

State of the art ingredients · fast friendly service

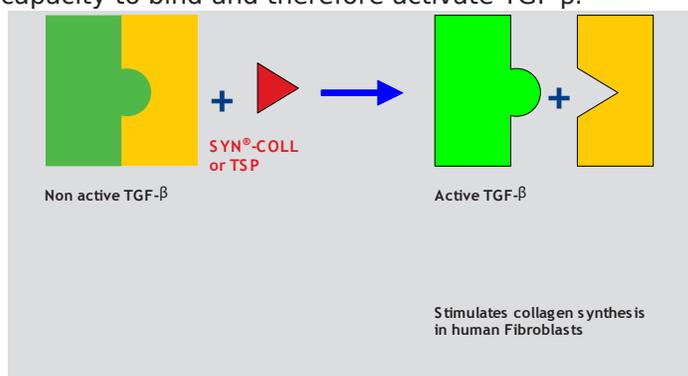
## SYN®-COLL

SYN®-COLL is a patented innovative approach that is based on many years of experience in synthesizing peptides for the pharmaceutical industry.

SYN®-COLL is a small peptide with a unique sequence to mimic the human body's own mechanism to produce collagen via TGF-β. The product is offered unpreserved, as a ready to use water soluble solution.

### Properties:

Collagen represents the main component of the ECM (Extra Cellular Matrix) of the dermal connective tissue. Thrombospondin I (TSP) is a multifunctional protein that activates the latent but biologically inactive form of TGF-β (Tissue Growth Factor). TGF-β is known as the key element in the synthesis of collagen and binds to a particular sequence in the TSP molecule. This sequence is known as ARG-PHE-LYS, being similar to this SYN®-COLL also has the capacity to bind and therefore activate TGF-β.



Source: J.E. Murphy-Ullrich, M. Poczatek, *Cytokine & Growth Factor Reviews*, 11, 2000, 59-69.

### Function:

- SYN®-COLL stimulates Collagen synthesis
- SYN®-COLL actively removes any type of wrinkle
- SYN®-COLL has in addition skin firming and moisturizing properties
- SYN®-COLL has been clinically proven to be safe and effective.

### Cosmetic application:

- SYN®-COLL is a deep penetrating, bio-active ingredient developed to remove any type of wrinkle and to repair existing stretch marks.
- As a breakthrough in wrinkle treatment SYN®-COLL can be used in any type of anti-aging product for every aspect of wrinkle reduction.

### Suggested concentration:

1-3% SYN®-COLL

### Formulation:

SYN®-COLL is a clear aqueous solution that can easily be incorporated into the aqueous phase of a formulation.

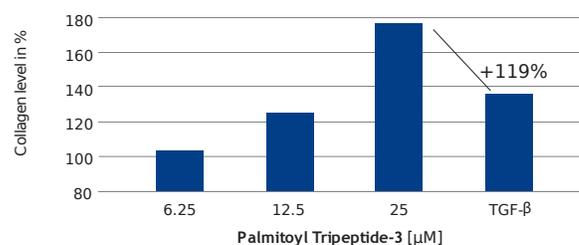
### INCI name:

Palmitoyl Tripeptide-5, Glycerine

### Efficacy tests:

*In vitro* testing in human fibroblasts, SYN®-COLL has shown excellent collagen building capacity compared to the positive standard TGF-β (0.4 nM).

COLLAGEN LEVELS IN HUMAN FIBROBLASTS



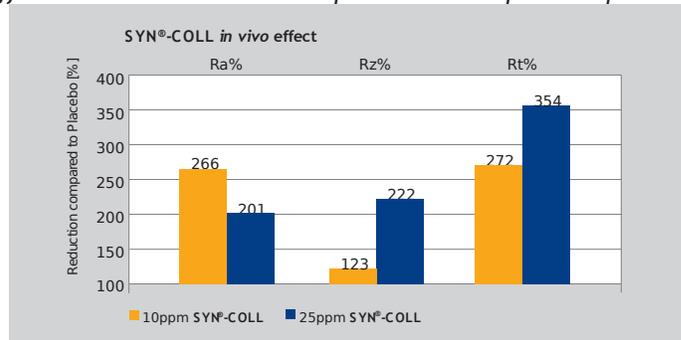
INCREASE OF COLLAGEN synthesis by 119% compared to the positive standard.

### *In vivo* test:

To prove the anti-wrinkle effect of SYN®-COLL, a study on 60 healthy volunteers has been performed. Various concentrations of SYN®-COLL (1% and 2.5% respectively) have been applied twice daily for 84 days.



Effect on wrinkles is a 350% improvement compared to placebo



Ra: Average roughness

Rz: Mean of 5 consequent regions

Rt: Maximum difference

SYN®-COLL can be considered an effective alternative to collagen injections.