

Stretch Marks : matrix degradation by activated inflammatory cells:
(1) mast cells and (2) macrophages

Function:

Anti-stretch marks.

Definition:

Combination of *Phaseolus lunatus* extract, rutin and 2 matrikines (Pal-GHK and Pal-GQPR).
NO PRESERVATIVES

Properties:

The *Phaseolus* extract and rutin antagonize the activated inflammatory cells responsible for tissue degradation. The matrikines stimulate repair of the damaged extracellular matrix.

Characteristics:

The inflammatory reaction begins before stretch marks are visible and continues as they appear on the skin from a pink colour fading to white.

REGESTRIL™ prevents and reduces stretch marks by slowing down the degradation and by promoting regeneration of the extracellular matrix.

INCI name:

(Check PCPC on-line dictionary for latest INCI name)
Butylene Glycol – Water – Cetyl Hydroxyethylcellulose – Rutin – Palmitoyl Oligopeptide – Palmitoyl-Tetrapeptide-7*
– Phaseolus Lunatus (Green Bean) Extract
* former INCI name: Palmitoyl Tetrapeptide-3

Applications:

Anti-stretch mark products.

Formulation:

Water soluble.
Incorporated at the final stage of the formulation

Recommended use level:

2 to 4%



POST PARTUM
WEIGHT GAIN
ADOLESCENCE
COSMETIC
SURGERY
BODYBUILDING
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REGESTRIL™ prevents and rubs away stretch marks

Reduces the depth of stretch marks by:



-72%

In vitro tests

Inhibition of proteolytic enzymes

During the inflammatory phase contributing to the formation of stretch marks, proteolytic enzymes are released such as trypsin, chymotrypsin (mast cell degranulation) and leukocyte elastase (macro-phages).

Trypsin, chymotrypsin or elastase are incubated with REGESTRIL™ at different concentrations. The inhibition kinetics are monitored for a few minutes.

Synthesis of matrix macromolecules

Human fibroblasts are incubated with REGESTRIL™ at 2%. After incubation, the collagen I and the fibronectin produced are quantified by immunodosage and visualised by immunofluorescence.

- Synthesis of collagen I ————— +102%
- Synthesis of fibronectin ————— + 91%

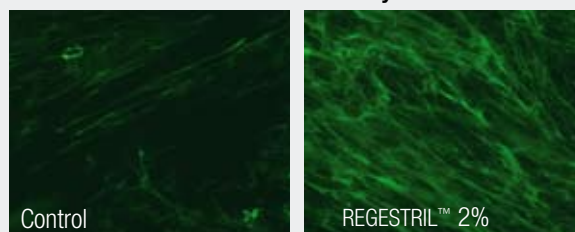
REGESTRIL™ fights against the degradation of the extracellular matrix contributing to the formation of stretch marks by:

- antagonising the destructive effect of proteolytic enzymes.
- stimulating the neosynthesis of the matrix macromolecules.

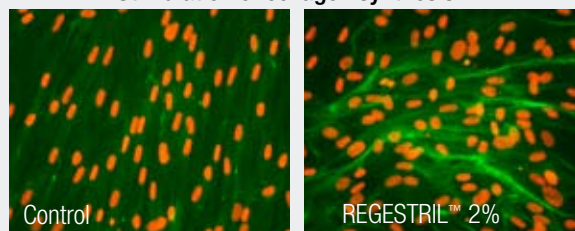
Enzymatic activities	REGESTRIL™			
	1%	2%	3%	4%
Trypsin	-4%	-14%	-32%	-58%
Chymotrypsin	-3%	-7%	-11%	-15%
Elastase	-41%	-66%	-80%	-90%

REGESTRIL™ inhibits, in a dose-dependent and significant manner, the proteolytic enzymes released during the formation of the stretch mark.

Stimulation of fibronectin synthesis



Stimulation of collagen synthesis



In vivo tests

Anti-stretch mark efficacy

13 women with stretch marks on the abdominal area (post pregnancy) / Twice daily application of a cream containing 2% REGESTRIL™ / 56 days / The anti-stretch mark efficacy was assessed by echography and dermatological evaluation.

Colour	-21.7%	p<0.05
Relief	-21.9%	p<0.05
Width	-26.7%	p<0.01
Skin thickness	+10.8%	p<0.05
Stretch mark depression	-72.5%	p=0.07

REGESTRIL™ shows a visible and significant anti-stretch mark efficacy. After 2 months use, stretch marks fade and skin becomes smoother.



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