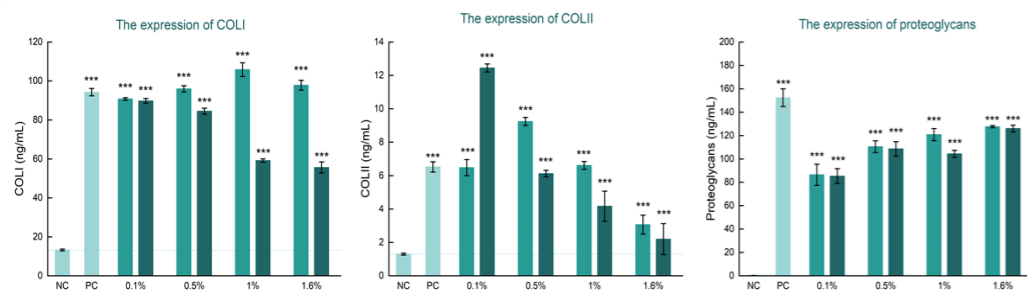


Efficacy Experiments

Promoting cartilage regeneration: Significantly enhancing the expression levels of COLI, COL II, and proteoglycans in bone marrow mesenchymal stem cells.

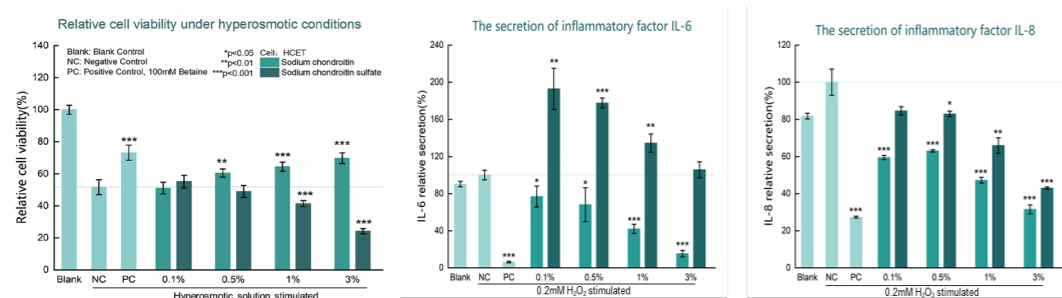


Remark

■ Sodium chondroitin
■ Sodium chondroitin sulfate
 Cell model: BMSCs
 NC: Negative Control
 PC: Positive Control, 10ng/mL TGFβ3
 *p<0.05, **p<0.01, ***p<0.001

For Ophthalmology

Significantly improving the survival rate of corneal epithelial cells under hyperosmotic condition;
 Suppressing the secretion of inflammatory factors IL-6 and IL-8.



Remark

■ Sodium chondroitin
■ Sodium chondroitin sulfate
 Cell model: HCET
 Blank: Blank Control
 NC: Negative Control
 PC: Positive Control, 100mM DEX
 *p<0.05, **p<0.01, ***p<0.001

Product Information

Product name	Sodium Chondroitin
Grade	Pharmaceutical grade (BET<0.05 IU/mg)
Appearance	White or almost white powder or granules
Purity	≥95%
Applications	Injectable aesthetics, intra-articular injections for osteoarthritis treatment, eye drops (dry eyes), ophthalmic viscosurgical devices (OVD), etc.
Recommended dosage	0.1~3.0%



CREATIVE TECHNOLOGY FOR VIBRANT LIFE

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Bloomsac™ Sodium Chondroitin

Bio-Fermentation · Strong Repair · Regeneration

Chondroitin is a natural high-molecular-weight glycosaminoglycan composed of alternating units of N-acetylgalactosamine and D-glucuronic acid. It serves as a precursor to chondroitin sulfate and is synthesized in human cartilage (such as joints, nasal cartilage, and ear cartilage) and connective tissues (including skin, tendons, and ligaments). Through sulfation, it is converted into chondroitin sulfate and secreted into the extracellular matrix to exert its functions. Chondroitin exhibits similar biological activities to chondroitin sulfate but has a simpler molecular structure and higher bioavailability. It effectively promotes collagen regeneration, accelerates tissue repair, maintains cartilage matrix homeostasis, and protects cartilage health. Additionally, it shows potential in treating dry eye syndrome and demonstrates significant anti-inflammatory properties.

Product Features

Green Bio-Manufacturing, Animal Source Alternative

- Overcoming the resource limitations of traditional animal extraction: High-yield strains are developed based on synthetic biology principles and utilized with intelligent fermentation technology.
- Environment-friendly and sustainable production: 100% bio-based carbon sources, no animal-derived ingredients and no toxic reagents involved in production.

Safe and Stable

- FDA GRAS-certified *Corynebacterium glutamicum*
- Animal origin-free, avoiding the risk of potential viral infections
- No species or tissue variability
- Strict endotoxin control (<0.05 IU/mg)
- Excellent batch-to-batch consistency, uniform molecular weight (30-50 kDa)
- 100% consistent with endogenous chondroitin in the human

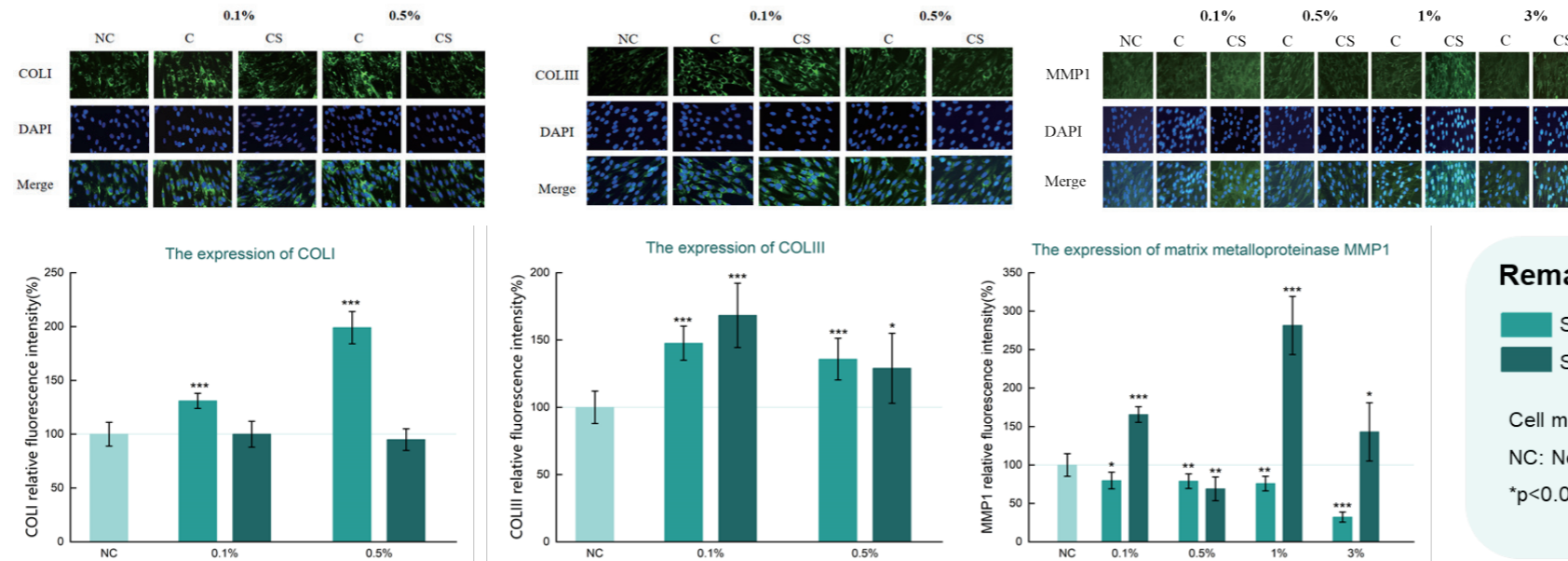
Intellectual Property Protection

1. A recombinant *Corynebacterium glutamicum* for efficient synthesis of chondroitin oligosaccharides (ZL202110926226.4)

Efficacy Experiments

For Aesthetics

Anti-aging efficacy: Significantly enhancing the synthesis of collagen I and collagen III; inhibiting the expression of matrix metalloproteinase MMP1.

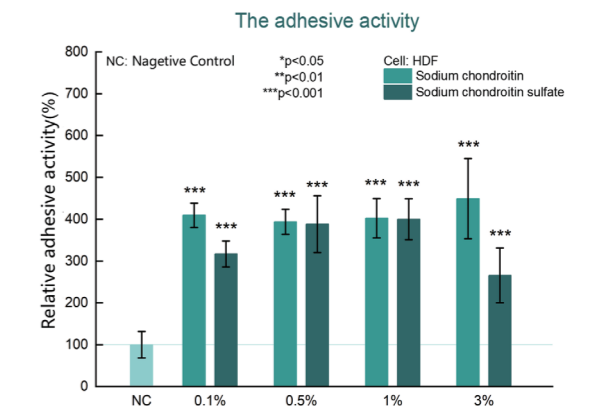


Remark

- Sodium chondroitin
- Sodium chondroitin sulfate

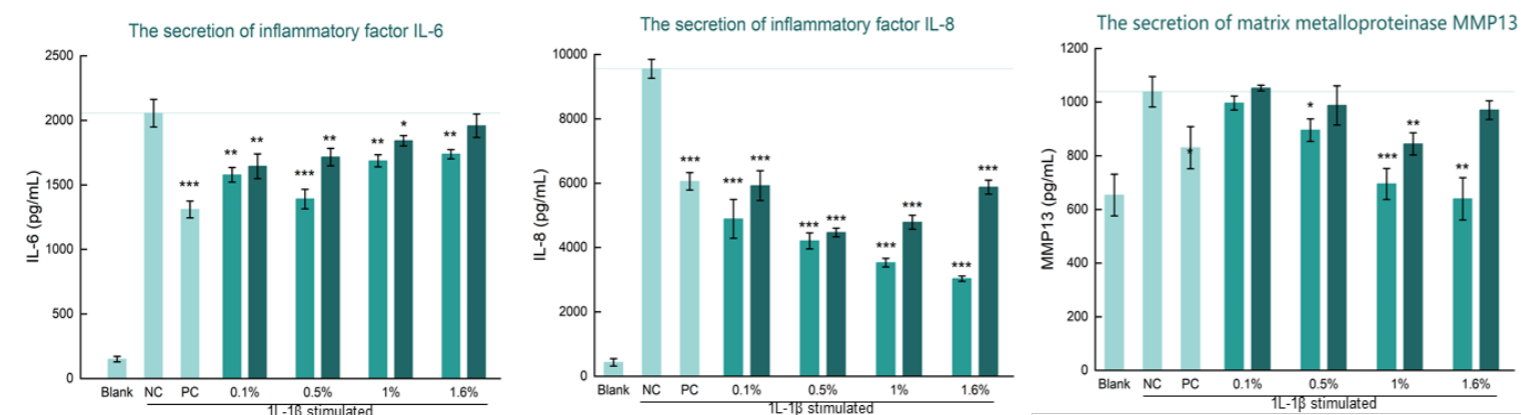
Cell model: HDF
 NC: Negative Control
 *p<0.05, **p<0.01, ***p<0.001

Tissue repair enhancement: Significantly enhancing the adhesive activity of dermal fibroblasts.



For Orthopedics

Anti-inflammatory properties: Effectively inhibiting the secretion of inflammatory factors IL-6 and IL-8, as well as matrix metalloproteinase MMP13 in synovial fibroblasts.



Remark

- Sodium chondroitin
- Sodium chondroitin sulfate

Cell model: Synovial fibroblasts
 Blank: Blank Control
 NC: Negative Control
 PC: Positive Control, 100μM LR-90
 *p<0.05, **p<0.01, ***p<0.001

Maintaining Cartilage Matrix Homeostasis: Significantly promoting the expression of COL II in chondrocytes.

