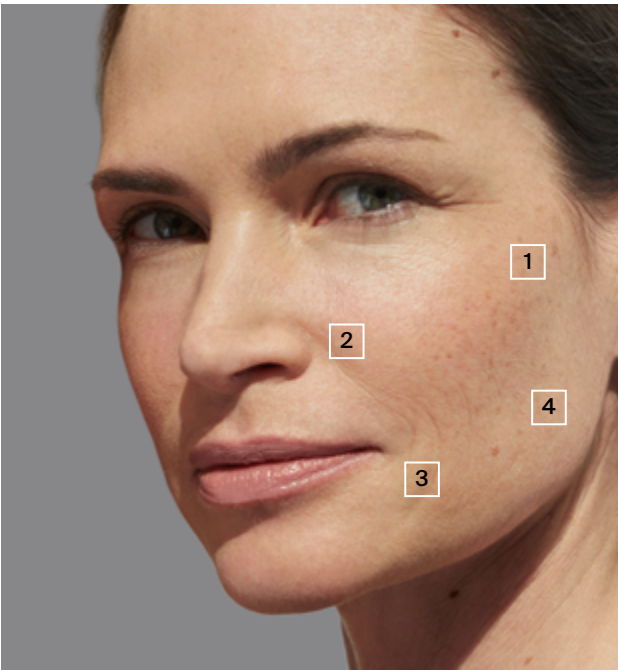


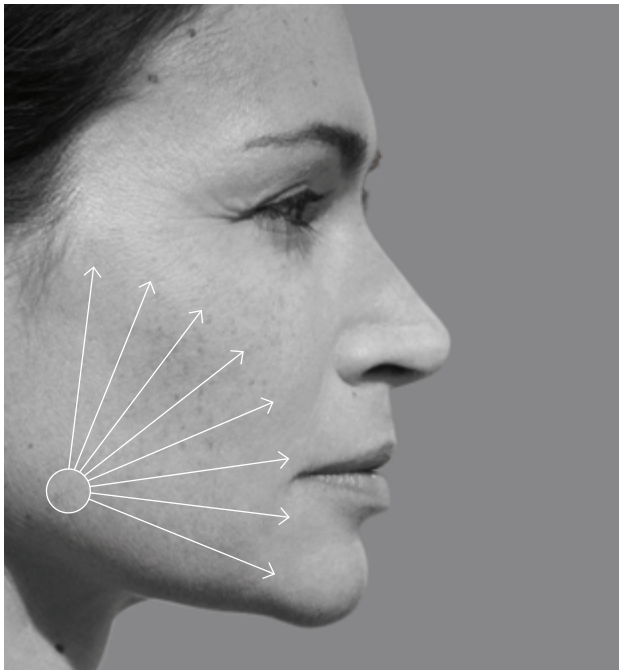
Reticular dermis

4 Strategic injection points

TKN HA3 is injected into the reticular dermis. It can be applied using any technique (needle or cannula), but **TOSKANIMED** strongly recommends the 4-point protocol.⁴ This method is the most effective at optimizing results and reducing complications and discomfort for the patient.



0,2 ml per point with 30G x 4mm **needle**.



0,8 ml per hemiface with **cannula** 25G x 70mm.

Biorevitalizes

- Provides deep and long-lasting hydration by retaining water.¹
- Immediately improves skin texture and provides a glowing effect.⁶
- Reinforces the skin barrier, soothing and regenerating dehydrated skin.⁷
- Rejuvenates senescent fibroblasts.¹⁵

Biostimulates

- Long-term increase in skin firmness and elasticity through fibroblast activation. Induction of collagen and elastin synthesis.⁸
- Extracellular matrix structural improvement helps regulate melanin levels and reduce erythema.⁹
- Improvement of facial contour through extracellular matrix reorganization.¹⁰

Regenerates

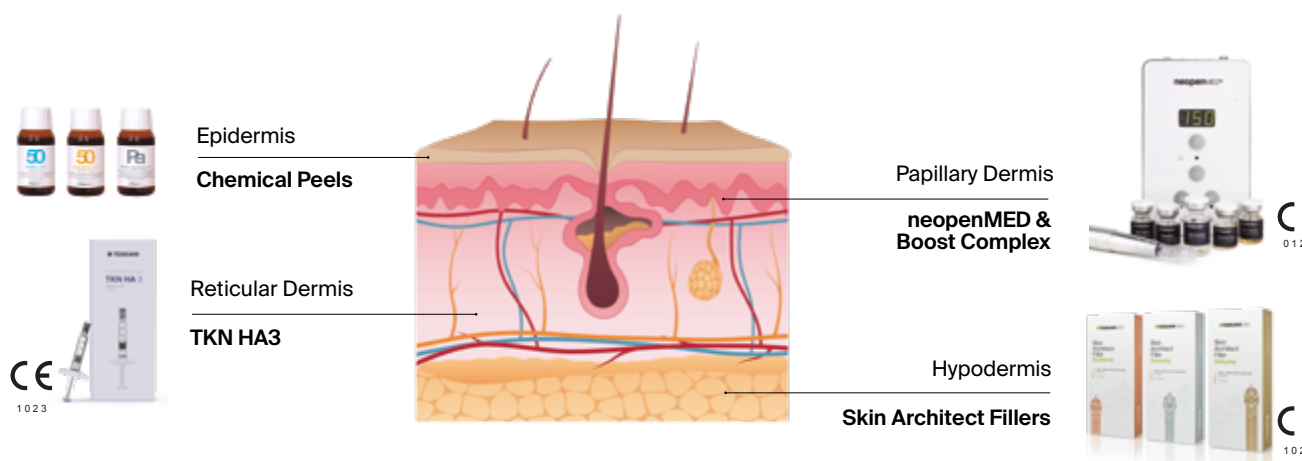
- Repairs aged and damaged skin, promoting dermal density and firmness.¹¹
- Promotes fibroblast spreading and proliferation.¹²
- Stimulates Adipose Derived Stem Cells, promoting adipocyte proliferation and maturation, restoring the loss of adipose tissue volume.^{13,14}

Mesosynergy®

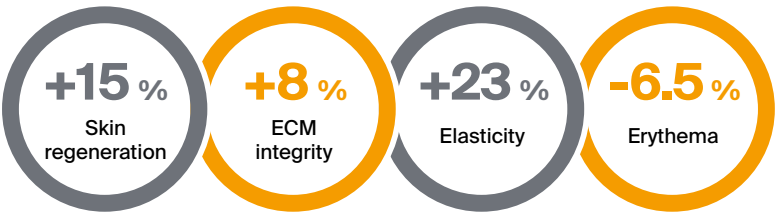
Biostimulation at every skin layer

With the strong belief that the best results come from the combination of treatments, **TOSKANIMED** presents an effective, safe and holistic approach to prevent and reverse the signs of aging.

Each complementary treatment addresses the specific needs of each skin layer and fibroblast subpopulation, improving results and durability. The results of **TKN HA3** are enhanced by using it as part of this protocol.



Average TKN HA3 results¹⁹



References

1. Hemming R, Martin DC, Slominski E, et al. (2008) Mouse Hyal3 encodes a 45- to 56-kDa glycoprotein whose overexpression increases hyaluronidase 1 activity in cultured cells. Glycobiology. 18:280-9.
2. Liang J, Jiang D, Noble PW. Hyaluronan as a therapeutic target in human diseases. Adv Drug Deliv Rev 2017;97:186-203. DOI: 10.1016/j.addr.2015.10.017
3. Kuo J-W. Practical aspects of Hyaluronan based medical products. Boston: Taylor and Frances. 2005: pp 1-209
4. deFrutos Pachón E. Técnica de los 4 puntos, el concepto de coste-efectividad en Medicina Estética. Medicina Estética. 2016;47(2):38-43. <https://doi.org/10.48158/MedicinaEstetica.04702>
5. Jang, M., Baek, S., Kang, G., Yang, H., Kim, S. and Jung, H. Dissolving microneedle with high molecular weight hyaluronic acid to improve skin wrinkles, dermal density and elasticity. Int J Cosmet Sci. 2020;42:302-309.
6. Muto J, Sayama K, Gallo RL, Kimata K. Emerging evidence for the essential role of hyaluronan in cutaneous biology. J Dermatol Sci. 2019;94(1):190-195
7. Kavasi R-M, Berdiaki A, Spyridaki I, Corsini E, Tsatsakis A, Tzanakakis G, et al. HA metabolism in skin homeostasis and inflammatory disease. Food Chem Toxicol. 2017;101:128-38. DOI: 10.1016/j.fct.2017.01.012
8. Palmieri A, Avantaggiato A, Cura F, Papalia R, Casale M, Bressi F, Scapoli L. Effect of biostimulation on oral fibroblast: a pilot study. J Biol Regul Homeost Agents. 2017 Dec 27; 31(4 Suppl 2):139-145.
9. Lorente, Enrique; Pérez, María Llanos. 2022. High molecular weight hyaluronic acid (HMW-HA) for the treatment and prevention of skin aging. TKN HA3® for the skin aging. Aesthetic medicine. Volume 8, Nº 4, October - December 2022, pages 12-20
10. Tejero P, Mota S. Bioestimulación: ¿Qué hay de nuevo? Medicina estética. 2022 Nov 08; 73(4).
11. Mahajan AS, Pilling D, Gomer RH. High and low molecular weight hyaluronic acid differentially regulate human fibrocyte differentiation. PLoS One. 2011;6(10):e26078. doi: 10.1371/journal.pone.0026078. Epub 2011 Oct 11. PMID: 22022512; PMCID: PMC3191166
12. Stern R, Jedrzejewski MJ. Hyaluronidases: their genomics, structures, and mechanisms of action. Chem Rev. 2006;106:818-839
13. Nadra K, Andre M, Marchaud E, et al. A hyaluronic acid-based filler reduces lipolysis in human mature adipocytes and maintains adherence and lipid accumulation of long-term differentiated human preadipocytes. J Cosmet Dermatol. 2021;20(5):1474-82.
14. Kruglikov IL, Wollina U. Soft tissue fillers as non-specific modulators of adipogenesis: change of the paradigm? Exp Dermatol. 2015;24(12):912-5.
15. M L L. Pérez, B. García, A. Palacio, L. Molina. Comparative In Vitro Study of the Effects Produced by Different Hyaluronic Acids on the Extracellular Matrix and Fibroblasts. in IRJPMs, Volume 7, Issue 5, 2024
16. Efficacy study of TKN HA3 in 19 female volunteers between 25 and 60 years of age. TOSKANI Clinical Unit 2023.
17. Pilot efficacy study of TKN HA3 in 6 male and female volunteers between 44 and 70 years of age. TOSKANI Clinical Unit 2021.
18. Pilot efficacy study of TKN HA3 in 11 male and female volunteers between 50 and 65 years of age. TOSKANI Clinical Unit 2023.
19. Study Multicenter efficacy study of TKN HA3 in 119 male and female volunteers. TOSKANI Clinical Unit 2023, Teknon Medical Center (results were measured using the Cutometer and Mexameter probes).

TOSKANIMED
PASSION FOR SKIN®

+34 93 844 78 25
info@toskani.com
toskanimed.com



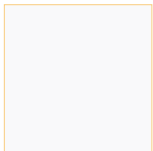
TKN-65-3178-2501

TOSKANIMED

TKN HA3

Pure Hyaluronic acid of **very high molecular weight**

LAYERS
OF BEAUTY



**REGENERATIVE MEDICINE FOR SKIN REJUVENATION
WITH MINIMIZED INFLAMMATION**

TKN HA3

Volume	1.6 ml
Concentration	9 mg/ml
Recommended needle	30G / 4 mm
Recommended cannula	25G / 70 mm
Indications	Anti-aging, Skin laxity and sagging, Fine lines and wrinkles, Dehydrated skin
Targeted Areas	Face, Neck

Unique molecular weight in the market with unique properties

+ HYAsep® Technology

Preserves the 3,000 kDa HA molecular weight by eliminating thermal sterilization, therefore avoiding the use of cross-linking agents during all manufacturing stages.

+ Perfect Rheology

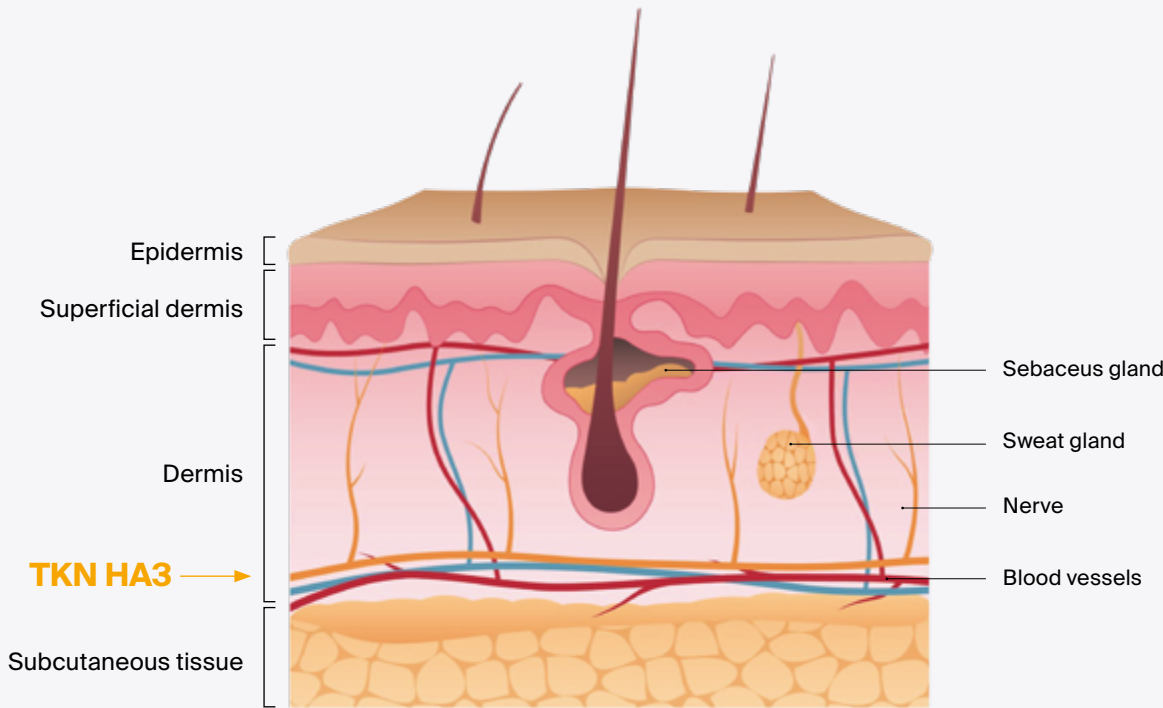
The balance between molecular weight and concentration confers unique viscoelastic properties to an ease and safe injection.

+ High Biocompatibility³

TKN HA3 mimics the skin's endogenous hyaluronic acid, ensuring excellent tissue integration, low endotoxin levels, and reduced inflammation.

+ Enhanced effect¹⁻²

VHMW hyaluronic acid shows more resistance to degradation by the skin hyaluronidases, ensuring longer biostimulating effects on the skin.



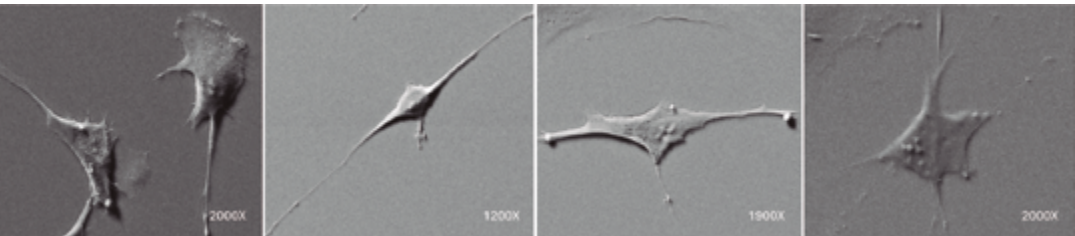
Clinical evidence

In vitro study

TOSKANIMED has performed an *in vitro* study to demonstrate the efficacy of the product, showing superior results compared to products with equivalent performance.¹⁵

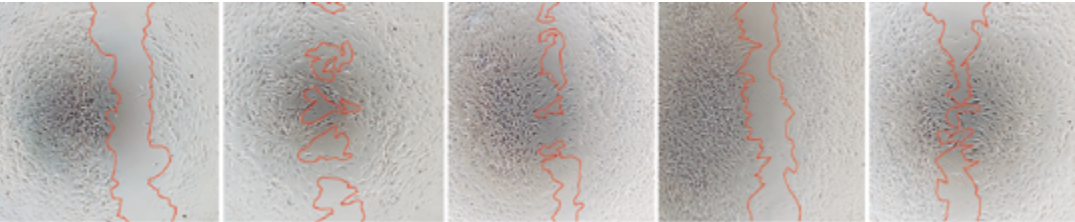
Rejuvenates senescent fibroblast

Young and healthy human dermal fibroblasts have an elongated morphology.



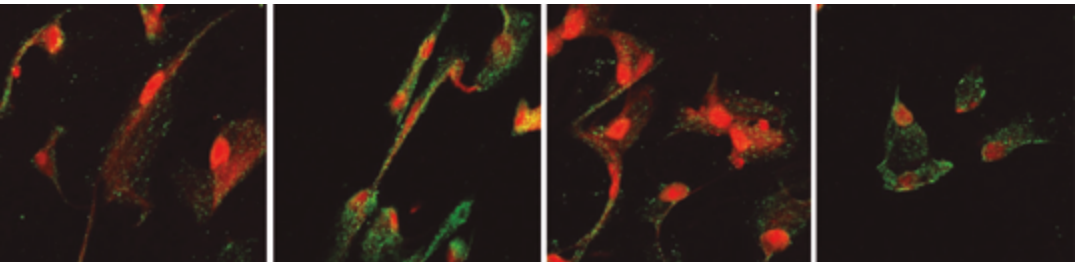
Enhances regeneration

Red lines show tissue regeneration (human dermal fibroblasts) after an scrath injury.



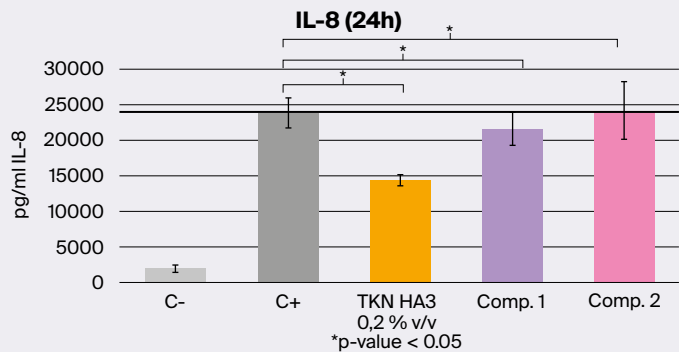
Promotes elastin synthesis

Human dermal fibroblasts elastin production is shown in green fluorescence.



Reduces inflammation

Lower levels of IL8 (inflammation marker) in THP-1 monocytes.



In vivo study

The before and after photos showcase the results 30 days after three sessions, with one session conducted every 20 days using different techniques.

Improved skin firmness¹⁹



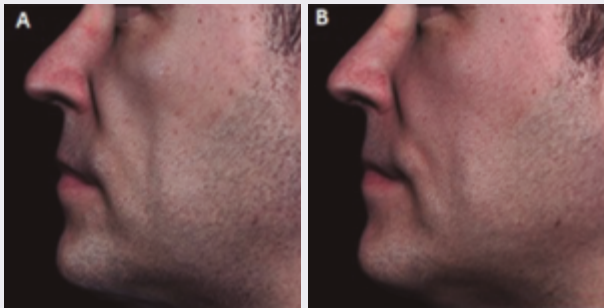
Deep hydration and brightness¹⁹



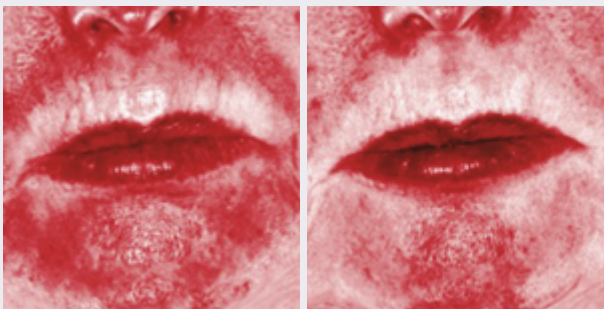
Wrinkle reduction¹⁶



Subcutaneous fat regeneration¹⁷



Decrease in erythema¹⁸



Skin tone evening¹⁶

