Immune Support

Koshland Pharm
Custom Compounding Pharmacy

Clinical Applications

- Supports Healthy Immune Function*
- Supports the Body's Defenses Against Seasonal Immune Challenges*
- Supports Hematopoiesis Following Radiation and Other Bone Marrow Insults*

Immune Support's *active ingredient is beta 1,3/1,6 glucan, a unique complex carbohydrate purified from* Saccharomyces cerevisiae *(baker's yeast). It is natural, not genetically modified (non-GMO), hypoallergenic, patented, and generally recognized as safe (GRAS). Taken orally, Immune Boost, without over-stimulating, primes and mobilizes cells in the body's first line of defense to enhance protection against harmful effects of lifestyle and physical stressors.**

All Formulas Meet or Exceed cGMP Quality Standards

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Discussion

Beta-glucan has been recognized for its support of immune system activity for centuries[1]; and yeast-derived beta-glucan has become the subject of over 800 scientific studies to date. Immune Boost contains concentrated 1,3/1,6 beta-glucan from the yeast *Saccharomyces cerevisiae*, a source known to support immune function.[2-4] Beta-glucan is produced by fungi, grains, seaweed, and yeast, but not by mammalian cells.[3-5] While each source of beta-glucan has its own unique structure of glucose linkages, purified yeast-derived beta-glucan from *S cerevisiae* is considered the most effective source.[6,7] Purity of the product is vital, since protein contaminants can cause untoward immune reactions. Koshland Pharmacy, Inc.'s Immune Boost is refined to remove most impurities, including proteins and fats that can interfere with uptake and effectiveness. Mannan, a potential trigger of allergic reactions or bowel exacerbation, has been removed. Immune Boost provides 500 mg beta-glucan per capsule.*

Ongoing research has unveiled a detailed mechanism of action, including activation of macrophages, neutrophils, and T-cell–mediated immunity.[3,8,9] Orally administered yeast beta-glucan is processed by macrophages—the first line of defense in cellular immunity[8]—with subsequent increases in phagocytosis, selective cytokine release, and oxidative degranulation.[10] Macrophages degrade beta-glucan into small fragments that are then bound to neutrophils (granulocytes), the most abundant immune cells in the body. Neutrophils then become primed and are better able to provide support against microbial challenges.[4] Through a process called chemotaxis, these primed neutrophils migrate to target sites with enhanced immune actions.[3,11] Prophylactic administration of beta-glucan was found to positively affect levels of the antioxidant enzymes catalase and superoxide dismutase, moderate tissue-damaging cytokines, and assist in ameliorating microbial imbalance.*[12]

Research demonstrates a sustained release of soluble fragments over a multi-day period, providing a unique mechanism of action for the beta-glucan form found in Immune Boost. Studies also indicate that the entrance of these soluble fragments into the bone marrow may affect white-blood–cell recovery, further enhancing its health effects.[13] Individuals at increased risk for immune challenges, those in need of immune support, or those undergoing surgery have been found to benefit from Immune Boost.[2,6,8,12,14] A 12-week, randomized, phase II, double-blind, placebo controlled, parallel-group trial of 1,3/1,6 beta-glucan from *S cerevisiae* was conducted. Long-term use of beta-glucan was well tolerated and resulted in a reduction in acute immune challenge discomforts.*[2]

Immune Support

***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.**

Supplement Facts

Serving Size: 1 Capsule
Servings Per Container: 20

	Amount Per Serving	%Daily Value
Whole Glucan Particle (providing beta-glucan naturally derived from *Saccharomyces cerevisiae*)	500 mg	**

** Daily Value not established.

Other Ingredients: Dicalcium phosphate anhydrous, HPMC (capsule), stearic acid, magnesium stearate, silica, and medium-chain triglyceride oil.

MAY BE COVERED BY ONE OR MORE OF THE FOLLOWING PATENTS AND APPLICATIONS:
US 7,981,447; US 7,022,685; US 7,566,704; US 6,369,216; US 5,702,719 and patents pending.

Directions

For ongoing immune support: Take one capsule daily, first thing in the morning or last thing at night (before or well after a meal), with a full 8 oz glass of water. For fast-acting immune support: Take up to two capsules per day, as above; or use as directed by your healthcare practitioner.*

Consult your healthcare practitioner prior to use. Individuals taking medication should discuss potential interactions with their healthcare practitioner. Do not use if tamper seal is damaged.

Does Not Contain

Wheat, gluten, corn, yeast protein, soy, animal or dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, or artificial preservatives.

References

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DRS-152
REV. 06/08/16