%), Market product 1 (0.01%, 0.1%, 1%), Market product 2 (0.01%, 0.1%, 1%). Values: Control 100%, Bloomcolla™ Col III 205%***, 201%***, 200%***; Market product 1 204%***, 200%***, 148%***; Market product 2 100%, 100%, 99%.

Promotes skin barrier related protein mRNA expression, strengthen skin barrier *(in-vitro)*

Bar chart — Relative level of mRNA: CLND1 +27%***, FLG +38%**, AQP3 +20%*, HAS2 +32%*. Control vs. 0.001% Bloomcolla™ Col III.

Promotes cell migration *(in-vitro)*

Bar chart — Cell migration (%): Control 100%, Bloomcolla™ Col III 126%*, 150%*, 169%**; Market product 1 114%, 146%*, 107%; Market product 2 147%**, 156%*, 123%.

Instant moisturizes and strengthens the skin barrier *(in-vivo)*

Left chart — Relative growth rate of skin moisture content (%): 1h +8.41%*, 3h +8.26%**, 8h +8.88%*. Right chart — Relative reduction rate of transepidermal water loss (TEWL) (%): 3h −5.68%*, 8h −3.8%*. Placebo vs. Essence containing 0.1% Bloomcolla™ Col III.
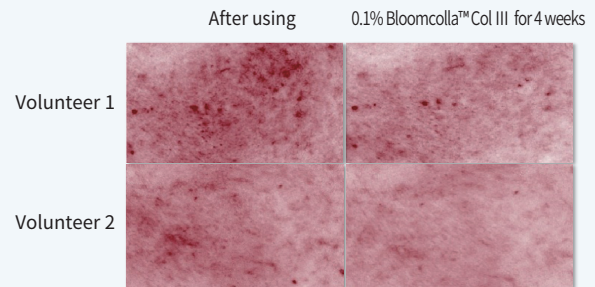
The facial skin type of the volunteers was sensitive skin and ≥3 points in lactic acid sting test

Inhibits the expression of inflammatory factors *(in-vitro)*

Test model: Scratch treatment

PGE2 (pg/ml): Control 276, Scratch 1821 (##), Bloomcolla™ Col III 624**, Market product 1 1422, Market product 2 803**. TNF-α (pg/ml): Control 7.4, Scratch 17.7 (##), Bloomcolla™ Col III 10.2**, Market product 1 13.1*, Market product 2 12.1**.
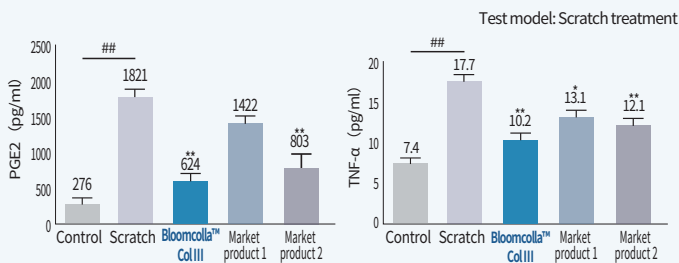
Soothes skin and reduces redness *(in-vivo)*

After using — 0.1% Bloomcolla™ Col III for 4 weeks. Volunteer 1, Volunteer 2.

The facial skin type of the volunteers was sensitive skin and ≥3 points in lactic acid sting test

Test model: HaCaT   Compared to control group   *p＜0.05，**p＜0.01，***p＜0.001

【Product Description】

INCI name: Soluble Collagen or sh-polypeptide-69
Appearance: White or off-white powder, soluble in water
Suggestion dosage: 0.01%-1%