





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

INTENDED FOR SKIN BEAUTIFICATION

OX-1 • REDISCOVER YOUR
• YOUTHFUL GLOW

HYALU PN TOX

High concentration ingredients achieve a powerful
strong effect. DNA and live growth factors with cell penetration
serum technology make skin elastic and healthy.

2ml x 10springs



**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

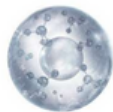
**Methionyl sh-Oligopeptide-2
Decapeptide-40**

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

• 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).



Back of hand



Fore head



HYALU PN TOX

HOW TO USE AND EFFECT



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

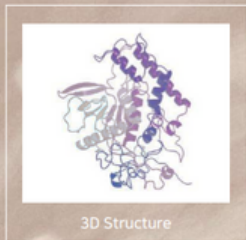
03. Pore size & Anti-inflammatory

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

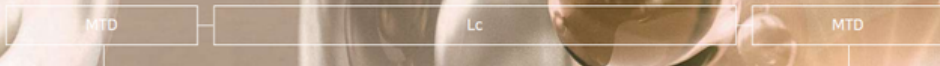
Botulinum Polypeptide :
Same efficacy with intra-dermal Botox use



Botulinum
Light
Chain
A type
+
MTD Protein

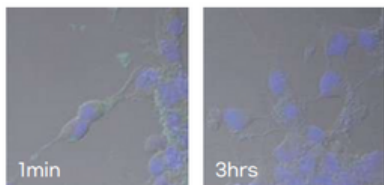
Vector	pET21binsert
Insert	MTD ~20 amino acid
	Name : Clostridium botulinum neurotoxin type A light chain Amino acid : 447 amino acid Sequence : Clostridium botulinum type A Hall Lc
	Tag Hexa-histidine

Structure

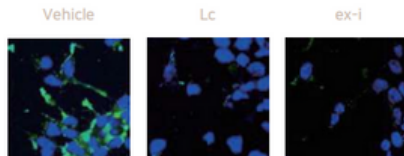


469aa (53.6kDa)

Transdermal delivery potential in SiMa cell(human neuronal cells)



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

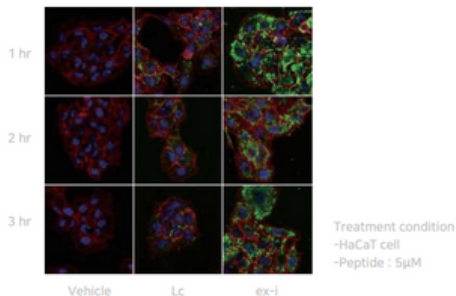


Treatment condition
- FITC conjugated : 5 μ g
- Time : 3hrs
- Method : confocal

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

Fig 7. Permeation of keratinocytes by ex-i



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

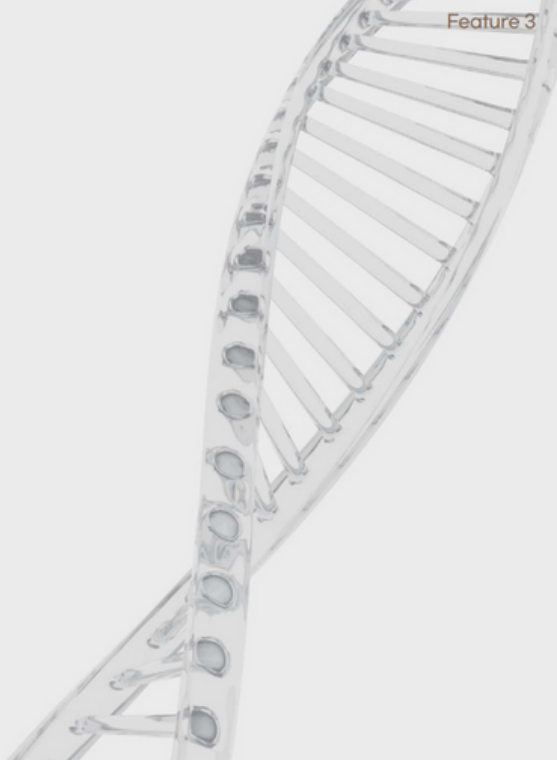
PDRN

Sodium DNA

Salmon extract DNA

Skin Cell Regeneration

Medical Grade High-purity

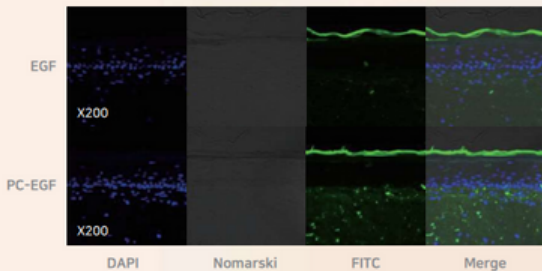


MTD-EGF :

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



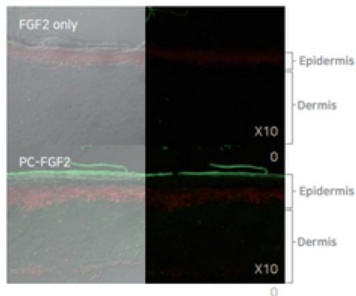
EpiDermFT
- Franz Diffusion Cell assay test result

MTD-FGF2 :

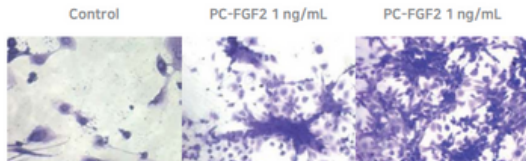
Cell permeable Basic fibroblast growth factor 2 :
Regeneration

Sh-Polypeptide-1
Nonapeptide-29

Cell permeable Basic fibroblast growth factor
Skin Cell Regeneration



EpiDermFT™ Confocal microscopy observation result



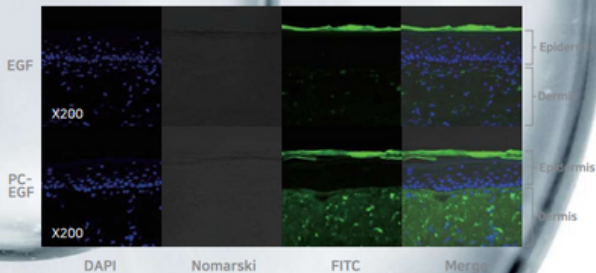
Fibroblast growth (72hr)

MTD-IGF1 :

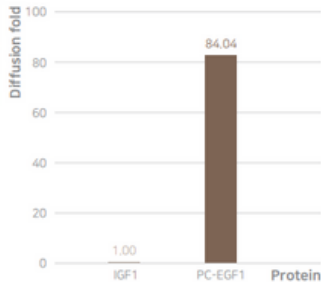
Cell permeable Insulin-like growth factor 1 :
Regeneration

Methionyl sh-Oligopeptide-2
Decapeptide-40

Cell permeable Insulin-like growth factor 1
Skin Cell Regeneration



EpiDermFT™ Confocal microscopy observation result

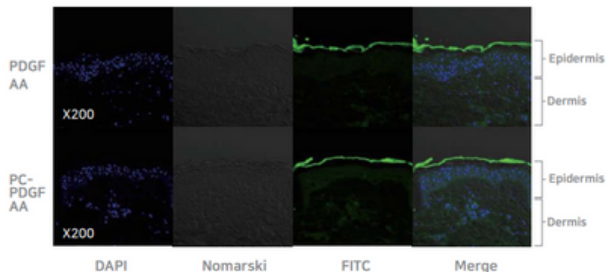


EpiDermFT™ Franz Diffusion Cell assay test result

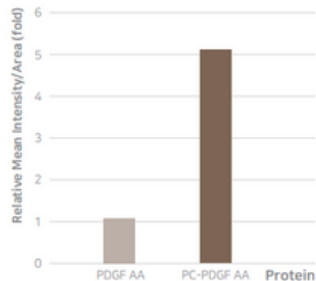
MTD-PDGF AA : Cell permeable Platelet-derived growth factor AA : Regeneration

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

Cell permeable Platelet-derived growth
factor AA Skin Cell Regeneration



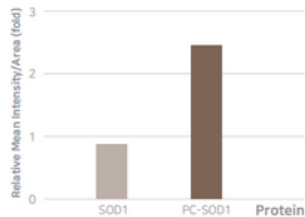
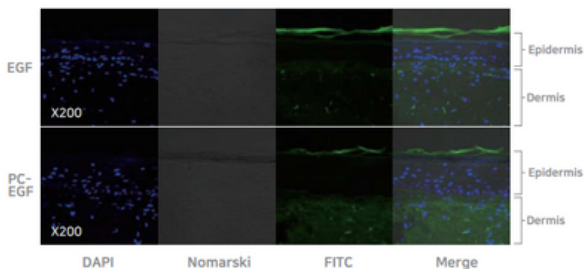
EpiDermFT™ Confocal microscopy observation result



EpiDermFT™ Confocal microscopy
observation semi-quantitative result

MTD-SOD1 :

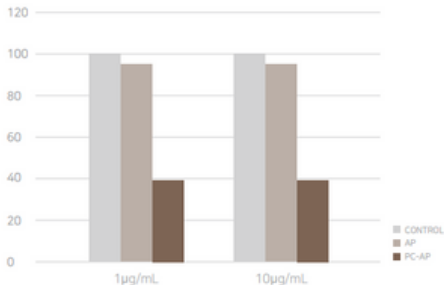
Cell permeable Superoxide dismutase 1 :
Skin Brightening Anti-oxidation



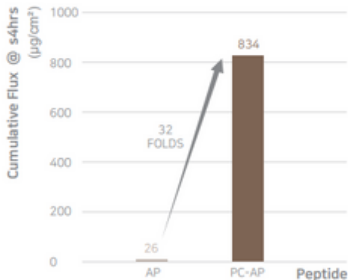
	Intensity	Total
Protein	AVE	Fold
SOD1	3.505	1.000
PC-SOD1	8.218	2.345

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

MTD-AP :
Cell permeable Acetyl Pentapeptide :
Collagen increase



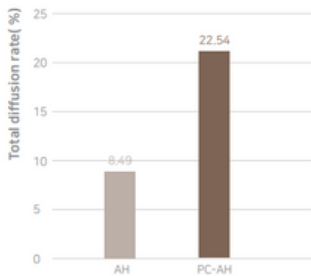
Preventing collagen degradation due to non-cytotoxicity and inhibition of MMP-1 activity



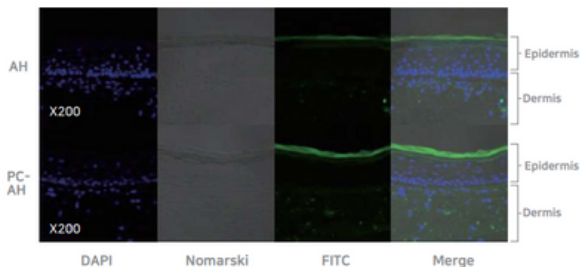
EpiDermFT™
Franz Diffusion Cell assay test result

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)

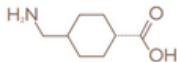


In the semiquantitative analysis using fluorescence intensity, skin permeability of MTD-conjugated AH(PC-AH) is about 4 times more than that of AH after 24 hour treatment on artificial skin (EpiDermFT™, MatTek)



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



