



## Formula 12

### NRF2 SUPPORT

A custom and powerful combination of key ingredients with antioxidant properties.

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### AT A GLANCE

The NRF2 (Nuclear factor erythroid 2-related factor 2) pathway is a critical cellular defense mechanism that plays a pivotal role in maintaining overall health and homeostasis within the body. While it is not directly involved in hormone regulation, its importance lies in its ability to protect cells from oxidative stress, inflammation, and damage caused by various environmental and endogenous factors.

NRF2 is a transcription factor that is primarily found within the cytoplasm of cells. Under normal conditions, NRF2 is bound to a protein called Kelch-like ECH-associated protein 1 (Keap1). Keap1 acts as a regulator, keeping NRF2 in an inactive state.

When cells are exposed to stressors such as oxidative stress, toxins, or inflammation, NRF2 is liberated from Keap1 and translocates into the cell nucleus. In the nucleus, NRF2 binds to antioxidant response elements (AREs) on DNA, initiating the transcription of various genes encoding antioxidant and detoxification enzymes. These enzymes include superoxide dismutase (SOD), catalase, glutathione peroxidase, and heme oxygenase-1 (HO-1), among others.

The products of these genes help neutralize free radicals, reduce oxidative stress, and detoxify harmful substances including catechol estrogens, thereby protecting cells from damage. A healthy NRF2 pathway can indirectly contribute to overall hormonal balance and overall well-being by preserving the integrity and function of cells and tissues involved in hormone production and regulation.



### KEY BENEFITS



A unique blend of potent antioxidant nutrients focused on supporting the NRF2 pathway – the primary regulator of antioxidant response elements (AREs) at an intracellular level.

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Highlights ultra-potent sulforaphane in the form of TruBroc to maximize detox response and reduce oxidative stress

## FORMULA ANALYSIS

### TruBroc®

TruBroc is a patented form of stable and bioavailable sulforaphane. The unique stability of TruBroc is achieved through a proprietary process that preserves the enzymatic reaction necessary for sulforaphane production and ensures its stability during storage and digestion. This characteristic is essential for harnessing the full potential of sulforaphane for therapeutic and preventive purposes.[1] Sulforaphane is a potent antioxidant made by cruciferous vegetables (especially in their sprouting period), that can neutralize harmful free radicals and reduce oxidative stress within cells. Sulforaphane has been shown to enhance the body's natural detoxification processes, aiding in the elimination of harmful environmental toxins and carcinogens. Furthermore, it promotes the health of mitochondria, the cellular powerhouses, which is essential for overall cellular function and longevity. [2]

### Mustard Seed

Sulforaphane, an isothiocyanate compound, exhibits a myriad of health-promoting properties, including antioxidant, anti-inflammatory, and anticancer effects. It is typically derived from broccoli and other cruciferous vegetables. However, sulforaphane formation requires myrosinase, an enzyme found primarily in these vegetables. Mustard seeds, another cruciferous plant, are rich in myrosinase and have the potential to enhance sulforaphane bioavailability when added to sulforaphane supplementation. The combined administration of mustard seed and sulforaphane has been associated with greater antioxidant and anti-inflammatory effects compared to sulforaphane supplementation alone. This synergy may result from increased sulforaphane absorption and activity, contributing to more effective reduction of oxidative stress and inflammation[3].

### Camellia sinesis

We use a concentrated extract of green tea, the catechin epigallocatechin gallate (EGCG), in our NRF2 formulation. EGCG and other catechins have been shown to modulate NRF2 activity through direct interaction with NRF2 or its regulatory protein Keap1. This interaction can promote NRF2 translocation to the nucleus, enhancing its transcriptional activity, protecting cells from the harmful influence of free radicals and oxidative stress.[4]

### Pomegranate extract

Pomegranate polyphenols, particularly ellagitannins, exhibit potent antioxidant properties, effectively scavenging free radicals and reducing cellular oxidative stress. By reducing the oxidative burden on cells, pomegranate compounds may indirectly support NRF2 activation by removing a critical inhibitory factor (Keap1).[5] The added benefit of utilizing pomegranate is to resolve free radical burden that can result from the up regulation of our natural detoxification process. Pomegranate stimulates production of SOD, binds to transition metal ions like iron and copper, reduces inflammation and preserves nitric oxide (NO-) and reduces free radical burden, playing both a protective and supportive role in our custom formulation. [6]

## Meet Restore

Designed to move, alter and transform our detox intermediates into less reactive and more easily eliminated by-products. Supporting our hormone balance.



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## SUPPLEMENT FACTS

Serving Size 2 Capsules  
Servings Per Container 30

Amount Per Serving	% Daily Value
Vitamin E (as d-alpha tocopheryl succinate)	15 mg 100%
Selenium (as L-Selenomethionine)	0.4 mcg < 1%
N-acetyl-L-cysteine	300 mg †
Green Tea ( <i>Camellia sinensis</i> ) (leaf) extract (Total polyphenols 98%, 50% EGCG <1% Caffeine)	225 mg †
Broccoli ( <i>Brassica oleracea italica</i> ) (seed) powder extract (13% glucoraphanin) (TrueBroc®)	200 mg †
Pomegranate ( <i>Punica granatwn</i> ) (fruit) extract (40% Ellagic acid)	100 mg †
Coenzyme Q10	50 mg †
Mustard Powder ( <i>Sinapis alba</i> / <i>Brassica hirta</i> ) (seed)	20 mg †

† Daily Value not established

**Other ingredients:** Vegetable capsule (hypromellose), microcrystalline cellulose, and magnesium stearate.

## SUGGESTED USE

Take 2 capsules once a day with a meal or as directed by your healthcare practitioner.

**CAUTION:** Do not use if pregnant or nursing. Consult your physician before use if you have a medical condition, or taking any medication. Do not use product if the safety seal is broken or damaged. Keep out of reach of children.

## MADE WITHOUT

Corn, soy, or wheat.

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

## REFERENCES

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