ex-i : REDISCOVER YOUR YOUTHFUL GLOW

HYALU PN TOX

High-concentration ingredients achieve a powerful
Lifting effect, PN and five growth factors with cell penetration
MTD technology make skin elastic and healthy

BAIN & CO



ex-i :

Why ex-i product is innovative

Rapid Efficacy



immediate boosting effect after same-day treatment, due to the action of MTD botulinum

Customer satisfaction with maximizing synergies of treatment procedures

Optimal Skin Regeneration

Induce activation of VEGF-producing cells in the skin of polynucleotide (PN)

Promoting the growth of ECM factors of four growth factors with MTD

Boosting effect of collagen synthesis after cosmetic treatment

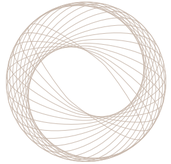
Restoring Balance



High purity 3MDa hyaluronic acid and Trehalose act to moisturize the skin outside and inside at the same time

Increased skin soothing after cosmetic treatment

Reliable Safety



Produced in aseptic environment with no preservatives

safety for use on all type of skin



High Purity Hyaluronic Acid



Sodium Hyaluronate

3MDa hyaluronic acid
Skin Moisturized
Medical Grade High-purity

PDRN



Sodium DNA

Salmon extract DNA
Skin Cell Regeneration
Medical Grade High-purity

Botulinum Polypeptide



Methionyl r-Clostridium Botulinum Polypeptide-1 Hexapeptide-40

Botulinum efficacy in the dermis
Patent pending in 11 countries (7 registered)
Exclusive ingredient of BoLCA

MTD - FGF



sh-Oligopeptide-1 Nonapeptide-29

Skin Permeable Epidermal growth factor
Skin Cell Regeneration
30 Times More Permeable to Skin than normal EGF

MTD - FGF2



Sh-Polypeptide-1 Nonapeptide-29

Cell permeable Basic fibroblast growth factor
Skin Cell Regeneration

MTD-IGF1



Methionyl sh-Oligopeptide-2 Decapeptide-40

Cell permeable Insulin-like growth factor 1
Skin Cell Regeneration

MTD - PDGF AA



r-(Methionyl sh-Polypeptide-8 Decapeptide-40)

Cell permeable Platelet-derived growth factor AA Skin Cell Regeneration

MTD Pentapeptide-4



Nonapeptide-29 Pentapeptide-4

Skin Permeable Pentapeptide-4 collagen-synthetic facilitator
32 Times More Permeable to Skin than normal Pentapeptide-4

ex-i



Under the eyes



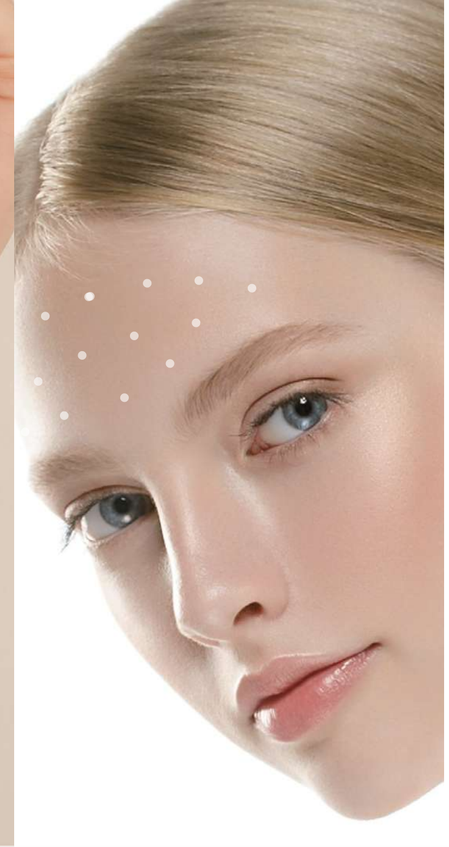
Neck Wrinkle



Cheeks and Chin



Back of hand



Fore head

* ex-i is more effective on the skin when used in small amounts (0.1ml to 0.2ml) at regular intervals (0.5cm to 1.0cm).

ex-i

HYALU PN TOX

HOW TO USE AND E FFECT



ex-i

HYALU PN TOX

High-concentration ingredients achieve a powerful lifting effect. PN and five growth factors with cell penetration MTD technology make skin elastic and healthy.

01. Wrinkle Improvement

Powerful wrinkle improvement effect of high concentration Botulinum-derived ingredients

02. Rejuvenation & Elasticity

Excellent regeneration and skin elasticity with four Growth Factors with MTD technology and PN (Salmon DNA Extract)

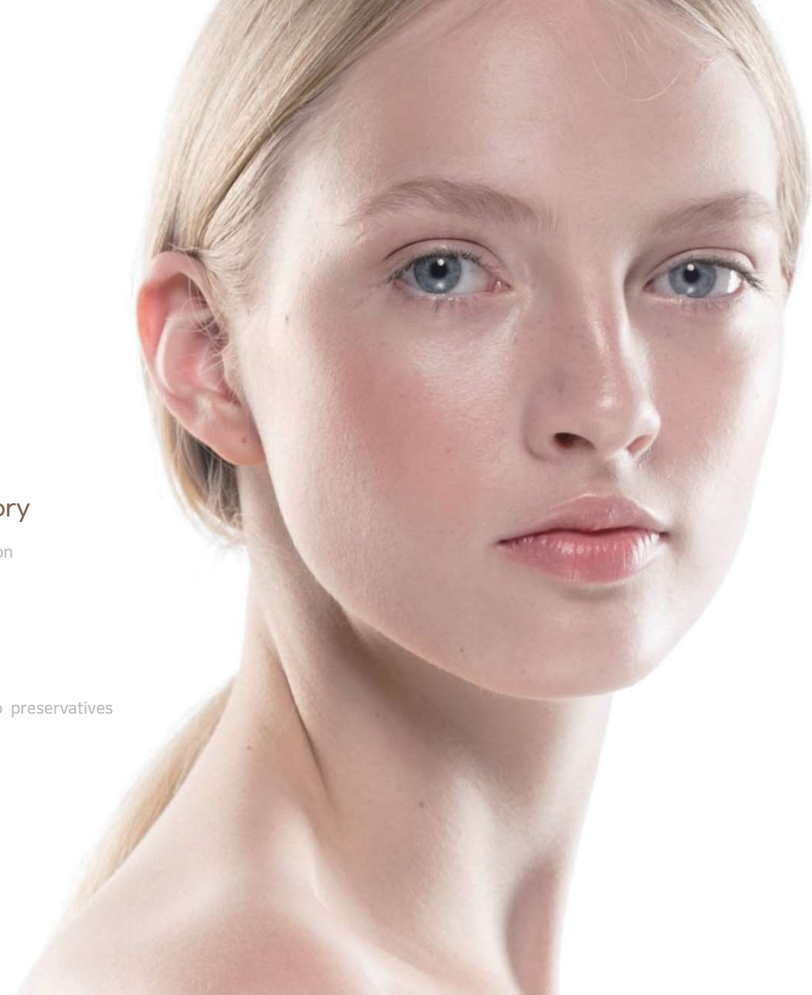
REDISCOVER YOUR YOUTHFUL GLOW

03. Pore size & Anti- inflammatory

Skin oil/water balance control Pore reduction and strong anti-inflammatory effects

04. Minimized stimulus

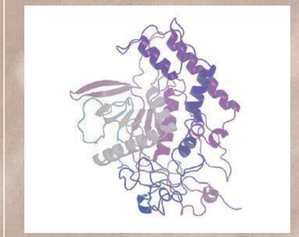
safety and minimizing skin irritation with no preservatives and sterile environments manufacturing



ex-i

Feature 1

Botulinum Polypeptide :
Same efficacy with intra-dermal Botox use



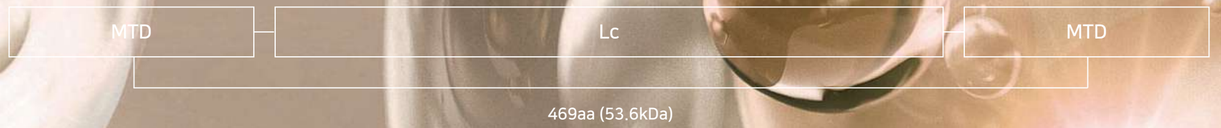
3D Structure



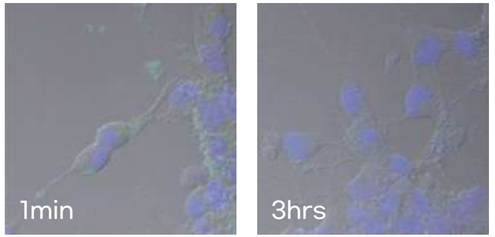
Botulinum
Light
Chain
A type
+
MTD Protein

Vector	pET21bInsert	
Insert	MTD	~20 amino acid
	Lc	Name : Clostridium botulinum neurotoxin type A light chain Amino acid : 447 amino acid Sequence : Clostridium botulinum type A Hall Lc
	Tag	Hexa-histidine

Structure



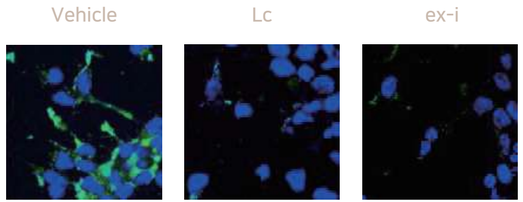
Transdermal delivery potential in SiMa cell(human neuronal cells)



Treatment condition
-FITC conjugated BPMed_BoLCA: 3μg
-Time : 1min, 3hrs
-Method : confocal

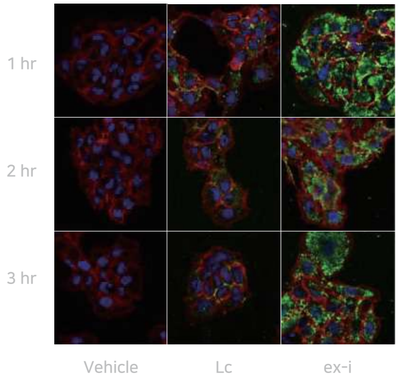
Fig 6. ex-i cell Penetration test

Cell treatment on differentiated SiMa cell
(Human neuroblastoma) with FITC conjugated ex-i.
After 3 hours protein can be seen inside the cell



Treatment condition
- FITC conjugated : 5μg
- Time : 3hrs
- Method : confocal

Fig 7. Permeation of keratinocytes by ex-i



Treatment condition
-HaCaT cell
-Peptide : 5μM

Hyaluronic Acid :
Medical grade pure 3

High Purity Hyaluronic Acid
Sodium Hyaluronate

3MDa hyaluronic acid
Skin Moisturized
Medical Grade High-purity



Sodium DNA :
Salmon extract DNA

PDRN
Sodium DNA

Salmon extract DNA
Skin Cell Regeneration
Medical Grade High-purity

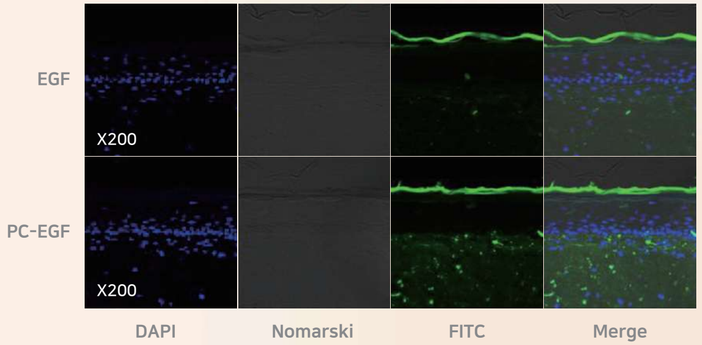


MTD-EGF :
Cell permeable Epidermal growth factor :
Skin Regeneration

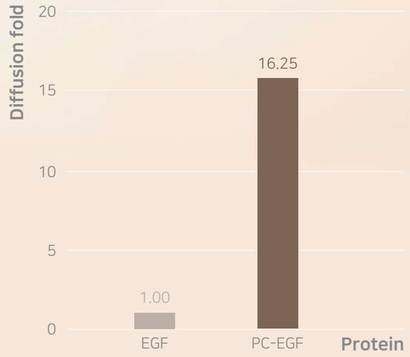
sh-Oligopeptide-1
Nonapeptide-29

Skin Permeable Epidermal growth factor
Skin Cell Regeneration
30 Times More Permeable
to Skin than normal EGF





EpiDermFT™Confocal microscopy observation result



EpiDermFT
- Franz Diffusion Cell assay test result

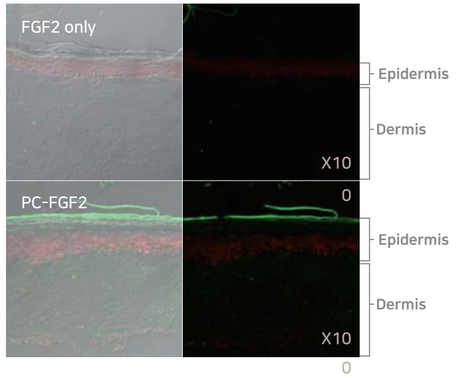
Feature 4

MTD-FGF2 :
Cell permeable Basic fibroblast growth factor 2 :
Regeneration

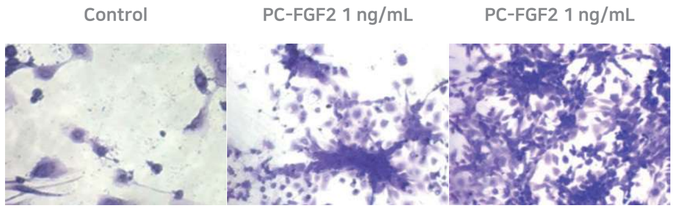
Sh-Polypeptide-1
Nonapeptide-29

Cell permeable Basic fibroblast growth factor
Skin Cell Regeneration





EpiDermFT™Confocal microscopy observation result

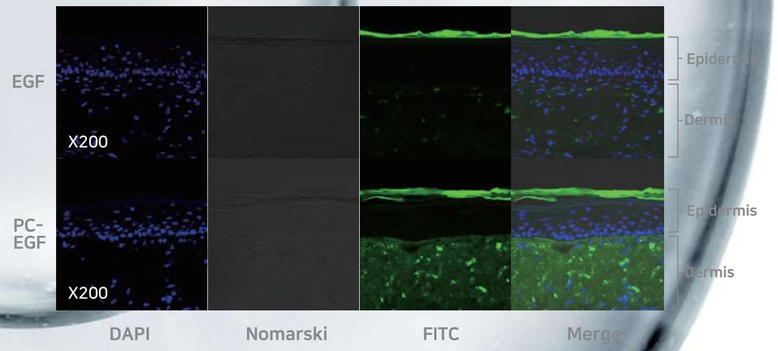


Fibroblast growth (72hr)

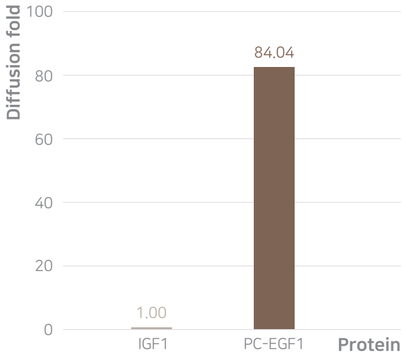
MTD-IGF1 :
Cell permeable Insulin-like growth factor 1 :
Regeneration

Methionyl sh-Oligopeptide-2
Decapeptide-40

Cell permeable Insulin-like growth factor 1
Skin Cell Regeneration



EpiDermFT™ Confocal microscopy observation result

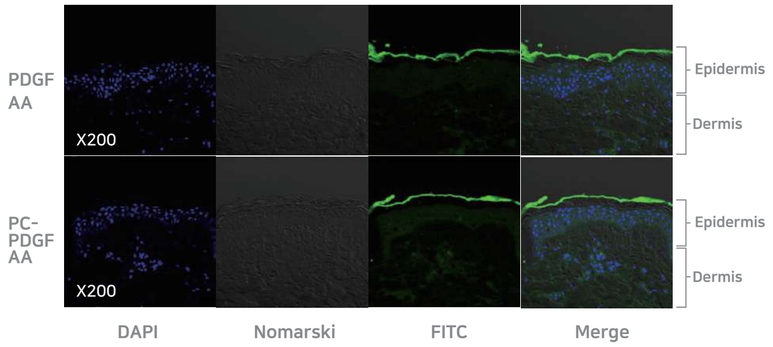


EpiDermFT™
Franz Diffusion Cell assay test result

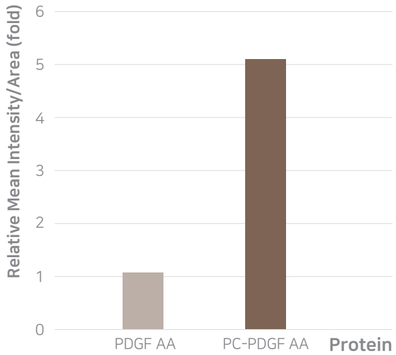
MTD-PDGF AA :
Cell permeable Platelet-derived growth factor AA :
Regeneration

r-(Methionyl sh-Polypeptide-8
Decapeptide-40)

Cell permeable Platelet-derived growth
factor AA Skin Cell Regeneration

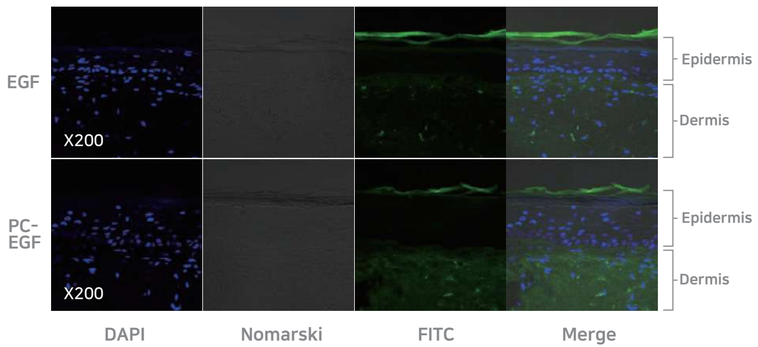


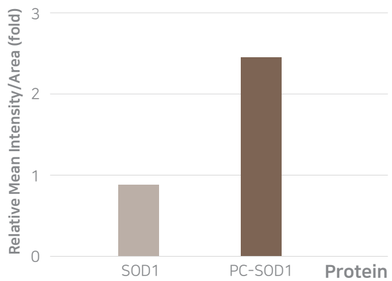
EpiDermFT™ Confocal microscopy observation result



EpiDermFT™ Confocal microscopy
observation semi-quantitative result

MTD-SOD1 :
Cell permeable Superoxide dismutase 1 :
Skin Brightening Anti-oxidation

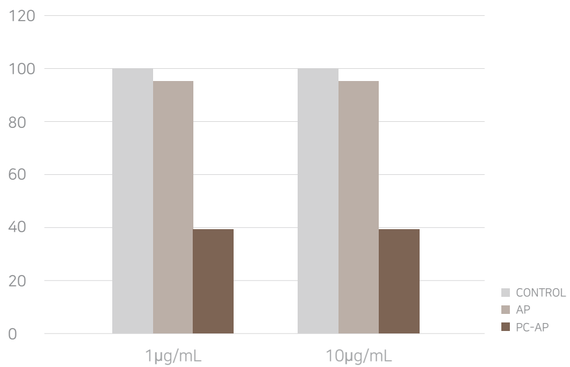




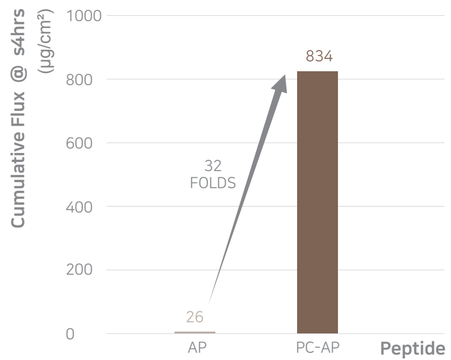
Intensity	Total	
Protein	AVE	Fold
SOD1	3.505	1.000
PC-SOD1	8.218	2.345

- ✓ FITC conjugated SOD1 and PC-SOD1 (10μg) were loaded onto EpiDermFT™ Tissue Model
- ✓ After 24hrs, EpiDermFT™ Tissue were observed using confocal microscopy

MTD-AP :
Cell permeable Acetyl Pentapeptide :
Collagen increase



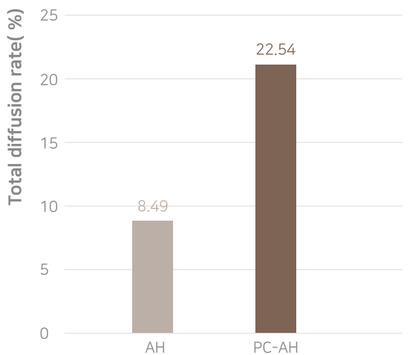
Preventing collagen degradation due to
non-cytotoxicity and inhibition of MMP-1 activaity



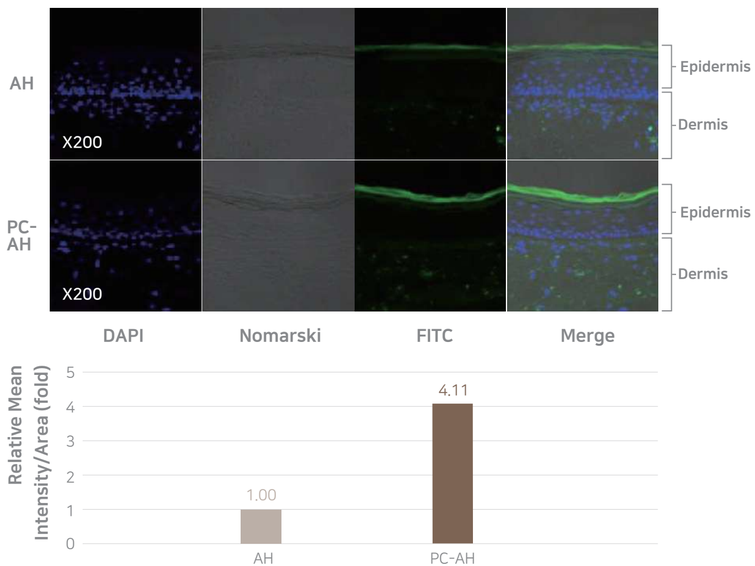
EpiDermFT™
Franz Diffusion Cell assay test result

MTD-AH :
Cell permeable Acetyl Hexapeptide :
Wrinkle improvement (Botulinum mimic)

Skin permeability of MTD-conjugated AH (PC-AH) is about 23 times more than that of AH after 24 hour treatment on artificial skin (EpiDerm™, MatTek)



In the semiquantitative analysis using fluorescence intensity, skin permeability of MTD-conjugated AH(PC-AH) is about 4 times more than that of AH after 24 hour treatment on artificial skin (EpiDermFT™, MatTek)



Tranexamic Acid :
Whitening Agent

Tranexamic Acid



KFDA Certified Brightening and Whitening Functional Cosmetic Ingredient



Trehalose :
Moisturizing Agent

Trehalose

Enhanced moisturizing by superior water adsorption capacity
Enhanced skin elasticity with moisturizing effect through fibroblast cell protection
antioxidant function through increased stability of vitamin C and E





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