

HAIRNA⁺

scalp care solution

EXOSOME HAIR FILL

Hairna Exosome Hair Fill

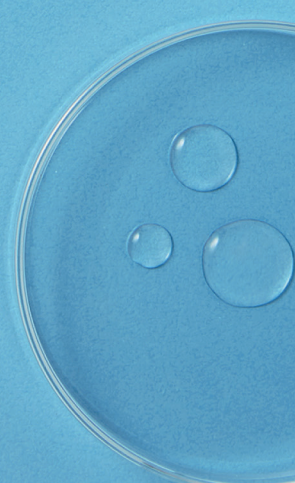
Introduction

Product Presentation (1ml)

Maypharm's Hairna Exosome Hair Fill is the first Adipose Stem Cell Exosome hair filler in the world, developed with Maypharm's exclusive technology for scalp rejuvenation and hair growth.

MAY PHARM

Hairna exosome hair fill

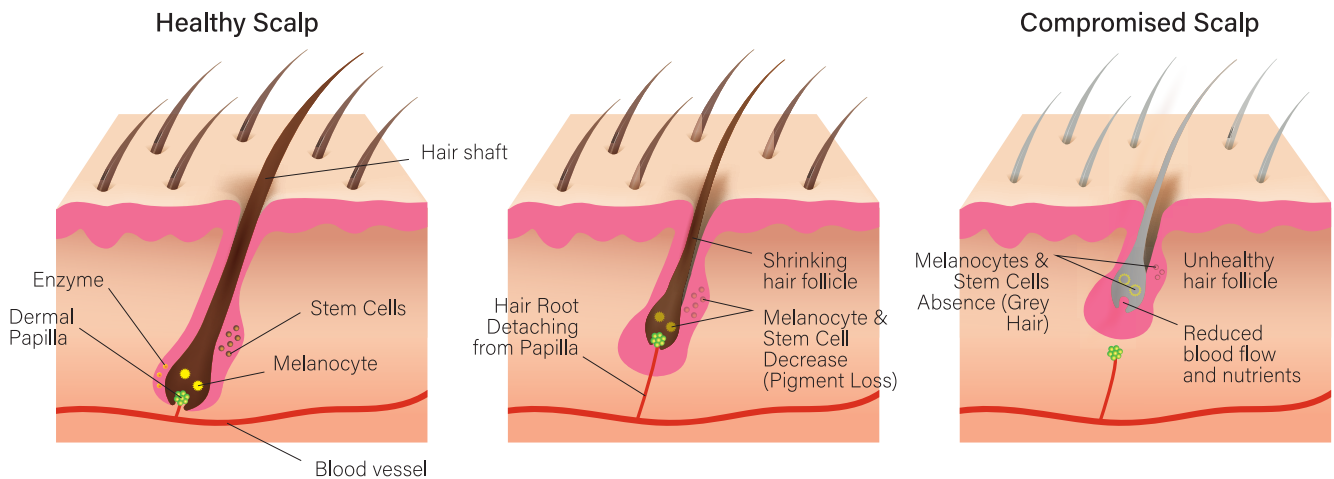


Scalp Aging & Hair Loss

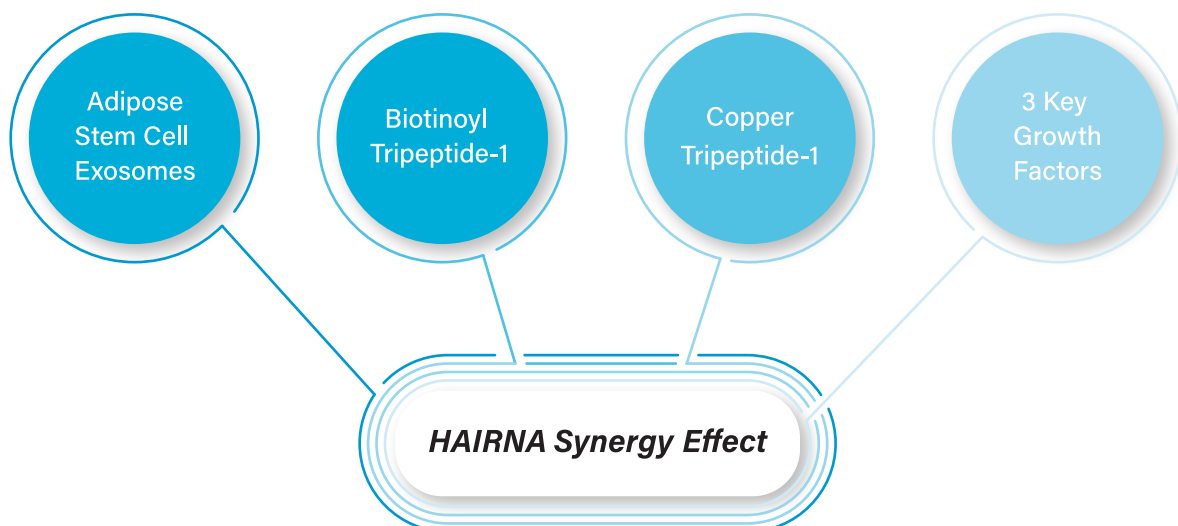
Alopecia and other hair anomalies can happen due to an array of causes, the most common being:

1. Loss of collagen in hair follicles due to aging
2. Loss of capillaries in the scalp, cutting oxygen and nutrient supply to the follicles
3. Decrease in follicle size and increased oil production due to DHT hormone expression
4. Reduced scalp regeneration and healing capacity due to compromised skin barrier
5. Reduced pigment transport due to loss of melanocytes (grey hair)

What Scalp Aging Looks Like



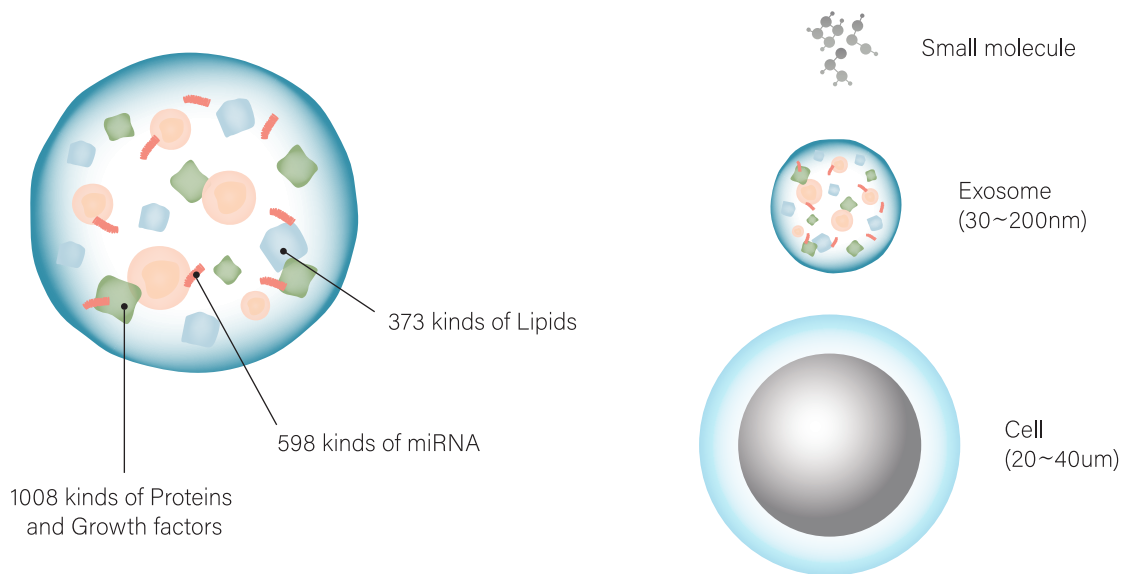
Hairna for Scalp Rejuvenation & Hair Growth



Main Ingredient

ASC Exosomes

Exosomes are tiny extracellular vesicles about 100 nanometres in size. They are the most important mechanism in cell-to-cell communication in our bodies, acting as messengers delivering lipids, proteins and RNA that activate biological responses in the recipient cells.



Pure Stem Cell Exosome Composition

Complexity & Size

Exosome Benefits

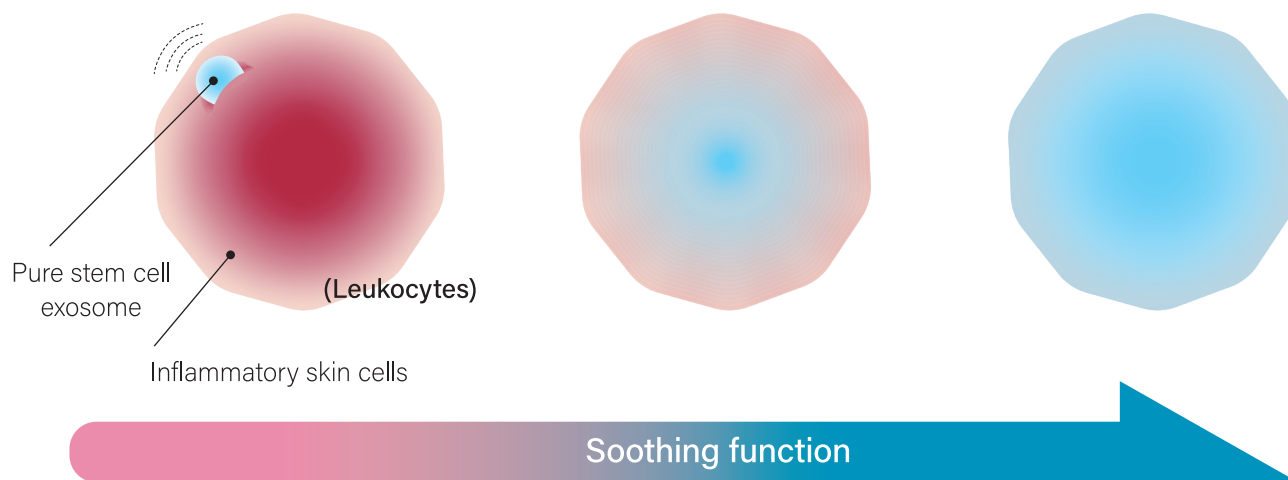
1. Anti-inflammatory Action

Exosomes have a big role in relieving inflammation, transporting the enzymes needed in the generation of extracellular Adenosine, a powerful anti-inflammatory agent which regulates immune activity and subsequently prevents excessive inflammation in the scalp and hair follicles.

2. Promotion of Skin Barrier Structural Components

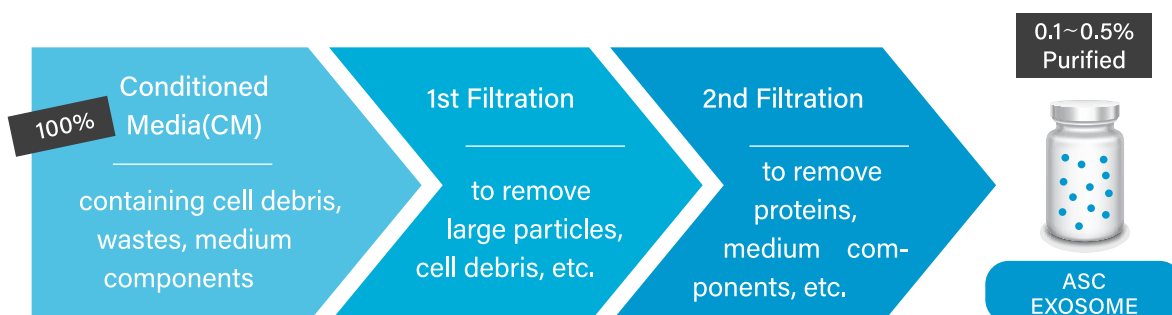
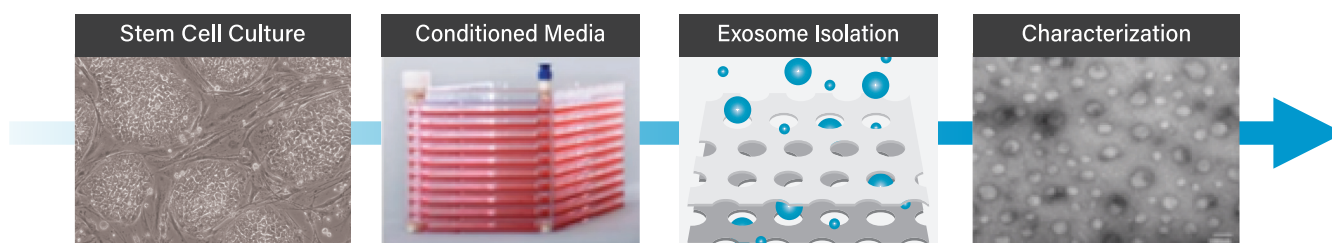
Exosomes promote the synthesis of critical components of the skin barrier - Sphingolipids. These are essential molecules of the epidermis that intervene in the modulation of our skin cells, they are involved in ceramide production, keratinocyte proliferation and differentiation, as well as the production of a key epidermal immune element (CAMP), maintaining skin barrier health.

Exosome Scalp Anti-inflammatory Action



ExoSCRT™ Isolation Technology

The conventional method to isolate and purify Exosomes was Ultracentrifugation. However, there is always a certain degree of Exosome destruction with this method. For this reason, Hairna Hair Fill's Exosomes are isolated with ExoSCRT™, a novel patented filtering technology which successfully preserves the quality of every single Exosome.



Active Ingredient

01 Biotinoyl Tripeptide-1

Biotin Tripeptide-1 is a three amino acid peptide that combines the famous collagen fragment, GHK with Biotin, a well-known supplement for stronger hair and nails. The resulting Biotinoyl Tripeptide-1 has shown hair regrowth effects comparable to those of Minoxidil.

Biotinoyl Tripeptide-1 Benefits

1. Hair Cell Activation

Promotes keratinocyte proliferation at the follicle base and helps optimal hair anchorage by stimulating the synthesis of adhesion molecules - Laminin 5 and Collagen IV. This results in stronger hair that stays in place for longer.

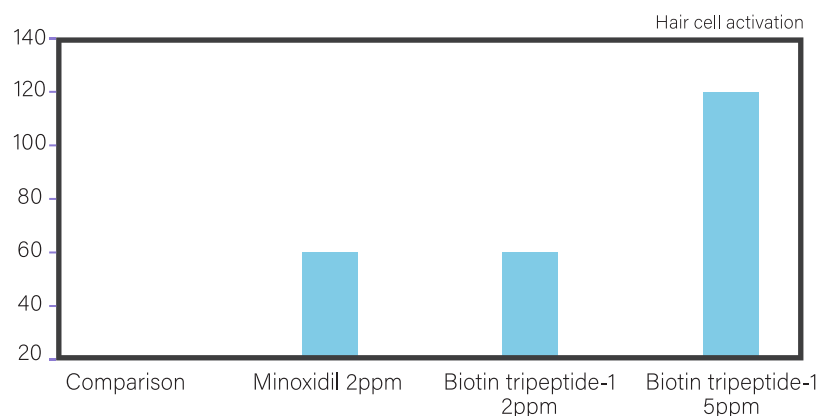
2. Gene Expression Stimulation

Stimulates the expression of the Ki-67 gene, a proliferation marker protein associated with cellular proliferation as well as tissue recovery, supporting the restoration of damaged hair follicles.

3. Hair Cell Metabolism Regulation

Promotes scalp microcirculation and stimulates cell communication, improving oxygen and nutrient supply to the hair follicles. This reduces hair follicle atrophy and signs of scalp aging.

Biotinoyl Tripeptide-1 Minoxidil Comparison Study
Human Hair Follicle Culture (14 Days)



Test results:

- ▶ Similar activity at the same concentration (2ppm)
- ▶ Significant hair production activity increase at higher concentration (5ppm)
- ▶ No irritation or side effects at the recommended dosage

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scalp care solution

EXOSOME HAIR FILL

Hairna exosome hair fill

Exosome hair loss therapy

- + Human Adipose Stromal Cell Exosomes
- + Growth Factor
- + Biotin

2.5mL / Syringe

02 Copper Tripeptide-1

Copper Tripeptide-1 (GHK-Cu) is a copper-peptide complex found naturally in bodily fluids such as plasma and saliva. With copper depletion being one of the causes for signs of skin aging and hair thinning, this tripeptide is quickly becoming a popular ingredient for hair and scalp treatments.

Copper Tripeptide-1 Benefits

1. Hair Follicle Enlargement

While studying GHK-Cu's wound healing properties, an enlargement of hair follicles around the area was found which eventually led to the discovery that copper peptides stimulate hair growth by stimulating follicular cell proliferation, resulting in larger follicles that produce longer and thicker hair.

2. Hair Growth Cycle Regulation

Copper peptides stimulate and prolong the hair growth phase (Anagen), resulting in more time for active hair regrowth and thicker hair strands. They are also involved in shortening the inactive phase of the hair follicles (Telogen), decreasing hair shedding and preventing premature follicle death.

3. DHT Hormone Inhibition

Dihydrotestosterone (DHT), a hormone converted from testosterone, is the main cause of androgenetic hair loss. DHT is converted thanks to an enzyme known as 5-alpha reductase, which peptides have been shown to obstruct. In this way, copper peptides block DHT production and prevent further hair loss.

03 3 Key Growth Factors

1. sh-Polypeptide-1 (FGF2)

Synthesized copy of the human gene coding for Basic Fibroblast Growth Factor (FGF2). Stimulates fibroblast and keratinocyte cell growth and proliferation, as well as the synthesis of collagen and other extracellular matrix components, promoting skin barrier health.

2. sh-Polypeptide-4 (SCF)

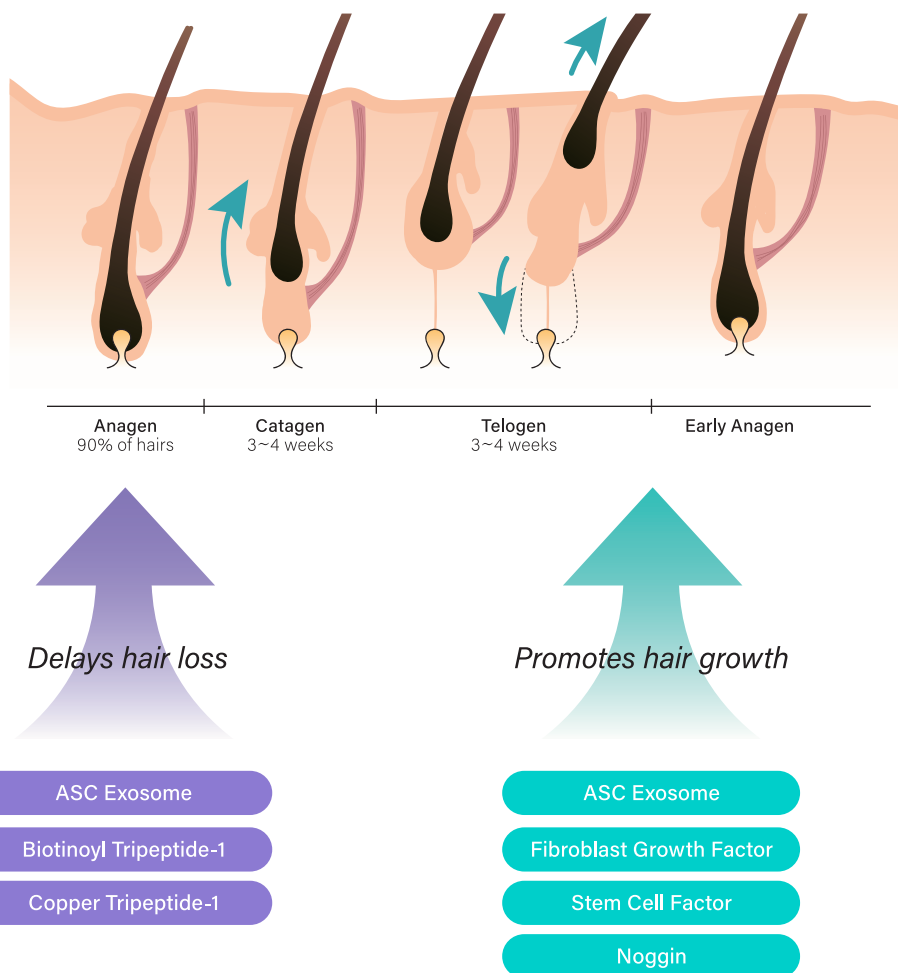
Synthesized copy of the human gene coding for Stem Cell Factor (SCF). Plays an important role in the formation of blood cells and melanocytes, regulating the survival and proliferation of melanocytes in adults to maintain a normal pigment transport (grey hair prevention).

3. sh-Polypeptide-12 (NOG)

Synthesized copy of the human gene coding for Noggin protein (NOG). Noggin is a signaling molecule that plays a role in tissue development and the derivation of specialized cells. Studies show that Noggin signaling is required for induction of the hair follicle growth phase (Anagen).

Hairna Exosome Hair Fill & The Hair Growth Cycle

Biotin Tripeptide-1 is a three amino acid peptide that combines the famous collagen fragment, GHK with Biotin, a well-known supplement for stronger hair and nails. The resulting Biotinoyl Tripeptide-1 has shown hair regrowth effects comparable to those of Minoxidil.



Hairna Exosome Hair Fill Case Study Results



Growth Factors contained in Exosomes have shown noticeable positive effects on Androgenetic Alopecia after only 3 months



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HAIRNA+



Exosome hair fill

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