



# 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

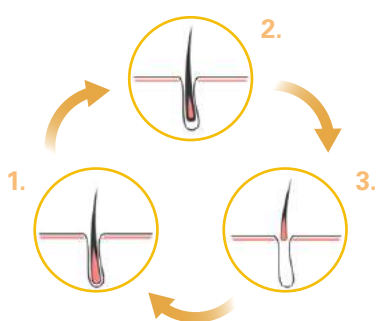
## Benefit

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.

## Hair Cycle

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.

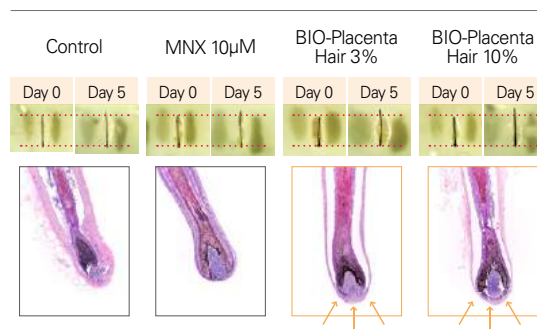
## Why BIO-Placenta Hair

### BIO-Placenta : Hair Advantage

	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 : 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 Assay

### Protein expression profile

Detection method : Western blot



### HDP(Human Dermal Papilla) Cell proliferation

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

