

Heritage Ingredient



USC1994[®] For cosmetic ingredient

The 2nd Generation of Exosome

EXOSOME | 100% Pure Stem Cell Conditioned Media

- USC1994-CM[™]** Umbilical cord blood stem cell conditioned media
제대혈 줄기세포 배양액
- USC1994-FP[™]** Frozen umbilical cord blood stem cell conditioned media powder
프로즌 제대혈 줄기세포 배양액
- USC1994-LS[™]** Pro-liposome umbilical cord blood stem cell conditioned media
프로 리포솜 제대혈 줄기세포 배양액
- USC1994-LSL[™]** Liposome umbilical cord blood stem cell conditioned media
리포솜 제대혈 줄기세포 배양액
- USC1994-EW[™]** Umbilical cord blood stem cell conditioned media extract
제대혈 줄기세포 배양액 추출물
- USC1994-EXS[™]** Umbilical cord blood stem cell exosomes
제대혈 줄기세포 엑소솜
- USC1994-EWSP[™]** Umbilical cord blood stem cell conditioned media extract impregnated spicule
제대혈 줄기세포 배양액 추출물 함침 스피쿨

PEPTIDE COMPLEX

- USC1994-PC[™]** Penta core peptides 펜타 코어 펩타이드
- USC1994-HPC[™]** Scalp multi peptides 스칼프 멀티 펩타이드
- USC1994-HBPC[™]** Scalp multi boost peptides 스칼프 멀티 부스트 펩타이드
- USC1994-AIPC[™]** Defense peptides 디펜스 펩타이드
- USC1994-GDF11[™]** Reverse aging peptide 리버스 에이징 펩타이드
- USC1994-TIMP2[™]** Aging block peptide 에이징 블럭 펩타이드
- USC1994-SPC[™]** Skin multi boost peptides 스킨 멀티 부스트 펩타이드

The most definite effect delivered by the youngest stem cells

가장 어린세포가 전하는 가장 확실한 효과

The 2nd Generation of Exosome USC1994[®]



Heritage Ingredient USC1994[®]?

The result of the dedication achieved through continuous research and development by Seoul National University researchers, since 1994

100% Pure umbilical cord blood stem cell conditioned media USC1994[®]

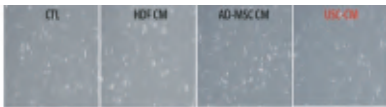
1994년부터 시작된 서울대 연구진의 30년 간의 끊임없는 연구와 노력으로 이뤄낸 집념의 결과물
100% Pure 순수 제대혈 줄기세포 배양액



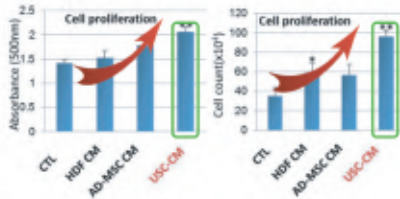
Efficacy Evaluation

I. Proven effect of skin regeneration

피부 재생 효과 입증



피부 세포 수 50% 증가 피부 세포 수 170% 증가



Skin cell proliferation up to **110%** compared to other stem cell conditioned media

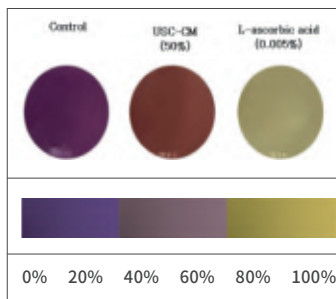
타줄기세포 배양액 대비 최대 **110%** 까지 피부세포 증식

※ Source: [Paper] Conditioned media from human umbilical cord blood-derived mesenchymal stem cells stimulate rejuvenation function in human skin
// Biochemistry and Biophysics Reports

II. Proven effect of antioxidation

항산화 효능 입증

USC-CM 50% 처리 시, 미처리군 대비



Proved antioxidant effectiveness by eliminating **60%** of free radicals

Free radical (활성산소) 약 **60%** 제거

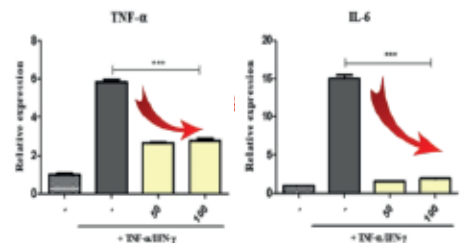
※ 자료출처: '인체제대혈유래줄기세포배양액'(USC-CM) 항산화 효력 평가시험 DIV-IVOET003(4)-18013 (디마프로)

III. Proven effect of anti-inflammation

염증억제 효능 입증

USC1994-CM 100% 처리 시, 미처리군 대비

TNF-α 생성량, 약 **50%** 감소 IL-6 생성량, 약 **87%** 감소



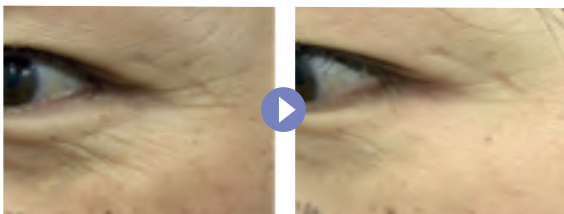
Proved anti-inflammatory efficacy by **68%** reduction of inflammatory factors

염증 유발 인자 평균 **68%** 감소

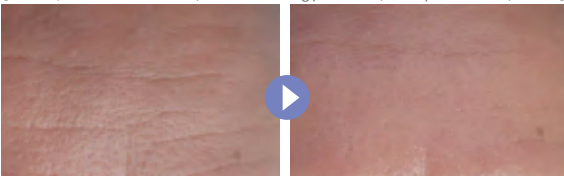
※ 자료출처: Effects of conditioned media from human umbilical cord blood-derived mesenchymal stem cells in the skin immune response // Biomedicine & Pharmacotherapy 131 (2020) 110789

Real Anti-aging Effect B & A

Fine Wrinkle Improvement 잔주름 개선



[Female / at B** clinic in Korea / with other lifting procedure / 1 vial per 2-3weeks, 3 times]

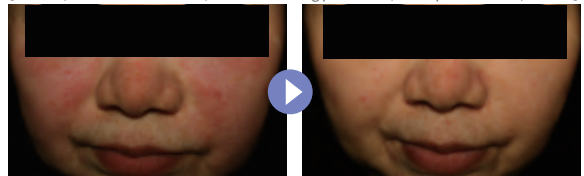


[Female / age 52 / at a clinic in Poland / Sep 2021 / after 1st session / 1time]

Rash Improvement 붉은기 완화



[Female / at B** clinic in Korea / with other lifting procedure / 1 vial per 2-3weeks, 3 times]



[Female / at KANGBUK SAMSUNG HOSPITAL / with laser toning / Oct 2019 to May 2020 / 1 vial per 2 weeks, 3 times]

"The 2nd Generation of Exosome"

The most obvious effect delivered by the youngest stem cell

01

R&D period

연구 개발 기간

About 30 Years, The result of the dedication achieved through continuous research and development by Seoul National University researchers, since 1994

100% Pure umbilical cord blood stem cell conditioned media USC1994®

1994년부터 시작된 서울대 연구진의 30년 간의 끊임없는 연구와 노력으로 이뤄낸 집념의 결과물 "순수 제대혈 줄기세포 배양액 USC1994®"

USC1994® is completely packed of 30 years of hard work and dedication

USC1994®에는 30년간의 **노력과 집념**이 고스란히 담겨져 있습니다.

2024
2015
2005
1994
줄기세포 연구의 시작

지속적인 연구개발을 통해 차세대 원료와 제품 개발

"Development of the next-generation raw materials and products through continuous R&D"

02

Purity

배양액 순도

100% Pure umbilical cord blood stem cell conditioned media you can trust

100% Pure 순수 제대혈 줄기세포 배양액, 정직하고 믿을 수 있는 원료

<p>Stem cell conditioned media of other companies 타 줄기세포 배양액</p> <p>WATER ESPRESSO</p> <p>Stem cell conditioned media used by diluting with purified water in the raw material process 원료 공정상 정제수와 희석하여 사용하는 배양액</p>	VS	<p>Our USC1994® 자사 제대혈 줄기세포 배양액</p> <p>ESPRESSO</p> <p>100% Pure undiluted stem cell conditioned media 100% 순수 원액 그대로 사용하는 자사 배양액</p>
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03

Exosomes & Active ingredients

엑소좀 & 유효성분

Contains up to 14 times more active ingredients for skin regeneration and immune regulation and exosomes
(compared to adipocyte and bone marrow stem cell exosomes)

피부재생, 면역조절 유효성분과 엑소좀이 최대 14배 이상 함유 (지방, 골수 줄기세포 엑소좀 대비)

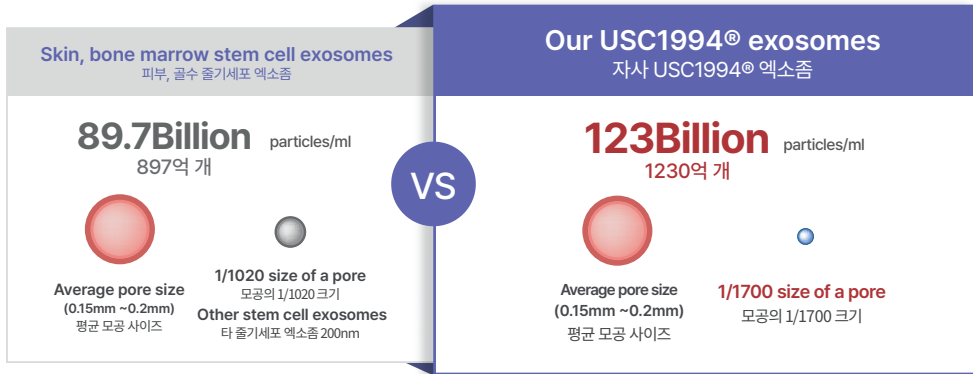
<p>Adipocyte, bone marrow stem cell exosomes 지방, 골수 줄기세포 엑소좀</p>	VS	<p>Our USC1994® exosomes 자사 USC1994® 엑소좀</p> <p>14 times more 14배 함유</p>
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[출처] # Kim YJ, 2017, BBRC - Exosomes derived from human umbilical cord bold mesenchymal stem cells stimulate rejuvenation of human skin - R&D Center testing results
**Limited to the characteristics of raw materials/ Calculated based on the average content of major active ingredients *원료적 특성에 한함/ 주요 유효성분 평균함량 기준으로 산출

04

Ultimate number and size of exosomes

초격차 엑소좀



[출처] # Kim YJ, 2017, BBRC Exosomes derived from human umbilical cord blood mesenchymal stem cells stimulate rejuvenation of human skin

**Limited to the characteristics of raw materials **원료적 특성에 한함

05

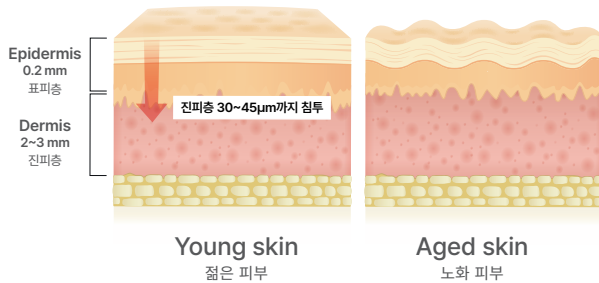
Skin penetration

피부 침투효과

Penetrates **deeper and faster** to the dermis of the skin

피부 진피층까지 **더 깊숙하게, 더 빠르게** 침투

For skin



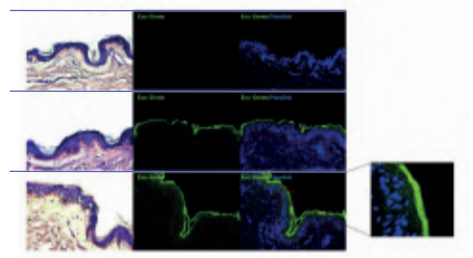
Immediate application
처리 직후

↓

3 hours later
3시간 경과

↓

18 hours later
18시간 경과



It reaches 30-45 µm from the epidermis to the dermis within 18 hours

18시간 이내 표피부터 진피층의 30-45 µm 까지 도달

[출처] # Kim YJ, 2018, BBR Conditioned media from human umbilical cord blood-derived mesenchymal stem cells stimulate rejuvenation function in human skin **Limited to the characteristics of raw materials **원료적 특성에 한함

06

Collagen synthesis

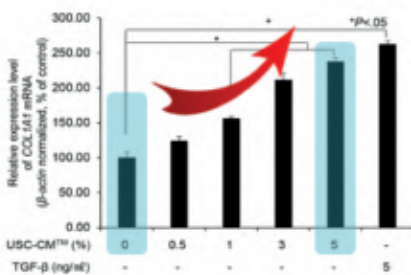
콜라겐 합성 능력

Outstanding **skin regeneration** through collagen increase

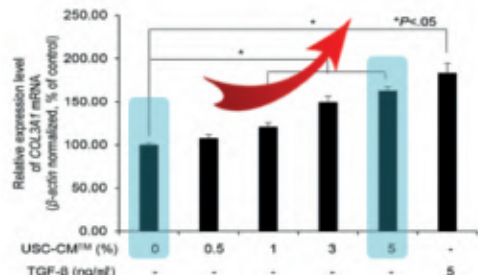
콜라겐 증가를 통한 뛰어난 **피부 재생** 효과

For skin

Collagen I synthesis **143%** increased
콜라겐 합성 약 **143%** 증가



Collagen III synthesis **67%** increased
콜라겐III 합성 약 **67%** 증가



USC1994® 5% application, compared to control group USC1994® 5% 처리시, 미 처리군 대비

[Reference] Efficacy test of 'human cord blood cell conditioned media (*USC-CM*) on the increase of human dermal fibroblast collagen production KISCS-AFJ005IV-KST(2)(Korea Institute of Dermatology)

[출처] 인체제대혈세포배양액(*USC-CM*)의 인간진피섬유아세포 콜라겐 생성 증가력에 대한 효력시험 KISCS-AFJ005IV-KST(2)(한국피부과학연구원)

07

Sensitive skin improvement

민감성 피부 개선 효능

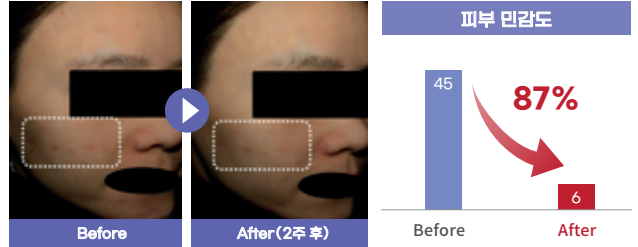
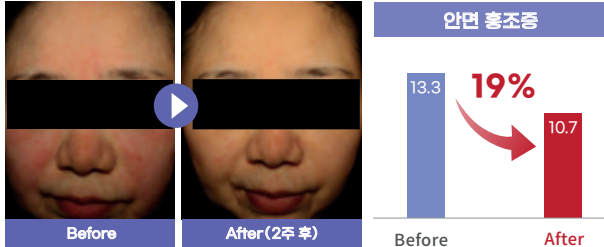
For skin

Powerful skin **soothing and improving** for sensitive skin

민감한 피부를 위한 강력한 **피부 진정 및 개선** 효과

USC1994® application, **19%** flushes improved
USC1994® 처리 시 안면홍조 **19%** 개선

USC1994® application, **87%** acne improved
USC1994® 처리 시 여드름성 피부 **87%** 개선



[Reference] Kangbuk Samsung Hospital clinical trial results * USC-1994® : 50,000PPM freeze dried powder+laser toning [출처] 강북삼성병원 피부과 임상연구 결과 * USC1994® 5% 함유 동결건조파우더+레이저토닝 요법 진행
**Limited to the characteristics of raw materials *원료적 특성에 한함

08

The rejuvenation protein GDF11

회춘 단백질 GDF11

For skin

USC1994® contains **"GDF11"**

타 줄기세포 대비 월등한 **"GDF11"**성분을 함유하고 있는 USC1994®

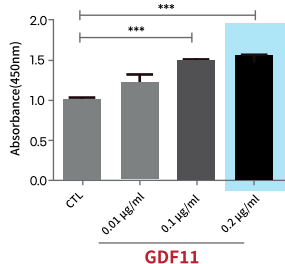
GDF11? As a growth differentiation factor 11 called "the elixir of youth," which increases skin fibroblasts, collagen, and elastin to effectively improve skin regeneration and elasticity.

"젊음의 묘약"으로 불리는 성장분화인자 (Growth differentiation factor 11)로서 피부섬유아세포, 콜라겐, 엘라스틴을 증가시켜 피부 재생과 탄력에 효과적으로 작용하는 성분

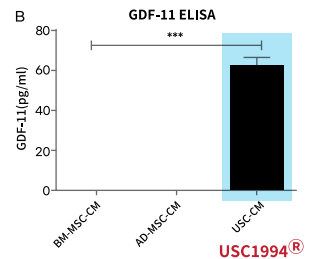


150% Skin regeneration increased

피부 재생 효능 **150%** 증가



60times higher of GDF11 expression
60배 이상 높은 GDF11 발현



[출처] : # Kim YJ, 2018, BBR Conditioned media from human umbilical cord blood-derived mesenchymal stem cells stimulate rejuvenation function in human skin ** Limited to the characteristics of raw materials **원료적 특성에 한함

09

Hair loss improvement

탈모 개선 효과

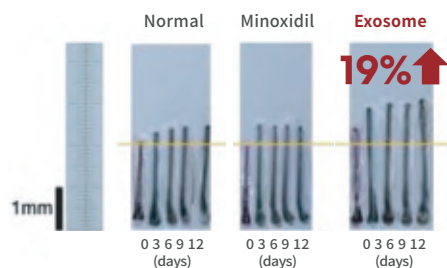
For hair

Excellent **hair follicle length growth and hair loss delay** compared to the hair loss treatment, minoxidil

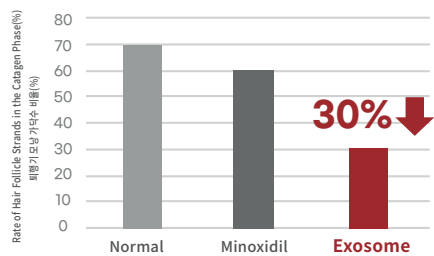
탈모 치료제 **미녹시딜** 대비 뛰어난 **모낭길이 성장 및 탈모 지연** 효과

Minoxidil vs Exosome

Follicle length increase **19%** 모낭길이 **19%** 증가



Hair loss reduced **30%** 탈모진행을 **30%** 감소



[Reference] Efficacy evaluation test of 'Exosome' in ex vivo human scalp-derived hair follicle culture model HB51-MEH-21017 Korea Skin Research Center
[출처] Ex vivo 인체 두피 유래 모낭 배양모델에서 'Exosome'의 효능 평가시험 HB51-MEH-21017 한국피부임상연구센터 Korean Skin Research Center ** Limited to the characteristics of raw materials. *원료적 특성에 한함

10

The youngest stem cell

(Our USC1994® Compare to Adipocyte and bone marrow stem cell)

가장 어린 세포 (지방, 골수 줄기세포 대비)

“Umbilical cord blood” the beginning of life, USC1994® is originated from the nobility.

“제대혈” 생명의 시작점, 그 고귀함에서 비롯된 USC1994®

Stem cell conditioned media of other companies

타 줄기세포 배양액



- ✓ Taken from adults
성인에게서 채취
- ✓ Stem cells with large variations due to variables such as the donor's age, diet, and condition
공여자의 나이, 식습관, 컨디션 등 다양한 변수로 인하여 편차가 큰 줄기세포
- ✓ Easy to get
쉽게 얻어낼 수 있는 줄기세포

VS



Our USC1994®

자사 제대혈 줄기세포 배양액

- ✓ Taken from 39~40 week-new born
39~40주의 갓 태어난 신생아에게서 채취
- ✓ The youngest, healthy, never aged stem cells without deviation
가장 어리고 건강한, 편차가 없는 줄기세포
- ✓ Precious stem cells that can only be obtained after childbirth
출산 후에만 얻을 수 있는 귀한 줄기세포

11

Scientific efficacy

과학적 효능 입증

Our USC1994®

자사 제대혈 줄기세포 배양액

- ✓ Superiority of efficacy identified
(skin regeneration, inflammation suppression, etc.)
효능(피부재생, 염증억제 등)의 우위성을 규명
- ✓ Global first exosome-related SCI journal using human skin published
Human skin을 활용한 세계 최초 엑소좀 관련 SCI급 논문 게재
- ✓ Over 290 SCI journals related to stem cells published, the most in the industry
업계 최대 줄기세포 관련 SCI급 논문 게재 (290여 편 이상)



- ✓ Global's only stem cell source technology and patent
세계 유일 줄기세포 원천기술 및 특허 보유
- ✓ Global first patent for cosmetic raw material composition including GDF11 acquired
세계 최초 GDF11를 포함한 화장품 원료 조성물 특허 획득
[10-1810385] Composition comprising GDF11 and uses thereof
[특허 제 10-1810385] GDF11를 포함하는 조성물 및 그의 용도



12

Securing safety at the level of pharmaceutical

의약품 수준의 안전성 확보

Stem cell conditioned media of other companies

타 줄기세포 배양액

- ✓ Stem cell conditioned media should be filtered
걸러내야만 하는 타 줄기세포 배양액
- ✓ It is unclear whether the donor is eligible or not, and the safety standards for human tissue-derived materials are unclear.
공여자 적격성 여부 및 인체조직유래물질의 안전성 기준 불분명

VS

Our USC1994®

자사 제대혈 줄기세포 배양액



- ✓ Raw materials produced in licensed pharmaceutical manufacturing facilities
의약품 제조 허가시설에서 생산된 원료



- ✓ 261 days of strict manufacturing process and quality control
261일간의 엄격한 제조과정 및 품질관리



식품의약품안전처

- ✓ Implementation of all test items including donor eligibility and ensuring safety
공여자 적격성 등 모든 시험 항목 시행 및 안전성 확보
(According to Annex Table 3 of the Act on the Safety Standards or Human Tissue-Derived Materials / 인체 조직 유래물질의 안전성 기준 법령 별표3의거)

Check out more detailed information

about our core raw material USC1994® and variety content via YouTube

핵심 원료 USC1994®의 상세한 정보와 다양한 콘텐츠를 유튜브를 통해 만나보세요



Global Ambassador
Announcer **Ga Eun Lee**

Exosome
TV



ExosomeTV



Find more information of ExosomeTV at Youtube

유튜브에 엑소좀TV를 검색하시면 더 많은 정보를 확인하실 수 있습니다.

Brand information 브랜드 소개 영상

Product information 제품 소개 및 교육 영상

Raw material information USC1994® 원료 소개 교육 영상

Language | ENG, JPN, CHN, KOR



USC1994® X Achievement & Patents

Umbilical cord blood stem cell conditioned media source technology based competitiveness

제대혈줄기세포배양액 원천기술 기반 기술 경쟁력 확보



2021 대한민국
국가사회 산업공헌 대상 수상
바이오 기술 신원료 부문



특허 제10-1810385호 GDF11을 포함하는 조성물 및 그의 용도
특허 제10-0950195호 ZNF281을 발현하는 제대혈 유래 인공 줄기세포의 분리방법
특허 제10-1138664호 ZNF281을 발현하는 제대혈 유래 줄기세포의 대량 배양방법
특허 제10-2020-0030707호 중결 제정된 제대혈 유래 줄기세포를 이용한 고농도 성장인자 함유 배양액 제조방법



First to launch stem cell conditioned media cosmetics in TV home shopping by global countries.

줄기세포 배양액 화장품
최초 홈쇼핑 런칭

[90 patents in Korea, USA, China, Japan, UK and Germany]

한국, 미국, 중국, 일본, 영국, 독일 포함 총 90개 국가 특허 등록 완료

USC1994® X Partners



USC1994[®] Ingredient List

For educational use

사내교육용

Trade Name	Product Name	INCI Name	Type	MOQ		Efficacy
USC1994-CM [™]	Umbilical cord blood stem cell conditioned media 제대혈 줄기세포 배양액	Human cord blood cell conditioned media	Liquid	200ml/g	1L/kg	<ul style="list-style-type: none"> • Skin regeneration • Anti-inflammatory • Anti-hair loss • Wound healing
USC1994-FP [™]	Frozen umbilical cord blood stem cell conditioned media powder 프로즌 제대혈 줄기세포 배양액	Human cord blood cell conditioned media, Mannitol	Powder	200g	1kg	<ul style="list-style-type: none"> • Skin regeneration • Anti-inflammatory • Anti-hair loss
USC1994-LS [™]	Pro-liposome umbilical cord blood stem cell conditioned media 프로 리포좀 제대혈 줄기세포 배양액	Human Cord Blood Cell Conditioned Media, Glycerin, Lecithin, Hydrogenated Lecithin, Cholesterol, Tocopherol, Water, 1,2-Hexanediol	Liquid	1L/kg	10L/kg	<ul style="list-style-type: none"> • Anti-wrinkle • Anti-oxidant
USC1994-LSL [™]	Liposome umbilical cord blood stem cell conditioned media 리포좀 제대혈 줄기세포 배양액	Human Cord Blood Cell Conditioned Media, Glycerin, Butylene Glycol, Caprylic/Capric Triglycerides, Polyglyceryl-10 Stearate, Hydrogenated Lecithin, Water, 1,2-Hexanediol	Liquid	1L/kg	10L/kg	<ul style="list-style-type: none"> • Anti-wrinkle • Anti-oxidant
USC1994-EW [™]	Umbilical cord blood stem cell conditioned media extract 제대혈 줄기세포 배양액 추출물	Human Umbilical Mesenchymal Stem Cell Conditioned Media Extract, Ethylhexylglycerin, Water, 1,2-Hexanediol	Liquid	1L/kg	20L/kg	<ul style="list-style-type: none"> • Skin-moisturizing • Exfoliating
USC1994-EXS [™]	Umbilical cord blood stem cell exosomes 제대혈 줄기세포 엑소좀	Human Cord Blood Derived Stem Cell Exosomes	Liquid	200ml/g	1L/kg	<ul style="list-style-type: none"> • Skin regeneration • Wound healing
USC1994-EWSP [™]	Umbilical cord blood stem cell conditioned media extract impregnated spicule 제대혈 줄기세포 배양액 추출물 함침 스피클	Human Umbilical Mesenchymal Stem Cell Conditioned Media Extract, Hydrolyzed Sponge	Powder	200g	1kg	<ul style="list-style-type: none"> • Skin regeneration • Exfoliating • Improving inflammation
USC1994-PC [™]	Penta core peptides 펜타 코어 펩타이드	Leontopodium Alpinum Callus Culture Extract, Copper Tripeptide-1, Tripeptide-1, Palmitoyl Pentapeptide-4, Dipeptide-2, Oligopeptide-1, Water, 1,2-Hexanediol	Liquid	1L/kg		<ul style="list-style-type: none"> • Skin-conditioning • Skin-elasticity
USC1994-HPC [™]	Scalp multi peptides 스칼프 멀티 펩타이드	sh-Oligopeptide-1, rh-Polypeptide-9, sh-Oligopeptide-2, sh-Polypeptide-3, Water, 1,2 Hexanediol	Liquid	1L/kg		<ul style="list-style-type: none"> • Improving scalp environment • Promoting hair growth
USC1994-HBPC [™]	Scalp multi boost peptides 스칼프 멀티 부스트 펩타이드	sh-Oligopeptide-1, rh-Polypeptide-9, sh-Oligopeptide-2, sh-Polypeptide-3, sh-Polypeptide-13, Water	Liquid	1L/kg		<ul style="list-style-type: none"> • Improving scalp environment • Promoting hair growth
USC1994-AIPC [™]	Defense peptides 디펜스 펩타이드	rh-Polypeptide-1, rh-Polypeptide-22, rh-Polypeptide-15, sh-Polypeptide-13, Water, 1,2 Hexanediol	Liquid	1L/kg		<ul style="list-style-type: none"> • Anti-oxidant • Immune reinforcement
USC1994-GDF11 [™]	Reverse aging peptide 리버스 에이징 펩타이드	rh-polypeptide-92, Water, 1,2- Hexanediol	Liquid	1L/kg		<ul style="list-style-type: none"> • Skin regeneration • promoting collagen & elastin synthesis
USC1994-TIMP2 [™]	Aging block peptide 에이징 블럭 펩타이드	rh-polypeptide-15, Water, 1,2- Hexanediol	Liquid	1L/kg		<ul style="list-style-type: none"> • Reinforce skin barrier • Anti-aging
USC1994-SPC [™]	Skin multi boost peptides 스킨 멀티 부스트 펩타이드	sh-Oligopeptide-1, rh-Polypeptide-9, sh-Oligopeptide-2, sh-Polypeptide-3, rh-Polypeptide-92, rh-Polypeptide-15, Water	Liquid	1L/kg		<ul style="list-style-type: none"> • Skin-moisturizing • Skin-elasticity

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