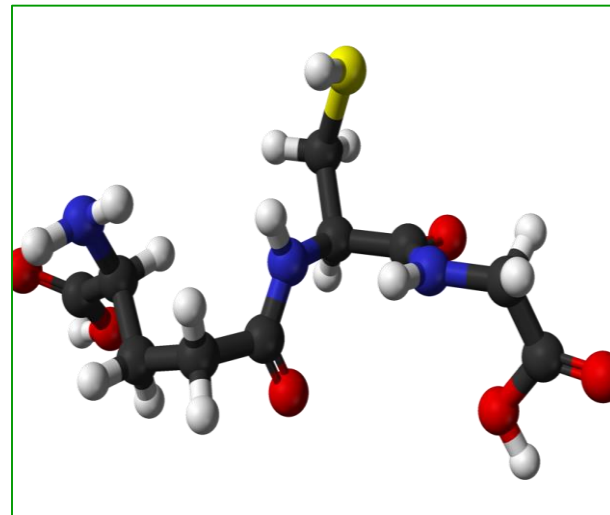
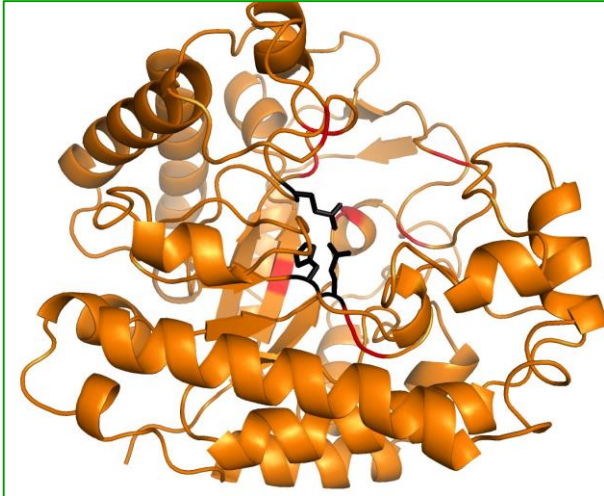


AC Collagen Prepeptide PF

Collagen Synthesis + Plumping & Firming + Seaweed Derived Peptide Technology



Tomorrow's Vision... *Today!*[®]

Product Information



20452PF – AC Collagen Prepeptide PF

Product Code: 20452PF

INCI Name: Tripeptide-29

INCI Status: Conforms

Suggested Use Level: 0.1 – 1.0%

Suggested Applications: Wrinkle Reduction, Plumping, Firming, Peptide Technology, Increases Collagen Production

Background: Collagen + Peptide Synthesis



Collagen

- Breaking down collagen with hydrolysis products a product that can increase collagen production
- Alkaline and enzymatic hydrolysis → random peptide sequences
- Glycine-Proline-Hydroxyproline (G-P-Hyp) is the active present in collagen hydrolysates

Peptide Synthesis

- Uses novel, base labile amino-protective groups
- Production of highly purified amino acid sequences
- G-P-Hyp amino acid sequence found in collagen protein structure

Collagen + Peptide Synthesis



The Science

- In the past, peptide sequences were produced by breaking down larger protein molecules – enzymatic or acidic hydrolysis
- Bovine-derived collagen typically used
- This method of peptide production is difficult to control and a multitude of peptide sequences can be produced.
- Level of G-P-Hyp is irregular and diluted

Collagen + Peptide Synthesis



Future Science

- Using basic amino acid building blocks can produce natural, biomimetic peptides
- Bio-identical activity
- Amino acids can be sourced from a variety of plants or animals

Peptides + Anti-Aging Skin Care



How is this approach different?

- Pure peptide and synthetic form of G-P-Hyp tripeptide
- Significantly increase collagen synthesis
- We know that collagen degradation causes wrinkles
- Soluble collagen products simply act as topical masks to signs of aging
- Maintaining collagen levels is a must for anti-aging skin care

AC Collagen Prepeptide PF

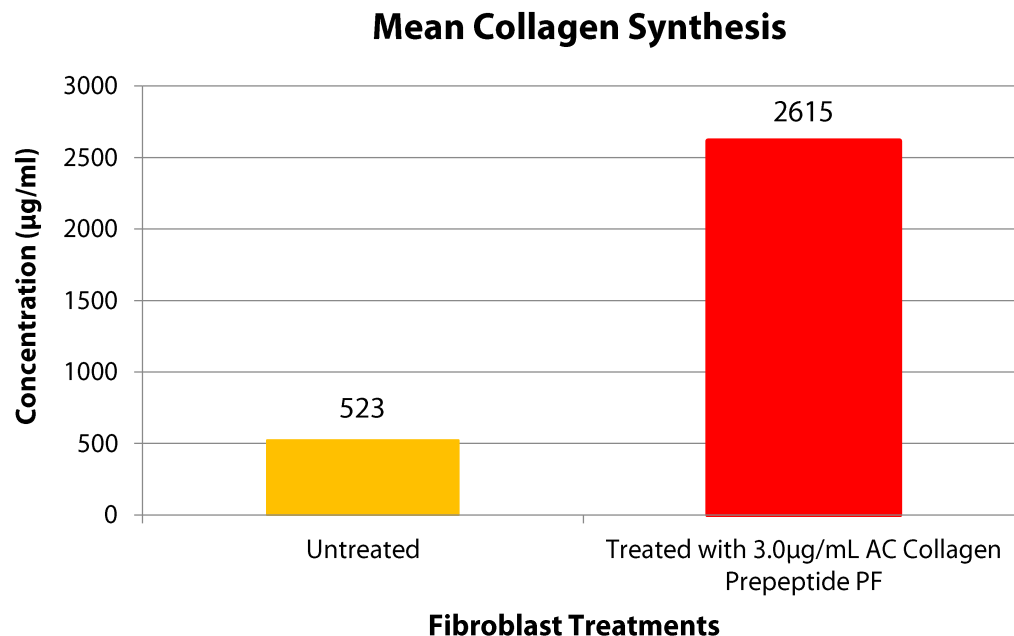


Benefits

- Pure (99.7%) G-P-Hyp tripeptide
- Proline and Hydroxyproline sourced from Glutamic Acid (proteinogenic amino acid found in seaweeds)
- Glycine derived from ammonia
- Not derived from animals or GMOs
- Molecular weight of 285 D – increases bioavailability
- Ideal for anti-aging skin care applications
- Promotes wrinkles reduction, firming and plumping

Collagen Synthesis + AC Collagen Prepeptide PF

Collagen Synthesis Assay



Protocol

- The conserved amino acid sequence of Glycine-Proline-Hydroxyproline is believed to increase *in-vivo* fibroblast activity for collagen synthesis.
- Adult human dermal fibroblasts were obtained from Cell Applications, Inc. The fibroblasts were cultured in 100-mm diameter petri dishes using Eagle's MEM supplemented with 9% FCS, ascorbic acid, nonessential amino acids, amphotericin B (1µg/ml), streptomycin (100µg/ml), penicillin (100U/ml) and Earle's salts, which were obtained from Gibco Laboratories.
- The cells were grown to confluence. The fibroblasts were then treated with 3% (30µg/ml) of AC Collagen Prepeptide PF. To determine the effect of AC Collagen Prepeptide PF on collagen production, cells were plated at 1×10^5 per well and cultured for 48 hours. Media from the wells was then collected to measure collagen I using a Capture ELISA kit (MDBiosciences).

ACTIVE CONCEPTS LLC



THANK YOU!