

**SYN®-TACKS** organizes your Dermal-Epidermal Junction (DEJ) to reach the “top of beauty”.

gruner brennneisen communications



**SYN®-TACKS** – peptide complex that significantly stimulates all relevant proteins of the Dermal-Epidermal Junction (DEJ).

**SYN®-TACKS** has outstanding activity on skin tonicity, cellular cohesion and overall skin structure.

**pentapharm**

benefiting society through science



# SYN®-TACKS

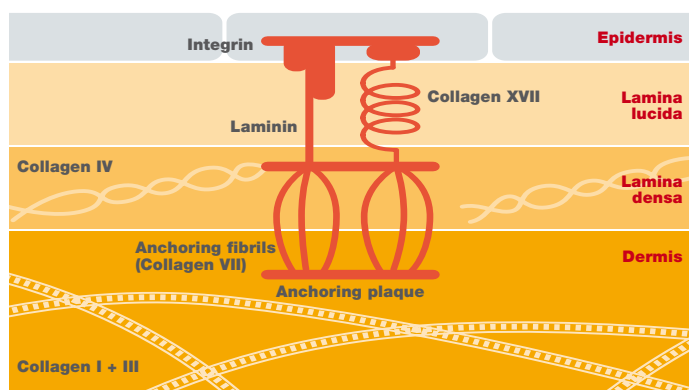
Helping skin to behave in a healthy way is the major target of cosmetic research. However, traditional approaches to skin aging appear today to be incomplete, particularly considering changes occurring at the dermal-epidermal junction (DEJ) and the evaluation of the changes of key proteins therein. The functionality of the DEJ that provides structural and functional integrity to the skin starts to change at around the age of 30. This process goes along, and is even accelerated by external influences such as UV light, with decreasing skin compactness, elasticity and a lack of skin firmness.

**Young skin → DEJ folded → even skin, no wrinkles**

**Mature skin → DEJ even → wrinkles, less elasticity and firmness**

## Properties:

**SYN®-TACKS**, the combination of two peptides offers for the first time the possibility to interact with the most relevant protein structures of the dermal-epidermal junction (DEJ). **SYN®-TACKS** significantly stimulates Laminin V, Collagen type IV, VII and XVII and Integrin at once. Only by this broad spectrum activity it is guaranteed to achieve the utmost structural benefit for the skin. By increasing the activity of these proteins the whole structure of the DEJ is improved. This finally leads to a visible cosmetic benefit.



## Function of SYN®-TACKS:

- improved structural integrity
- improved epidermal nourishment
- improved molecular communication within the skin

### this leads to:

- improved skin compactness
- reduced wrinkles
- increased skin tonicity
- increased skin firmness

## Cosmetic application:

- Skin compactness and skin restructuring treatments
- Anti aging cure and anti wrinkle products
- Skin protecting elixir and sun-care lines
- Barrier function and skin repair treatments

## Formulations:

**SYN®-TACKS** is offered as a glycerine-based aqueous solution that can easily be incorporated into the aqueous phase of a formulation even at elevated temperatures up to 80°C.

## Suggested concentration:

For skin care preparations, we recommend the addition of 1% **SYN®-TACKS**.

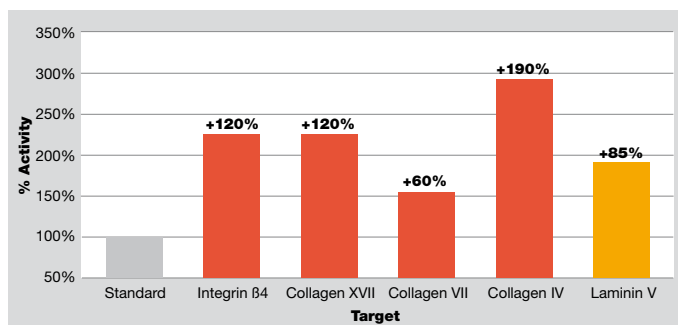
## INCI name:

Glycerin, Palmitoyl Dipeptide-5 Diaminobutyloyl Hydroxythreonine, Palmitoyl Dipeptide-6 Diaminohydroxybutyrate

## Efficacy tests:

### In vitro tests:

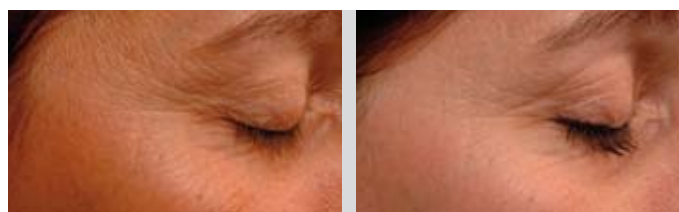
Stimulation of the relevant DEJ proteins by Palm-Lys-Val-Dab-Thr (50 µM, in red) and Palm-Lys-Val-Dab (100 µM, in orange).



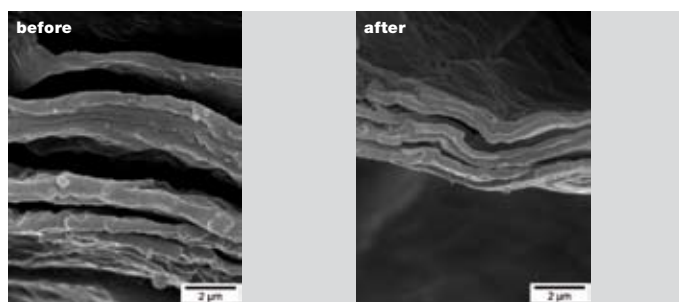
All tested proteins are significantly up-regulated.

### In vivo tests:

In various clinical studies the product has been tested at a 1% level. Measurements have been performed either at day 56 or day 84 depending on the protocol.



Macro photograph of a 45 year old volunteer after 56 days of treatment with 1% **SYN®-TACKS**.



Scanning Electron microscopy of the epidermis (tape strips) of a 62 year old volunteer after 84 days of treatment with 1% **SYN®-TACKS**.

## Summary of clinical investigation

- **SYN®-TACKS** improves after only two months skin tonicity by **32%**.
- **SYN®-TACKS** improves skin anisotropy up to **62%**.
- **SYN®-TACKS** improves cellular cohesion up to **23%**.
- Scanning electron microscopy shows a significant skin benefit.
- Macro photographs show the benefit of using **SYN®-TACKS**.
- **SYN®-TACKS** got excellent ratings in the evaluation questionnaire, **87%** would purchase the product again.