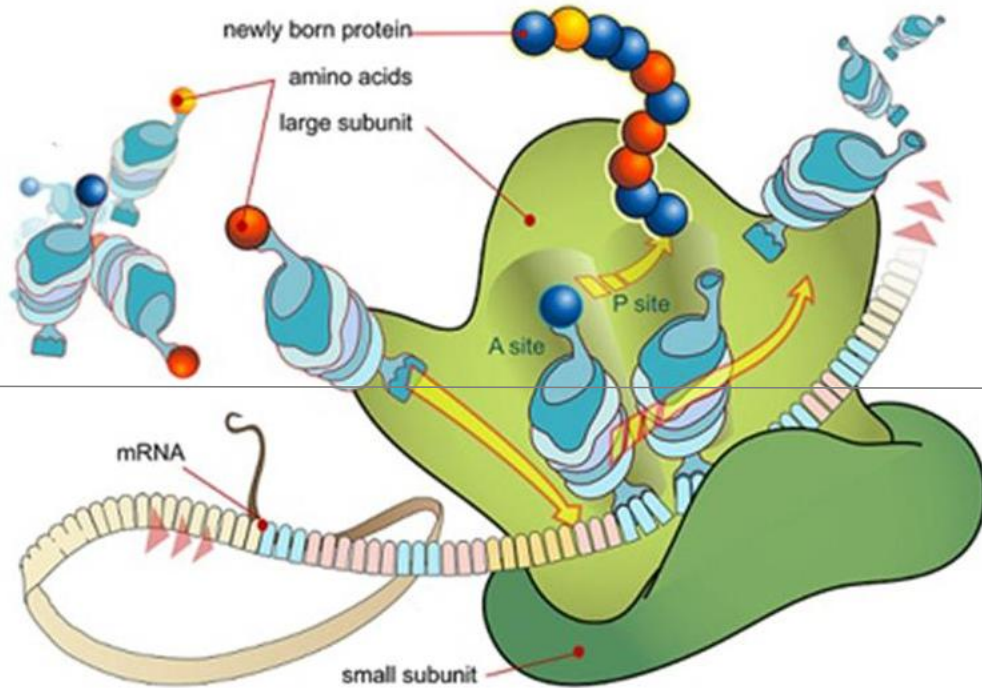




Biotinoyl Tripeptide-1

Combats hair follicle aging and prevents hair loss

Do you suffer from hair loss?

According to World Health Organization data, on average,

one in **six** Chinese people suffer from hair loss.

The number of bald people is about **130 million** men

and **70 million** women, with a ratio of **13:7**.

Among them, post-80s and post-90s make up

as much as **75%**.



The reason for the hair loss?

1 Neurogenic hair loss (excessive stress)

2 Androgenic hair loss (DHT, hereditary)

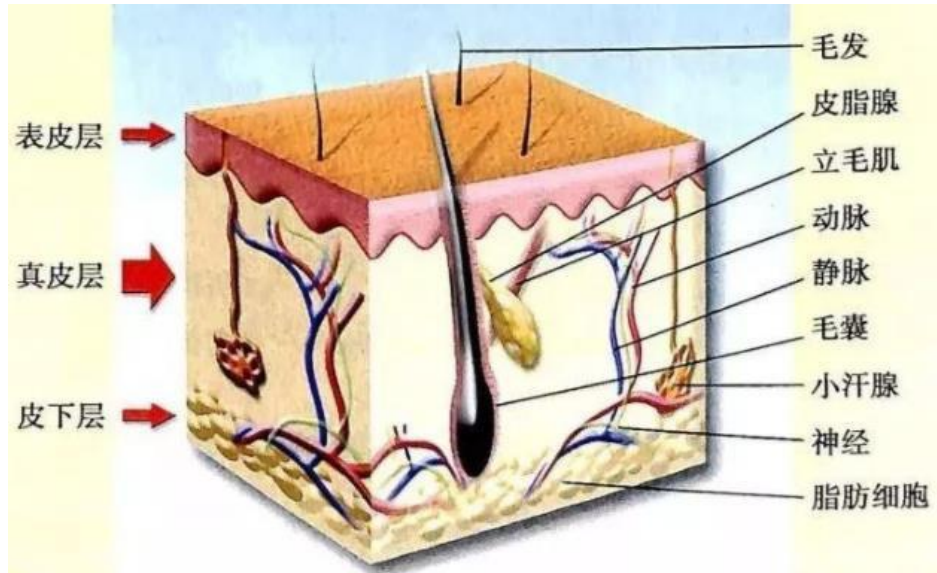
3 Endocrine alopecia (menopause and postpartum)

4 Nutritional alopecia (severe enough to cause diffuse alopecia)

5 Seasonal hair loss (common in autumn)

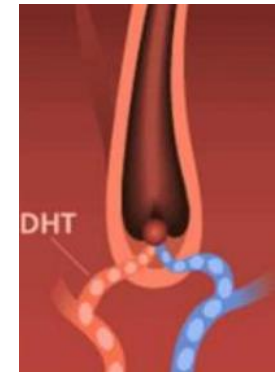
6 Scalding hair loss (chemical damage to scalp health)

Principle of hair growth



The hair roots are located under the scalp and make up 10-15% of the hair's weight, with the roots attached to a structure called the hair follicle. The part of the hair follicle that puffs out underneath is called the **hairball** and is the hair's tip.

The bottommost depression of the hairball is called the **hair papilla** and contains blood vessels and nerves. The hair papillae and connective tissue sheaths provide nutrients and oxygen for hair growth. If the hair papillae are damaged or degraded, the hair stops growing and gradually falls out.



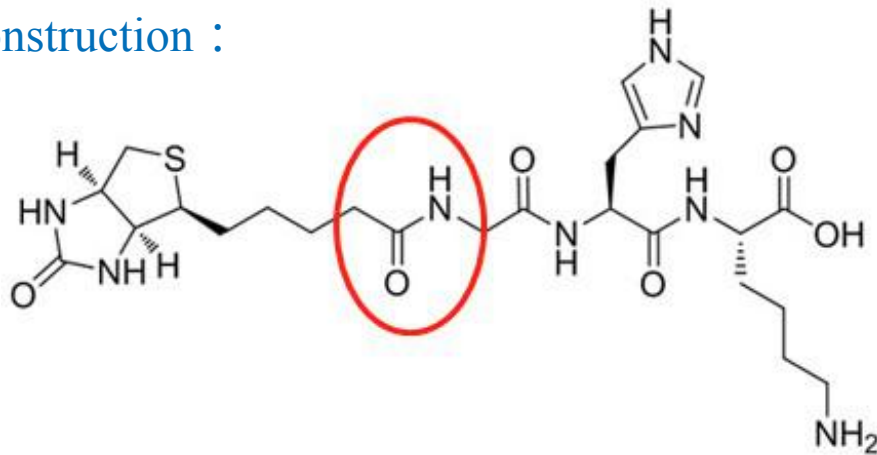
It is scientifically proven that when the scalp is high in dihydrotestosterone (DHT), the hair papillae are destroyed, the hair follicles shrink, the growth period of the hair is shortened and stopped, and hair loss occurs. (The top of the male head is particularly sensitive to DHT, the main cause of baldness)

Solution: inhibit DHT production, stimulate hair keratin growth, protect the hair papilla from damage and ensure adequate nutrition for the scalp.

Biotin Tripeptide-1

Biotin Tripeptide-1 is a tripeptide that combines biotin (vitamin H) with the Matrikine family of signal peptides, GHK. Biotin improves the body's keratin infrastructure and is an important nutrient for hair growth. Tripeptide-1 stimulates collagen IV and laminin 5 synthesis and strengthens hair roots to prevent hair loss. Biotin Tripeptide-1 combines the two characteristics, synergistically, can effectively reduce DHT production, strengthen hair follicles, stimulate hair keratin gene expression, anti-hair follicle aging, is a safe and effective anti-hair loss active peptide.

construction :



English name: Biotinoyl Tripeptide-1

Amino sequence: Biotin-Gly-His-Lys-OH

Molecular formula: C₂₄H₃₈N₈O₆S

Molecular weight: 566.67 CAS: 299157-54-3

Mechanism of action

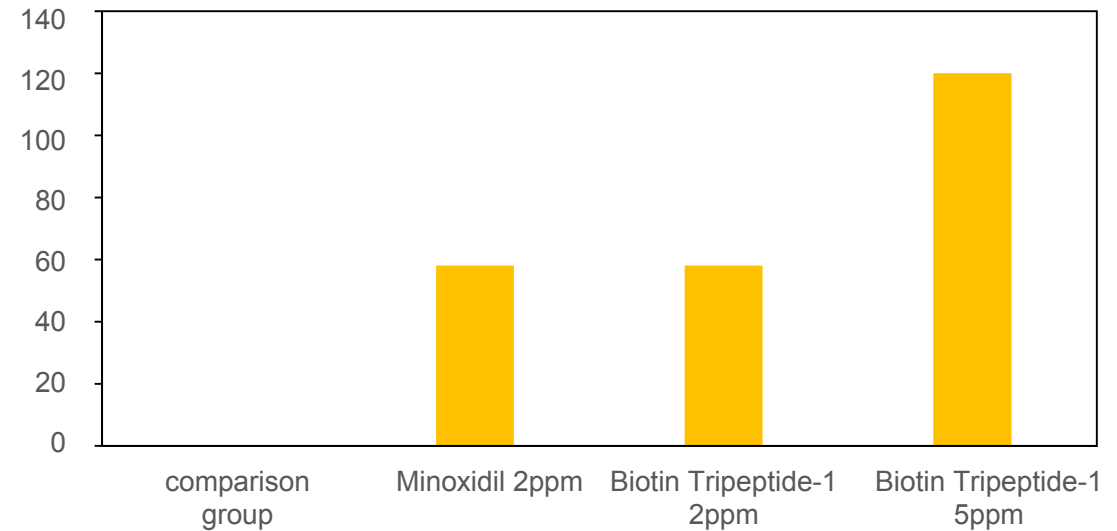
Promote gene expression: It can effectively stimulate Ki-67 gene expression, promote gene expression of various tissue repair, provide protection and repair for hair follicles, and delay the aging of the scalp and hair follicles.

Consolidation of the hair root: stimulates the synthesis of collagen IV and laminin 5 (adhesion molecules), which fix the hair in the dermal follicle.

Activates hair growth: stimulates hair keratin gene expression, stimulates cellular metabolism and promotes hair growth.

Hair growth stimulation experiment

Comparison of Biotin Tripeptide-1 and
Minoxidil control with human hair
follicles cultured for 14 days



At equal 2 ppm concentrations, biotin tripeptide-1 and minoxidil showed similar activity in activating hair growth. When the concentration of biotin tripeptide-1 was increased, hair growth activity increased significantly.

Biotin Tripeptide-1

Appearance: clear to slightly opaque liquid

PH: 3.0-6.0

Active content: 1000ppm

Recommended dose: 1-4%

Adding temperature: Adding at a temperature below 40°C in the late stage of production.

Storage conditions: The product should be stored in an airtight container under 0-25°C, avoiding light and moisture.

Packing specification: (1kg/bottle*10)/carton, (5kg/bottle*4)/carton, 20kg/drum.

Shelf life: 24 months.

Application

Application: Used in a variety of strong hair care products to prevent hair loss, compound application for better results.

1 Biotin Tripeptide-1 + **Tripeptide-1 Copper**: strengthens the hair follicles and promotes hair growth with remarkable results.

2 Biotin Tripeptide-1 + **Acetyltetrapeptide-3**: Inhibits 5- α -reductase, synergistically reduces DHT and has a significant effect on hair loss, as well as on lash growth.

3 Biotin Tripeptide-1 + **Myristoyl Pentapeptide-4**: Promotes eyelash growth, thickening, and lengthening.

4 Biotin Tripeptide-1 + **Hexapeptide-11**: Anti-aging scalp, improves follicles and reduces hair loss, promotes hair growth.

Product Advantages

1. Effectively stimulates the synthesis of keratin, an important component of hair, and promotes hair growth.
 2. Repairs damaged hair from the depths to make it thicker and tougher.
 - 3-Amino sequences are clear and the mechanism of action is clear.
 - 4 small molecule peptides, easily absorbed, well-matched and less volatile.
 - 5 Compared to common hair regrowth agents such as minoxidil (low efficiency and many side effects), the product is safe and in the recommended dosage
- There are no irritating or toxic side effects on it.

Brand application cases

Gerovital H3 Derma+



Ingredients:

Water, (animal) placental protein, hydrolysed soy protein, propylene glycol, panthenol, PCA zinc, glucose, ornithine, nicotinamide, arginine, pyridoxine, chitosanamine HCl, citrulline, biotin, chlorphenesin, sorbic acid, butylene glycol, PPG-26-butanol polyether-26, PEG-40 hydrogenated castor oil, celery (glycoside) ligand, lithophanin, **biotinyl tripeptide-1**, glycerol, LEPIDIUM MEYENII root extract, phenoxyethanol, ethylhexylglycerol

Brand application cases

MartiDerm HAIR SYSTEM 3GF



Ingredients:

water, ethanol, ethoxydiglycol, butylene glycol, betaine, PEG-40

hydrogenated castor oil, tocopheryl nicotinate, acetyl cysteine, acetyl

methionine, inositol, panthenyl ethyl ether, celery (glucoside) ligand,

lithophanin, **biotinoyl tripeptide-1**, citric acid, sodium benzoate,

disodium EDTA, flavour, potassium sorbate, sodium DNA, PPG-26-

butanol polyether-26, lactose Hydrolysed milk protein, sodium citrate

Company Miniature



Contact information

Hangzhou Rebtech Nobel Material Co.,Ltd

www.hzrebtech.com

Contact: Maggie Xu

maggie@hzrebtech.com

Tel:86-571-81902596

Whatsapp/Wechat:86-137 3810 4072



THANK YOU !