Oxidative Stress Inhibitor

Clinical Applications

- Antioxidant Support
- Anti-Inflammatory Support
- Detoxification Enhancement

Developed by Dr. David Perlmutter, Oxidative Stress Inhibitor's exclusive formula is designed to activate the Nrf2 genetic pathway that regulates the production of important antioxidants such as glutathione and superoxide dismutase (SOD), as well as detoxification enzymes including glutathione- S transferase, while down-regulating inflammatory factors such as NF-kB. Each of the ingredients in this product is backed by extensive research in peer-reviewed journals.

All 3rd Opinion Inc Formulas Meet or Exceed cGMP Quality Standards

Discussion

Nrf2 (NF-E2-Related Factor 2), a transcription factor in humans that is encoded by the NFE2L2 gene, regulates the expression of a set of antioxidant and detoxifying genes, protecting the body from the ravages of oxidative stress-related conditions, including (but not limited to) those affecting the brain and nervous system. In an unstressed state, Nrf2 is anchored in the cytoplasm by its specific inhibitor, Keap1 (Kelch-like ECH-Associated Protein 1). Keap1 functions as a sensor for oxidants and electrophilic xenobiotics. In the presence of any of these substances, Keap1 gives up its inhibition of Nrf2. This action stabilizes Nrf2, allowing it to accumulate in the nucleus and bind to the Antioxidant Response Element (ARE) located in the enhancers of its target genes. Under this circumstance, Nrf2 then up-regulates a variety of antioxidant enzymes and detoxifying proteins.

A variety of natural substances have been shown to activate Nrf2:

Sulforaphane (SGS), a naturally occurring isothiocyanate derived from cruciferous vegetables, induces phase 2 cytoprotective enzymes, supporting the body's response to oxidative stress and inflammation. SGS may modify critical cysteine residues of Keap1, leading to Nrf2 stabilization and activation of the ARE, inducing phase 2 enzymes. Research demonstrates that sulforaphane, through induction of Nrf2-dependent phase 2 enzyme, protects the brain against hypoxic-ischemic injury and may improve cognitive function when administered following traumatic brain injury.

Pterostilbene, a naturally occurring phenolic compound/analog of resveratrol that has comparatively better oral bioavailability, has been shown to possess cytotoxic, anti-inflammatory, and antioxidant properties. Resveratrol has also been shown to increase the protein and mRNA expression of Nrf2. There is evidence that Nrf2-mediated attenuation of oxidative stress and suppression of inflammatory response could be partially responsible for resveratrol's potential chemopreventive effects. In rat and animal studies, resveratrol/pterostilbene have been shown to up-regulate a significant number of genes involved in mitochondria function, disruption of which is known to result in neurodegenerative disorders, and also to modulate cholinergic neurotransmission and improve cognition.

Curcumin's array of biological activities stems from its anti-inflammatory activity, antioxidant properties, and induction of phase 2 detoxifying enzymes such as Heme Oxygenase (HO-1). Purification of curcumin yields the curcuminoids, demethoxy curcumin (DMC) and bisdemethoxy curcumin (BDMC). DMC has been shown to induce HO-1 more effectively than curcumin. The ability of DMC and BDMC to induce the expression of HO-1 and to translocate Nrf2 to the nucleus of pancreatic beta cells in mice suggests that they may play a role in cellular defense. Human studies showed a significant increase in curcumin absorption when co-administered with Bioperine®, a patented black pepper extract.

Green Tea's major polyphenol, (-)-epigallocatechin-3-gallate (EGCG), has been shown to induce expression of glutathione S-transferase, glutathione peroxidase, glutamate cysteine ligase, hemeoxygenase-1, and other enzymes, thereby protecting a variety of cells, including cultured neurons, against oxidative stress-induced cell death. EGCG modulates the redox-sensitive transcription factor, Nrf2, which plays a key role in activating detoxifying enzyme, HO-1, as well as other phase 2 enzymes.

In summary, Oxidative Stress Inhibitor is a promising approach for increasing antioxidant defenses by transcriptionally increasing the activity of the Nrf2/ARE pathway and activating transcription of anti-inflammatory and antioxidant genes. Green tea, curcumin, and resveratrol (pterostilbene) have also been shown to have anti-amyloidogenic properties that further increase the potential of this innovative formula.

Distributed by:
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Oxidative Stress Inhibitor

Supplement Facts

Serving Size: 1 Capsule
Servings Per Container: 60

	Amount Per Serving	%Daily Value
Broccoli Seed Extract *Providing 30 mg Sulforaphane Glucosinolate*	230 mg	**
Turmeric Rhizome Extract (95% curcuminoids)	200 mg	**
Black Pepper Extract (*piper nigrum*) (Bioperine®†)	2 mg	**
Green Tea Leaf Extract (*Camellia sinensis*) (70% polyphenols, 60% catechins, 35% EGCG)	200 mg	**
Pterostilbenes	50 mg	**

** Daily Value not established.

Other Ingredients: HPMC (cellulose), dicalcium phosphate, magnesium stearate, stearic acid, and silica.

† Bioperine is a registered trademark of Sabinsa Corp.

Produced under U.S. Patents 5,725,895; 5,968,505; 5,968,567; 6,277,122 and 6,242,018 licenced from Brassica Protection Products LLC; SGS is a trademark of Brassica Protection Products LLC.

Dosage

Take one to two capsules per day, or as directed by your healthcare practitioner.

References

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Cautions

Consult with your healthcare practitioner before use. If receiving cancer treatment, check with your treating physician. Keep out of reach of children.

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

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