

# PROTANDIM<sup>®</sup>

## healthy glow essentials

ACTIVATION STACK

EN PROTANDIM<sup>®</sup> & TRUESCIENCE<sup>®</sup> PRODUCTS

### *product information sheet*



Vibrant, youthful skin comes from within when you pair 2 products with beautifully ageless benefits. Together, TrueScience<sup>®</sup> Liquid Collagen and Protandim<sup>®</sup> Nrf2 Synergizer<sup>®</sup> help replenish collagen from within and defend your skin health. Liquid Collagen helps activate your body's ability to create collagen and helps reduce the appearance of fine lines and wrinkles as it increases your skin's moisture and improves texture. Protandim<sup>®</sup> Nrf2 Synergizer<sup>®</sup> helps minimize visible effects caused by oxidative stress and activates the production of antioxidants. You'll feel good in your skin and glow from within.\*

#### *Benefits*



Helps maintain healthy hair, skin, and nails to promote a youthful appearance\*  
**TrueScience<sup>®</sup> Liquid Collagen**



Helps activate, replenish, and maintain collagen production to support skin elasticity and firmness\*  
**TrueScience<sup>®</sup> Liquid Collagen**



Helps protect against the visible effects of oxidative stress\*  
**TrueScience<sup>®</sup> Liquid Collagen**  
**Protandim<sup>®</sup> Nrf2 Synergizer<sup>®</sup>**



Supports the body's natural ability to repair and rejuvenate its own cells\*  
**Protandim<sup>®</sup> Nrf2 Synergizer<sup>®</sup>**



Significantly reduces cellular stress through Nrf2 activation\*  
**Protandim<sup>®</sup> Nrf2 Synergizer<sup>®</sup>**

\*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

## Tips

Glowing skin can come from within. When you prioritize habits that activate your collagen production, increase circulation, and give you the rest you need, you'll glow in no time!



### Cleanse and Moisturize Your Skin

It's not news that washing your face keeps your skin clean, but did you know that regularly washing your face keeps your skin hydrated? You get a clean, radiant glow while removing debris and oil. Lock in moisture with facial lotion or serum.



### Drink Plenty of Water

Water flushes out the toxins on your skin and inside your body. Proper hydration helps your cells fight against premature aging, aids in cell regeneration, and assists in carrying oxygen and nutrients to the skin.



### Prioritize Quality Sleep

Beauty sleep earned its name for a reason. While you sleep your cells renew, circulation improves, cortisol levels decrease, and your body makes collagen. You can avoid looking washed out and stressed just by sleeping enough.



### Make Time for Exercise

Exercise increases blood circulation and makes you sweat, which improves your skin health. It's a great way to release stress, and it improves everything from your mental well-being to quality of sleep. All of these things, in turn, boost your skin's glow.

## Directions

For best results, take 1 Protandim® Nrf2 Synergizer® caplet and drink 1 bottle of Liquid Collagen per day.

Please visit [LifeVantage.com](https://LifeVantage.com) to find the supplement facts for individual products.

## Study Results



increased collagen density by **100%** \*<sup>3</sup>



depth of crow's feet reduced by **22%** \*<sup>1</sup>



skin roughness decreased by **10%** \*<sup>1</sup>



blood catalase (CAT) level increased by **202%** \*<sup>1</sup>



skin elasticity Increased by **8%** \*<sup>1</sup>



oxidative stress reduced by **40%** in 30 days \*<sup>2</sup>

<sup>1</sup> Results based on 8-week clinical trial on key ingredients in Liquid Collagen. Individual results may vary.

<sup>2</sup> Results based on a 2006 human clinical trial.

<sup>3</sup> Results based on a cell culture study on a key ingredient in Liquid Collagen.

## Share

Let your friends and family learn about your experience on social media!

Tag @LifeVantage for a chance to be featured as you show off your glow.

## *Cell Study Reveals New Benefits of Healthy Glow Essentials Stack*

An in-house cell study found that when Protandim® Nrf2 Synergizer® is taken together with TrueScience® Liquid Collagen, it helps fibroblast cells reduce unnecessary signals to the immune system, recover from a constant stress cycle, and get back to more optimal function. This makes it an innovative way to support healthy connective tissues that provide strength and structure throughout the body.\*

## *Protandim® Nrf2 Synergizer® and TrueScience® Liquid Collagen Study Results*

Due to the compelling benefits of both TrueScience® Liquid Collagen and Protandim® Nrf2 Synergizer® alone, global gene expression by RNA sequencing was performed to investigate if synergy existed between the 2 products. Fibroblasts were studied, because they are an integral part of structural organs, such as intestines, skin, spleen, brain, skin, joints, lung, liver, kidney, and blood vessels. They provide the backbone to the vascular system and skeletal muscles, bones, and tendons—acting as critical components in each of these organs. Because fibroblasts are so ubiquitous, they impact health, structure, and function inside and outside of the body.

Fibroblasts also play a central role in immune reactions—how the body physically responds to stresses. When fibroblast cells were exposed to the ingredients in Protandim® Nrf2 Synergizer® and TrueScience® Liquid Collagen, there were expected and unexpected synergies revealed.

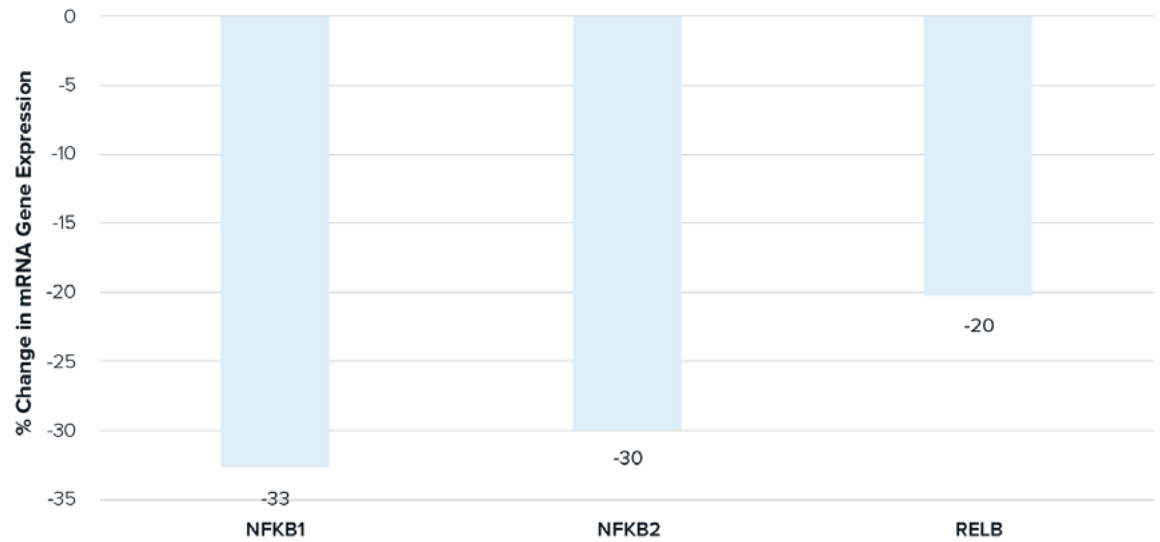
The top pathways significantly affected by Protandim® Nrf2 Synergizer® were all Nrf2/antioxidant-associated pathways. And the top pathways for TrueScience® Liquid Collagen were associated with collagen/structural-component production. TrueScience Liquid Collagen also demonstrated a small impact on immune-modulatory pathways.\*

The combination of Protandim® Nrf2 Synergizer® and TrueScience® Liquid Collagen showed a further, unexpected synergistic effect on the activation/deactivation of pathways involved in immune and cellular stress responses. These effects were most evident in a particular pathway: NF-κB (nuclear factor kappa-light-chain-enhancer of activated B cells).\*

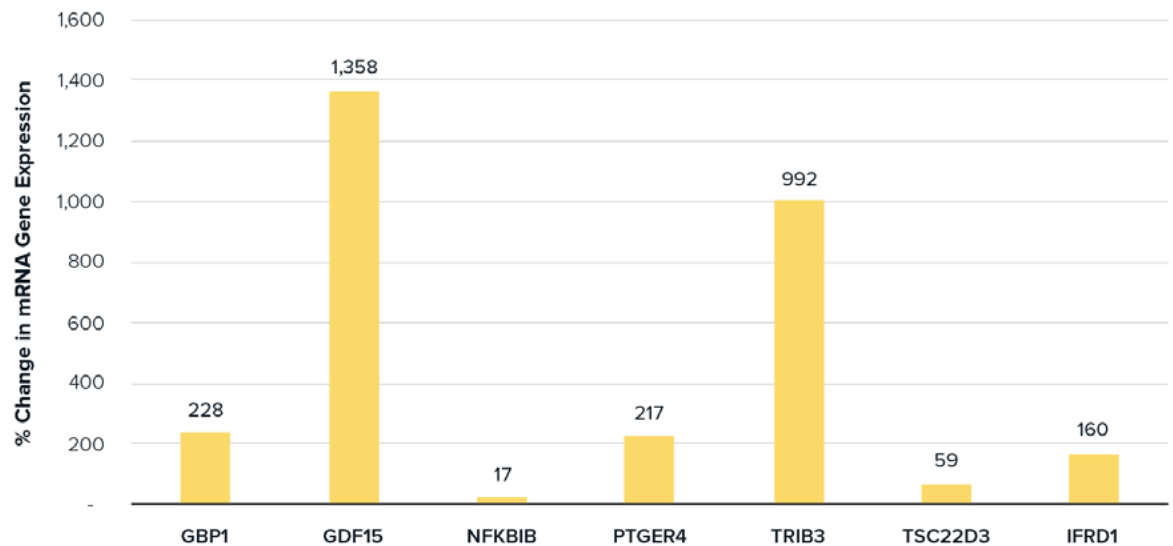
The NF-κB complex is a master switch that allows the cell to rapidly respond to stress and other insults via activation of immune reactions. It works by influencing specialized signaling proteins called cytokines (cell modulators), which balance the cellular stress response, as well as additional helper proteins that can produce both positive or negative effects. Due to a number of factors, our bodies are constantly under stress and signaling for immune responses. This means there is a fine balance of activating/deactivating the NF-κB master complex to respond to those stresses.

If immune reactions become imbalanced due to excessive stress signals, the hyper-reactivity can damage fibroblasts. Poor fibroblast function can negatively impact integrity of connective and structural tissues. This can result in less resilience throughout the body, including joints that don't recover from inflammation after intense activity as quickly or skin that looks prematurely older or feels more irritated. Only when used together, the combination of Protandim® Nrf2 Synergizer® and TrueScience® Liquid Collagen significantly downregulated/deactivated some of the genes involved in the NF-κB complex, suggesting fewer proteins are available to make the master switch NF-κB. Genetic expression of RELB, NFKB1, NFKB2 was reduced by 20%, 33%, and 30% respectively.\*

## Study Results (continued)

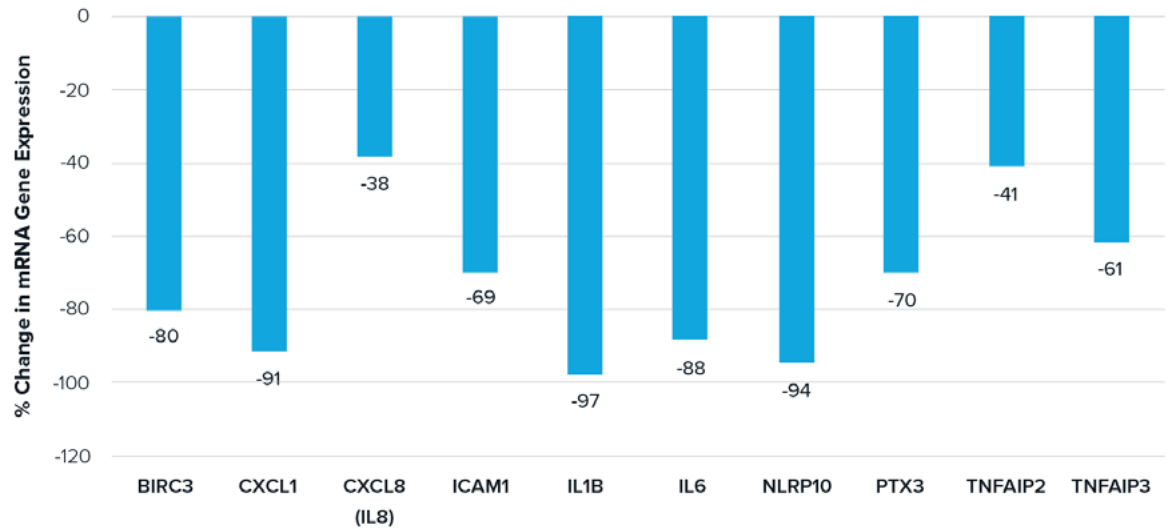


At the same time, many additional genes were significantly upregulated that either interfere with the assembly or activity of the NF- $\kappa$ B complex, such as GBP1, GDF15, NFKBIB, PTGER4, TRIB3, TSC22D3, and IFRD1 genes. These genes were significantly upregulated by 228%, 1358%, 17%, 217%, 992%, 59%, and 160% respectively.\*



As a result of downregulating the components to the NF- $\kappa$ B complex, the end products of unwanted cell modulators mRNA gene expression significantly decreased. BIRC3, CXCL1, CXCL8, ICAM1, ILB1, IL6, NLRP10, PTX3, TNFAIP2, and TNFAIP3 were reduced by 80%, 91%, 38%, 69%, 97%, 88%, 94%, 70%, 41%, and 61%, respectively.\*

## Study Results (continued)



By supporting upregulation of cellular pathways that inhibit NF- $\kappa$ B and downregulation of those that increase it, the synergistic effects activated by Protandim® Nrf2 Synergizer® and TrueScience® Liquid Collagen break the cycle of stress that can damage fibroblasts.\*

In simple terms, the products in the Healthy Glow Essentials Stack help your fibroblasts in 3 ways: Fibroblasts are able to stop sending unnecessary signals for immune responses that may become hyper-reactive and cause more damage. They can recover from a constant stress cycle by supporting balanced immune reactions. They can help restore more optimal function to maintain balanced collagen production and formation and promote stronger, more resilient connective tissues. Healthy Glow Essentials help support health you can feel on the inside and see on the outside.\*

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