# BIO-Placenta Hair

Improvement of scalp condition

### INCI

Water, Glycerin, Lecithin, Alcohol, Propanediol, Arginine, Caprylyl Glycol, Phenoxyethanol, Citric Acid, Eucalyptus Globulus Leaf Extract, Tocopherol, sh-Polypeptide-11, sh-Polypeptide-1, sh-Oligopeptide-2, sh-Oligopeptide-10, sh-Polypeptide-9

### CFDA

Water, Glycerin, Lecithin, Alcohol, Propanediol, Arginine, Caprylyl Glycol, Phenoxyethanol, Citric Acid, Eucalyptus Globulus Leaf Extract, Tocopherol, Hexapeptide-11, Oligopeptide-3, Oligopeptide-2, Oligopeptide-6

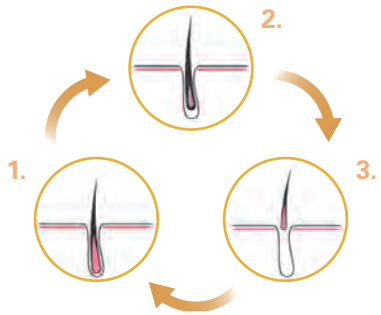
### Benefit

Regulating hair cycle, Controlling hair scalp condition

5 safely synthesized growth factors stimulate mRNA expression, essential factors such as beneficial Vitamin improves hair quality, Amino acids provides moisturizing effect and natural extract for cooling effect are working synergistically to regulate hair scalp condition

## New solution

### Hair Loss is caused by hair cycle's alteration




**1. Anagen (growth phase)**
Growth and formation of the hair shaft
·Duration : 2~8 years
·85~90% of the hair follicles are in Anagen phase

**2. Catagen (transition phase)**
Interruption of hair growth and regression of the follicle
·Duration : 2~3 weeks
·1~2 % of the hair follicles are in Catagen phase

**3. Telogen (resting phase)**
Resting state of the hair follicle.
·Duration : 2~4 months.
·5~15 % of the hair follicles are in Telogen phase.

## Feature

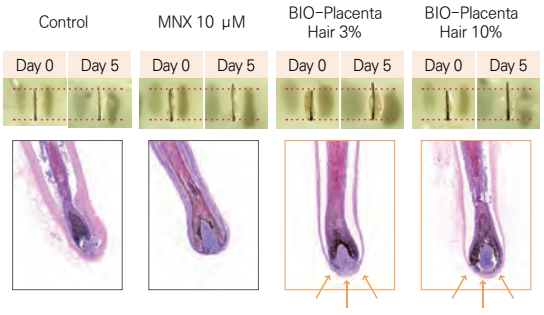
### Why BIO-Placenta Hair

BIO-Placenta : Efficacy on the scalp

| | Human Placenta | Effect | BIO-Placenta Hair |
|---|---|---|---|
| Growth Factor | FGF | Promote follicular growth | FGF |
| | VEGF | Promote formation of new blood vessels | VEGF |
| | IGF | Promote of proliferation of hair matrix cell | IGF |
| | KGF | Developing dermal papilla | KGF-2 |
| Essential Factor | Vitamin | Improve the quality of hair | Vitamin E |
| | Amino acids | Stimulate hair regrowth | Amino acids : L-Arginine |
| Cooling Factor | - | Cooling hair scalp | Eucalyptus leaf Extract |

### ex vivo, Elongation test

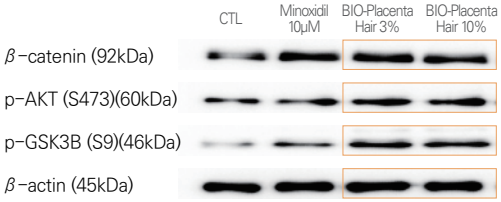
BIO-Placenta Hair promotes significant elongation of hair shaft after 5 days




### *In-vitro* test

**Protein expression profile**

Detection method : Western blot




**HDP (Human Dermal Papilla) Cell proliferation**

BIO-Placenta Hair increases HDP cell proliferation by induced Wnt / β-catenin

