

DC Upregulex™

Silk peptides for firming & reduction of wrinkle appearance



DC Upregulex™

INCI : Water (and) Butylene Glycol (and) Phospholipids (and) Hydrolyzed Sericin

CAS #: 7732-18-5, 73049-73-7, 123465-35-0, 107-88-0

EC #: 203-9231-791-2, N/A, N/A

Collagen Stimulation

Tyrosinase Inhibition

Improvement of Cell Proliferation

Hyaluronic Acid Stimulation

Anti-elastic

Film Forming

Recommended applications



Skin Care



Color Cosmetics



Vantage

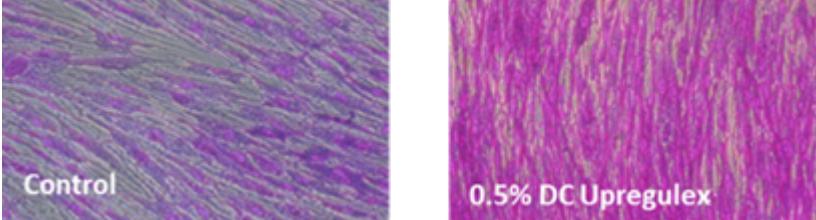
Gene array studies

DC Upregulex™ was found to modulate the expression of several genes including collagen production as well cell protection from oxidative damage.

DC Upregulex™ on
Reconstructed model
72 hour incubation
Affymetrix® system
Data on 22,200 probes and
flagged

Gene Name	Changes	Significance
tubulin, beta 2B	Upregulation	Building blocks of cellular architecture
superoxide dismutase 2	Upregulation	Mitochondrial Antioxidant enzyme
claudin 6	Upregulation	Protease inhibitor of Serpin family
kinesin 20A	Upregulation	Molecular intracellular motor (ATPase)
hyaluronan proteoglycan linkprotein1	Upregulation	Assembly and stabilization of ECM
cytochrome P450	Upregulation	Detoxification
collagen, type XIV, alpha 1 (undulin)	Upregulation	Extracellular matrix protein
collagen, type XV, alpha 1	Upregulation	localized in basement membrane
cytochrome P450	Upregulation	Detoxification
laminin alpha2	Upregulation	structural scaffolding of basement membranes
glutathione S-transferase theta 2	Upregulation	Detoxification
collagen, type XI, alpha 1	Upregulation	Mediates interactions between cells and ECM
hyaluronoglucosaminidase 1	Down regulation	Digestion of Hyaluronic acid
matrix metalloproteinase 8	Down regulation	Digestion of extracellular matrix proteins

Effect on cell proliferation



Cells: Human Skin Fibroblast Monolayer Culture

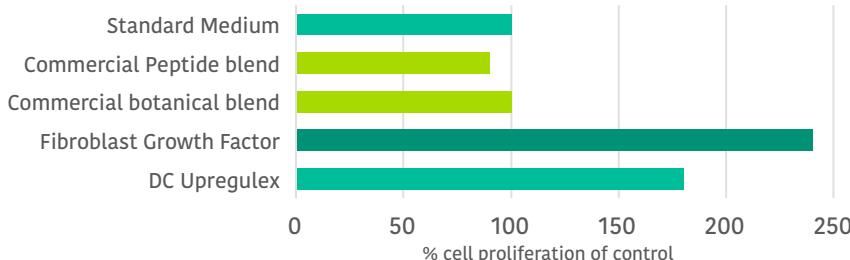
Negative Control: Untreated Cells
Test products

- DC Upregulex™ at 0.5%
- FGF (fibro blast growth factor)
- Commercial Peptide blend
- Commercial botanical blend

Measurement

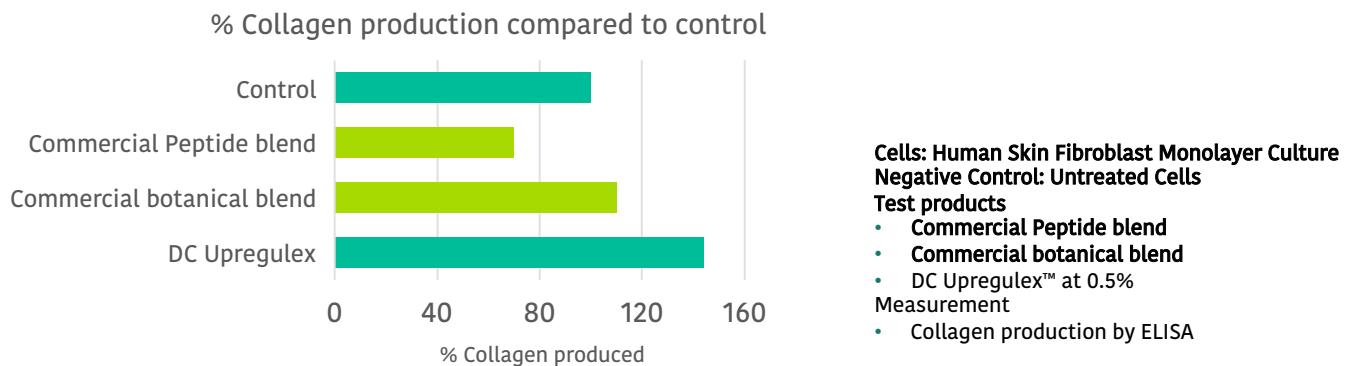
- Cell Morphology 4 hours after treatment
- Cell viability by MTT assay after 24 hours

Effect on cell Proliferation



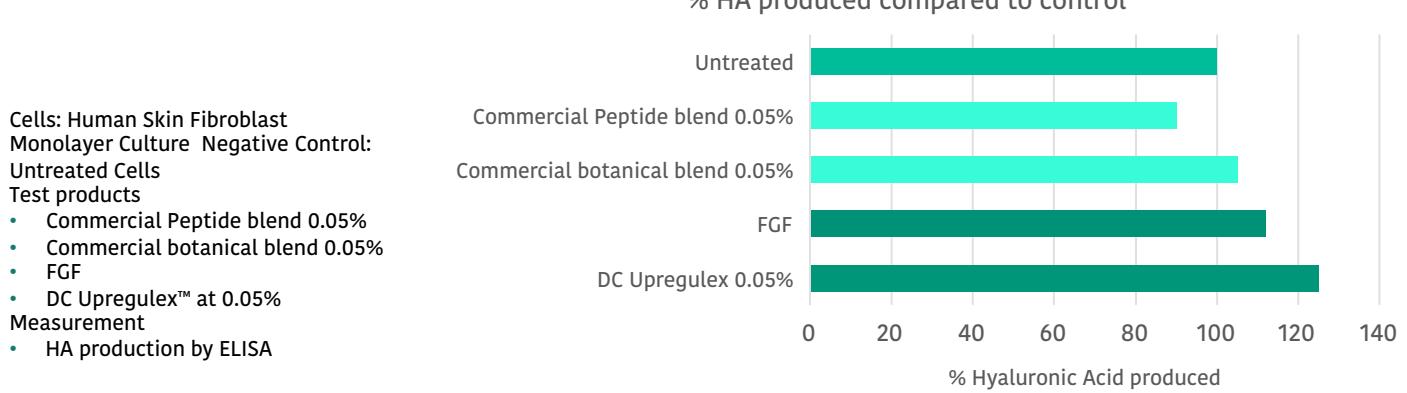
Collagen production

DC Upregulex™ promoted the synthesis of Collagen I better than commercial products and suggests its anti-aging ability.



Stimulation of HA production

DC Upregulex™ promoted the synthesis of Hyaluronic acid better than commercial products and suggests its skin moisturization properties.



DC Upregulex™

Skin peptides for skin firming and reduction of wrinkle appearance

Appearance	Milky brown liquid
Odor	Characteristic
pH	4.75 – 6.50
Specific Gravity	0.990 – 1.150
Recommended Use Level	2-6%

Preservative System: Phenoxyethanol, Caprylyl Glycol, Potassium Sorbate, and Hexylene Glycol

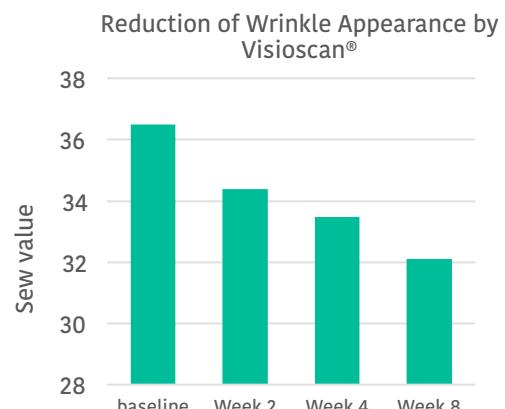
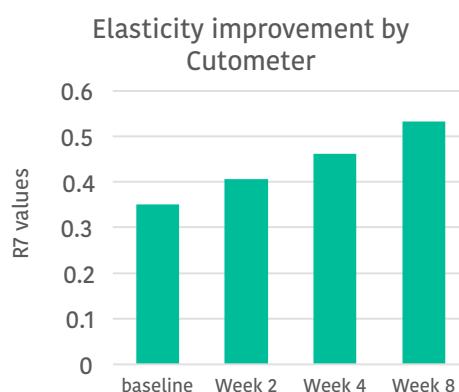
In vivo skin firming & reduction of wrinkle appearance studies

An 52% increase in skin firmness along with 12% Reduction in wrinkle severity was observed with visual improvement in skin tone, brighter skin and reduced redness.

Method

Measurement at baseline, week 2, week 4 and week 8

- Cutometer R7 parameter for skin Elasticity
- Wrinkle reduction by Visioscan®
- Visual assessment of Skin Erythema, Tone and brightness



Baseline

Week 2

Week 4

Week 8

DC Upregulex™ exhibits a skin firming benefit that is visible within 2 weeks.