

Hokkaido Salmon 『Proteoglycan』

Food Cosmetic

Proteoglycan is Extracted from Nasal Cartilage of Natural Salmon



Salmon is very popular and eaten widely in the world. Proteoglycan are extracted from the nasal cartilage of natural salmon.

Nasal cartilage of salmon called “Hizu”(Icy head), because it looks clear and beautiful, is eaten traditionally in Hokkaido and Tohoku region.

The ingredient is extracted from natural salmon of Hokkaido that is very familiar with Japanese people, so it has very reliable image. Not only reliable and familiar image, from the catching the fishes to processing, all the process is done in Japan, so it have a strong traceability.

Expected Function

- ⊙ Improving skin conditions ⊙ Promoting collagen & hyaluronic acid generation
- ⊙ Moisturising skin
- ⊙ Beautiful skin effect ⊙ Reducing joint pain
- ⊙ Activating dermal papilla cell ⊙ Anti-inflammation effect
- ⊙ Activating fibroblast and epidermal cell

Uses

- ⊙ Joint splplements, drinks and processed foods
- ⊙ Beauty supplements, drinks and processed foods

Recommended Dosage

6 ~ 10mg / day

Production Process



Allergen Labeling

Salmon head is used as a raw material for collagen. Salmon must be mentioned in allergen labeling.

Quality Standard Composition

Material	Nasal cartilage of salmon
Property	Light yellow powder with its original scent
Molecular weight (HPLC)	900,000~1,400,000 Dalton
Proteoglycan (Carbazole sulfuric acid method)	More than 90.0%
pH	7.0~8.5
Moisture	Less than 10.0%
Loss on drying	Less than 20.0%
Heaby metal (Pb)	Less than 20ppm
Arsenic	Less than 2ppm
Viable count of bacteria	Less than 3,000 pcs/g
Coliform bacteria	Negative
Mold·Yeast	Less than 300 pcs/g

Shipping

Quantity	100g, 1kg
Storage term	2 years
Storage conditions	Keep in cool dry location, and avoid direct exposure to sunlight.

Company Information

Where you can find Hokkaido supplements and cosmetics.



North Life Co.,Ltd.

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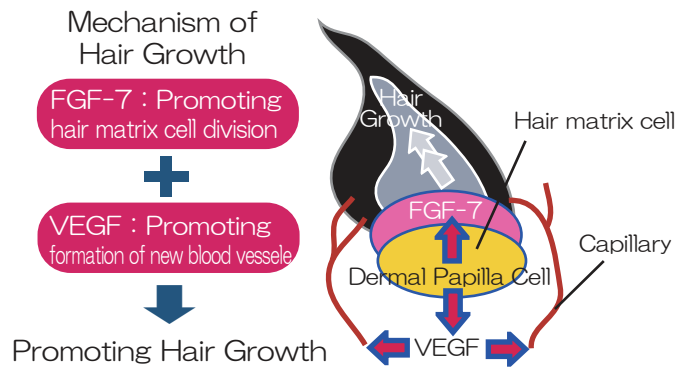
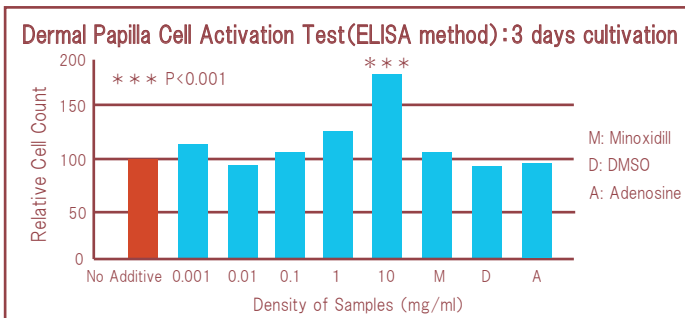
■ What is Proteoglycan?

Proteoglycan is a kind of glycoprotein in a broad sense that sulfated polysaccharide called glycosaminoglycan such as chondroitin sulfate, dermatan sulfate, heparan sulfate, heparin and keratan sulfate covalently bonded to the protein. Proteoglycan is present in the extracellular matrix and cell surfaces of animals. It is also present in the fibrous matrix and the cell surface of hyaluronic acid and collagen, and forming a fibrous matrix proteins and complex of hyaluronic acid and collagen.

■ Promoting Hair Growth and Inhibiting Hair Loss

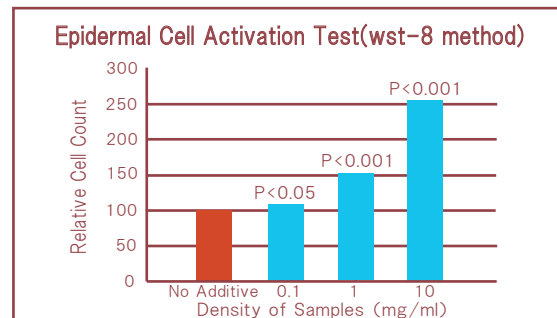
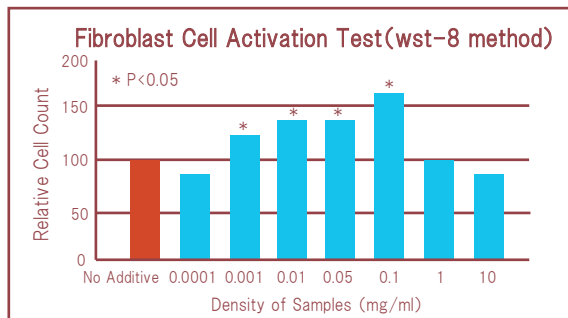
Dermal papilla cell activation test is performed with proteoglycan addition group and non-addition group by using normal human dermal papilla cells. As a result of the test, high cell activation in the addition group is observed. From the above, high skin regeneration effect with proteoglycan is assumed.

VEGF (vascular endothelial growth factor) production, FGF-7 (fibroblast growth factor) production and TGF-β2 (hair loss factor) production test are performed. As a result of the test, promoting cell division and inhibiting hair loss factor are observed in the addition group. From the above, hair growth promoting effect and hair loss inhibiting effect with proteoglycan are assumed.



■ Regeneration of Skin

Cell activation test is performed with proteoglycan addition group and non-addition group by using normal human epidermal cells and normal human fibroblast cells. As a result of the test, high cell activation in the addition group is observed. From the above, high skin regeneration effect with proteoglycan is assumed.

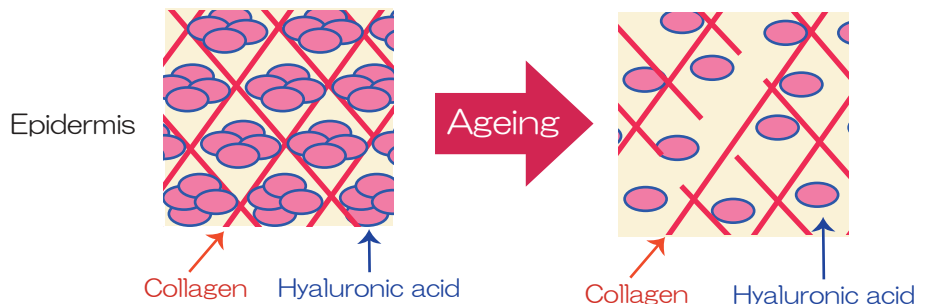


Collagen and hyaluronic acid form epidermis of skin. Collagen which accounts for 70% of the epidermis produces firmness and elasticity of the skin. Hyaluronic acid has an excellent water-holding capacity, and gives a firmness and moisture to the skin.

Collagen and hyaluronic acid are produced from fibroblasts, so a substance that promotes these production is important for skin regeneration and beautiful skin effect.

Collagen → Skin firmness and elasticity
Hyaluronic acid → Skin firmness & moisture

Reduction of Collagen → Wrinkle and sagging
Reduction of Hyaluronic acid → Losing firmness & moisture



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