

# PROTEIN MODULE

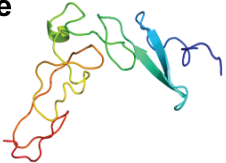
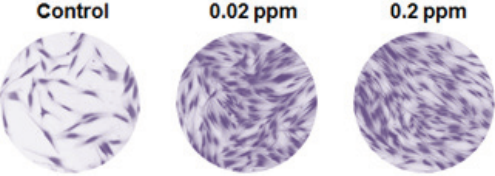
**NEXGEN<sup>®</sup>**  
THE ANTI-AGING

# List

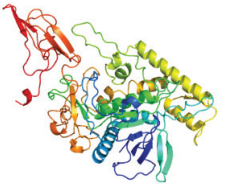
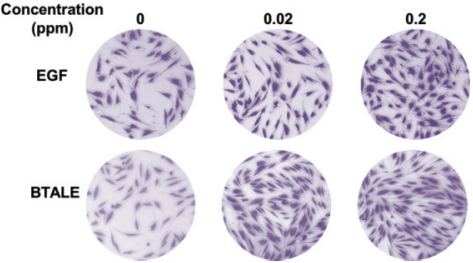
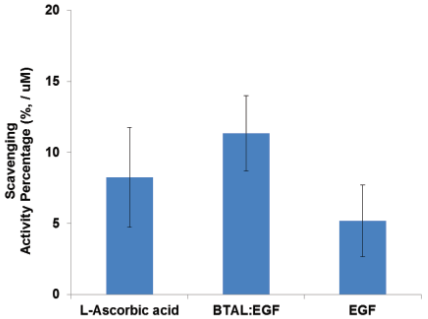
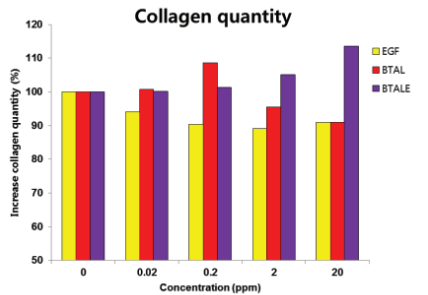
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- **ESV 0.1ppm** (sh-Oligopeptide-1 Alanyl sr-Spider Oligopeptide-1) ..... 1mL x 1  
*Human EGF-Spider Venom Hybrid, recombinant* (특허번호: KR 10-1636851)
- **BTALe 0.1ppm** (sr-Clostridium Botulinum Polypeptide-1 sh- Oligopeptide-1) ..... 1mL x 1  
*Botulinum Toxin Light Chain-human EGF Hybrid, recombinant* (특허번호: KR 10-1636846)
- **GS 50ppm** (Methionyl sh-Polypeptide-7 Dipeptide-19 sr-Spider Polypeptide-4 Hexapeptide 40) ..... 1mL x 1  
*Human Growth Hormone-Spider Silk Protein Hybrid, recombinant* (특허번호: KR 10-1652953)
- **TCT 0.1ppm** (sh-Polypeptide-2 sr-Egyptian Scorpion Oligopeptide-1) ..... 1mL x 1  
*Human Thioredoxin-Scorpion Venom Hybrid, recombinant* (특허번호: KR 10-1678393)
- **GFPE 50ppm** (sr-Jellyfish Polypeptide-1 sh-Oligopeptide-1) ..... 1mL x 1  
*Jellyfish Green Fluorescent Protein-Human EGF Hybrid, recombinant* (특허번호: KR 10-1661912)
- **EAFPSR 50ppm**( sh-Oligopeptide-1 sr-Sea Raven Polypeptide-1) ..... 1mL x 1  
*Human EGF-Sea Raven Anti Freeze Protein Hybrid, recombinant* (특허번호: KR 10-1678392)
- **HAS 50ppm** (sh-Polypeptide 91) ..... 0.5mL x 1  
*Human Hyaluronic Acid Synthase, recombinant* (특허번호: KR 10-1662990)

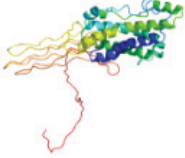
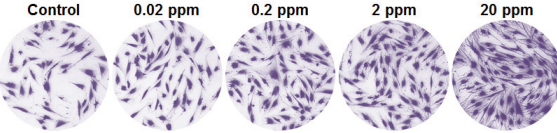
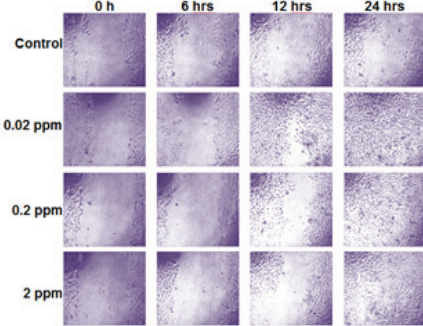
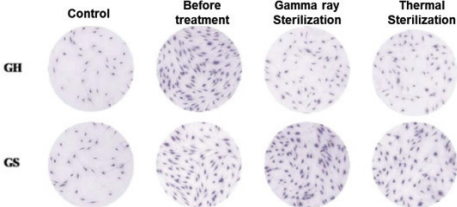
# ESV 0.1ppm *Human EGF-Spider Venom Hybrid, recombinant*

Trade name	ESV																																					
INCI name	sh-Oligopeptide-1 Alanyl sSpider Oligopeptide1																																					
Feature of ingredient	<p>1. Recombinant protein 2. Molecular Weight: 11.72 kDa 3. Appearance: Odorless solution</p> <p style="text-align: right;"><b>Tertiary Structure</b></p> 																																					
Functions of Raw material (Mechanism)	<div style="display: flex; justify-content: space-around;"> <div data-bbox="510 699 1019 997"> <p><b>1. HDFa cell proliferation</b></p>  </div> <div data-bbox="1064 699 1550 1061"> <p><b>2. The HaCaT cell migration</b></p> <table border="1" data-bbox="1064 758 1550 1061"> <thead> <tr> <th></th> <th>0 h</th> <th>6 hrs</th> <th>12 hrs</th> <th>24 hrs</th> </tr> </thead> <tbody> <tr> <th>Control</th> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>2 ppm</th> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>20 ppm</th> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> </div> <div data-bbox="1624 699 1982 1061"> <p><b>3. Thermal stability</b></p> <table border="1" data-bbox="1624 758 1982 1061"> <thead> <tr> <th>Concentration (ppm)</th> <th>0</th> <th>0.02</th> <th>0.2</th> </tr> </thead> <tbody> <tr> <th>ESV</th> <td></td> <td></td> <td></td> </tr> <tr> <th>Thermal Sterilization</th> <td></td> <td></td> <td></td> </tr> <tr> <th>Gamma ray sterilization</th> <td></td> <td></td> <td></td> </tr> </tbody> </table> </div> </div>			0 h	6 hrs	12 hrs	24 hrs	Control					2 ppm					20 ppm					Concentration (ppm)	0	0.02	0.2	ESV				Thermal Sterilization				Gamma ray sterilization			
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	· Anti-wrinkle · Skin-lifting · Wound healing																																					
	<b>Material name</b>	<b>Patent number</b>																																				
	Human epidermal growth factor and spider venom hybrid protein	10-1636851																																				

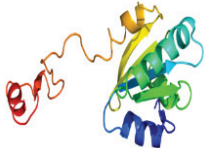
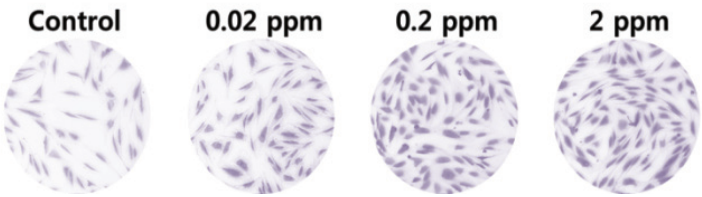
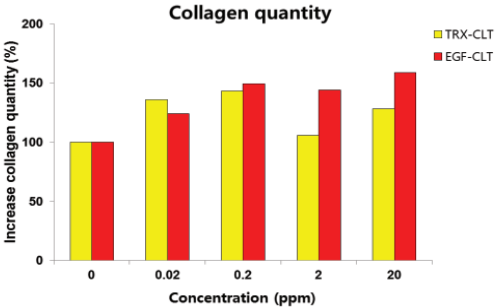
# BTALE 0.1ppm *Botulinum Toxin Light Chain-human EGF Hybrid, recombinant*

Trade name	BTALE																																		
INCI name	sr-Clostridium Botulinum Polypeptide-1 sh-Oligopeptide-1																																		
Feature of ingredient	<p>1. Recombinant protein 2. Molecular Weight: 57.6 kDa 3. Appearance: Odorless solution</p> <p style="text-align: right;"><b>Tertiary Structure</b></p> 																																		
Functions of Raw material (Mechanism)	<p><b>1. HDFa cell proliferation</b></p> 	<p><b>2. The HaCaT cell migration</b></p>  <table border="1"> <caption>Scavenging Activity Percentage (%)</caption> <thead> <tr> <th>Substance</th> <th>Scavenging Activity (%)</th> </tr> </thead> <tbody> <tr> <td>L-Ascorbic acid</td> <td>~8</td> </tr> <tr> <td>BTAL:EGF</td> <td>~11.5</td> </tr> <tr> <td>EGF</td> <td>~5</td> </tr> </tbody> </table>	Substance	Scavenging Activity (%)	L-Ascorbic acid	~8	BTAL:EGF	~11.5	EGF	~5	<p><b>3. Synthesis of Collagen</b></p>  <table border="1"> <caption>Increase collagen quantity (%)</caption> <thead> <tr> <th>Concentration (ppm)</th> <th>EGF (%)</th> <th>BTAL (%)</th> <th>BTALE (%)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>100</td> <td>100</td> <td>100</td> </tr> <tr> <td>0.02</td> <td>~95</td> <td>~100</td> <td>~100</td> </tr> <tr> <td>0.2</td> <td>~90</td> <td>~108</td> <td>~102</td> </tr> <tr> <td>2</td> <td>~90</td> <td>~95</td> <td>~105</td> </tr> <tr> <td>20</td> <td>~90</td> <td>~90</td> <td>~115</td> </tr> </tbody> </table>	Concentration (ppm)	EGF (%)	BTAL (%)	BTALE (%)	0	100	100	100	0.02	~95	~100	~100	0.2	~90	~108	~102	2	~90	~95	~105	20	~90	~90	~115
Substance	Scavenging Activity (%)																																		
L-Ascorbic acid	~8																																		
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Information	<b>Main feature</b>																																		
	· Anti-wrinkle · Skin-lifting · Wound healing																																		
	<b>Material name</b>		<b>Patent number</b>																																
	Botulinum neurotoxin type A protein and human epidermal growth factor hybrid protein		10-1636846																																

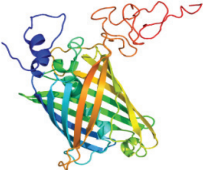
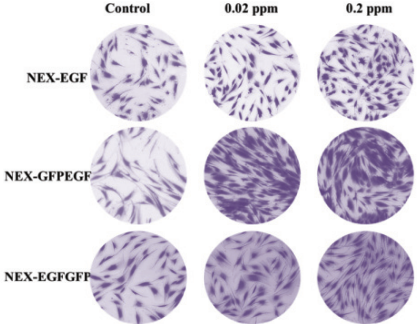
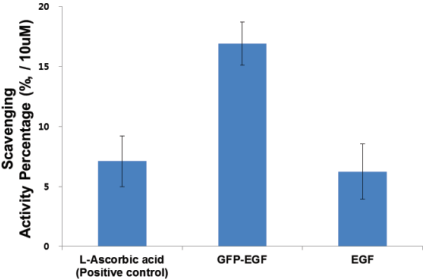
# GS 50ppm *Human Growth Hormone-Spider Fiber Protein Hybrid, recombinant*

Trade name	GS		
INCI name	Methionyl sh-Polypeptide-7 Dipeptide-19 sr-Spider Polypeptide-4 Hexapeptide 40		
Feature of ingredient	<ol style="list-style-type: none"> <li>1. Recombinant protein</li> <li>2. Molecular Weight: 33.3 kDa</li> <li>3. Appearance: Odorless solution</li> </ol>		<p style="text-align: center;">Tertiary Structure</p> 
Functions of Raw material (Mechanism)	<p><b>1. HDFa cell proliferation</b></p> 	<p><b>2. The HaCaT cell migration</b></p> 	<p><b>3. Thermal stability</b></p> 
Information	<b>Main feature</b>		
	· Anti-wrinkle · Anti-aging · Wound healing		
	<b>Material name</b>		<b>Patent number</b>
	Human growth hormone and spider fiber protein		10-1652953

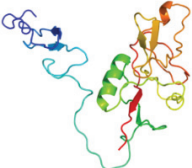
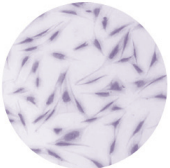
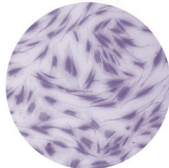
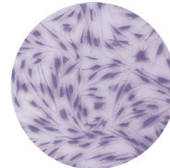
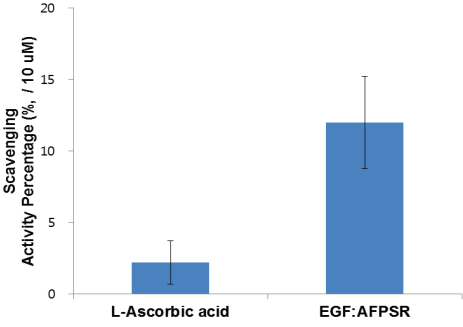
# TCT 0.1ppm *Human Thioredoxin-Scorpion Venom Hybrid, recombinant*

Trade name	TCT																			
INCI name	sh-Polypeptide-2 sr-Egyptian Scorpion Oligopeptide-1																			
Feature of ingredient	<ol style="list-style-type: none"> <li>1. Recombinant protein</li> <li>2. Molecular Weight: 15.7 kDa</li> <li>3. Appearance: Odorless solution</li> </ol>	<p style="text-align: center;"><b>Tertiary Structure</b></p> 																		
Functions of Raw material (Mechanism)	<p><b>1. HDFa cell proliferation</b></p> 	<p><b>2. Synthesis of Collagen</b></p>  <table border="1"> <caption>Collagen quantity data</caption> <thead> <tr> <th>Concentration (ppm)</th> <th>TRX-CLT (%)</th> <th>EGF-CLT (%)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>100</td> <td>100</td> </tr> <tr> <td>0.02</td> <td>135</td> <td>125</td> </tr> <tr> <td>0.2</td> <td>145</td> <td>150</td> </tr> <tr> <td>2</td> <td>105</td> <td>145</td> </tr> <tr> <td>20</td> <td>130</td> <td>160</td> </tr> </tbody> </table>	Concentration (ppm)	TRX-CLT (%)	EGF-CLT (%)	0	100	100	0.02	135	125	0.2	145	150	2	105	145	20	130	160
Concentration (ppm)	TRX-CLT (%)	EGF-CLT (%)																		
0	100	100																		
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Information	<b>Main feature</b>																			
	· Anti-wrinkle · Skin-lifting																			
	<b>Material name</b>	<b>Patent number</b>																		
	<b>Modified Chlorotoxin hybrid</b>	<b>10-1678393</b>																		

# GFPE 50ppm *Jellyfish Green Fluorescent Protein-Human EGF Hybrid, recombinant*

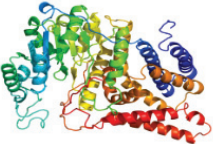
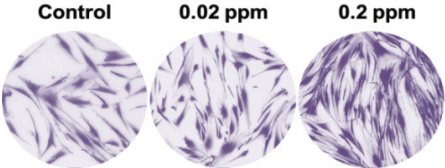
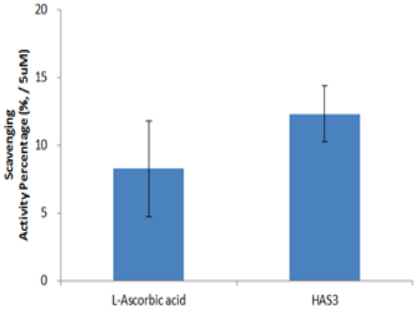
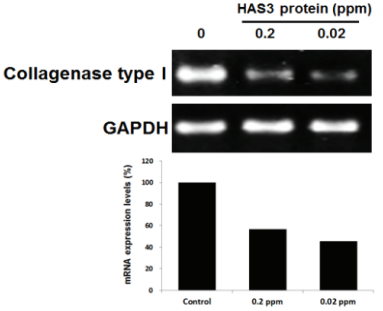
Trade name	GFPE									
INCI name	sr-Jellyfish Polypeptide-1 sh-Oligopeptide-1									
Feature of ingredient	<p>1. Recombinant protein 2. Molecular Weight: 33.2 kDa 3. Appearance: Odorless solution</p> <p style="text-align: right;"><b>Tertiary Structure</b></p> 									
Functions of Raw material (Mechanism)	<p><b>1. HDFa cell proliferation</b></p>  <p><b>2. Anti-oxidant activity</b></p>  <table border="1" data-bbox="1429 783 1850 1062"> <caption>Scavenging Activity Data</caption> <thead> <tr> <th>Substance</th> <th>Scavenging Activity Percentage (%) / 10uM</th> </tr> </thead> <tbody> <tr> <td>L-Ascorbic acid (Positive control)</td> <td>~7</td> </tr> <tr> <td>GFP-EGF</td> <td>~17</td> </tr> <tr> <td>EGF</td> <td>~6</td> </tr> </tbody> </table>		Substance	Scavenging Activity Percentage (%) / 10uM	L-Ascorbic acid (Positive control)	~7	GFP-EGF	~17	EGF	~6
Substance	Scavenging Activity Percentage (%) / 10uM									
L-Ascorbic acid (Positive control)	~7									
GFP-EGF	~17									
EGF	~6									
Information	<b>Main feature</b>									
	· Anti-wrinkle · Skin-lifting · Whitening									
	<b>Material name</b>	<b>Patent number</b>								
	Green fluorescent protein and human epidermal growth factor	10-1661912								

# EAFPSR 50ppm *Human EGF-Sea Raven Anti Freeze Protein Hybrid, recombinant*

Trade name	EAFPSR							
INCI name	sh-Oligopeptide-1 sr-Sea Raven Polypeptide-1							
Feature of ingredient	<ol style="list-style-type: none"> <li>1. Recombinant protein</li> <li>2. Molecular Weight: 20.2 kDa</li> <li>3. Appearance: Odorless solution</li> </ol>	<p>Tertiary Structure</p> 						
Functions of Raw material (Mechanism)	<p>1. HDFa cell proliferation</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Control</p>  </div> <div style="text-align: center;"> <p>0.02 ppm</p>  </div> <div style="text-align: center;"> <p>0.2 ppm</p>  </div> </div>	<p>2. Anti-oxidant activity</p>  <table border="1" style="margin-top: 10px;"> <caption>Scavenging Activity Data</caption> <thead> <tr> <th>Substance</th> <th>Scavenging Activity Percentage (% / 10 uM)</th> </tr> </thead> <tbody> <tr> <td>L-Ascorbic acid</td> <td>~2.5</td> </tr> <tr> <td>EGF:AFPSR</td> <td>~12</td> </tr> </tbody> </table>	Substance	Scavenging Activity Percentage (% / 10 uM)	L-Ascorbic acid	~2.5	EGF:AFPSR	~12
Substance	Scavenging Activity Percentage (% / 10 uM)							
L-Ascorbic acid	~2.5							
EGF:AFPSR	~12							
Information	<b>Main feature</b>							
	· Anti-wrinkle · Anti-aging							
	<b>Material name</b>	<b>Patent number</b>						
	Human epidermal growth factor and anti-freezing protein	10-1678392						



# HAS 50ppm *Human Hyaluronic Acid Synthase, recombinant*

Trade name	HAS	
INCI name	sh-Polypeptide 91	
Feature of ingredient	<p>1. Recombinant protein 2. Molecular Weight: 63 kDa 3. Appearance: Odorless solution</p> <p style="text-align: right;"><b>Tertiary Structure</b></p> 	
Functions of Raw material (Mechanism)	<p>1. HDFa cell proliferation      2. Anti-oxidant activity      3. Collagenase type I mRNA expression</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Control      0.02 ppm      0.2 ppm</p> </div> <div style="text-align: center;">  <p>Scavenging Activity Percentage (% / 50µM)</p> <p>L-Ascorbic acid      HAS3</p> </div> <div style="text-align: center;">  <p>HAS3 protein (ppm) 0      0.2      0.02</p> <p>Collagenase type I</p> <p>GAPDH</p> <p>mRNA expression levels (%)</p> <p>Control      0.2 ppm      0.02 ppm</p> </div> </div>	
Information	<b>Main feature</b>	
	· Anti-wrinkle · Anti-aging	
	<b>Material name</b>	<b>Patent number</b>
	<b>Hyaluronic acid synthase 3</b>	<b>10-1662990</b>

**NEXGEN<sup>®</sup>**  
**THE ANTI-AGING**

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