



# BIOME BREAKTHROUGH

Unique blend of immunoglobulins, probiotics, and prebiotics designed to help support a healthy intestinal lining, including proper permeability, microbiome, and immune cell activity\*

## FEATURES

### VANILLA

- Weed, seed, and feed the gut using one, simple powder:
  - **Weed** – 2,000 mg per scoop of IgY Max, a patented blend of avian immunoglobulins targeting 26 distinct, non-beneficial bacteria in the human gut\*
  - **Seed** – 10 billion CFU per scoop of immune-modulating probiotic strains *L. rhamnosus*, *L. gasseri*, and *L. helveticus*\*
  - **Feed** – Inulin and VitaFiber® isomaltooligosaccharides (IMO) for a synergetic prebiotic boost\*
- Gluten-free, dairy-free, soy-free formula

### CHOCOLATE

Above features, plus:

- 1,000 mg per scoop of collagen and bone broth for glutamine and collagen peptides to help heal gut lining\*

## BENEFITS

- Formulated to support intestinal integrity, balanced microbiome, proper inflammatory response, and healthy GI function overall\*
- In published studies, 2 grams of IgY Max taken daily led to a 95% decline in zonulin, a key protein that increases intestinal permeability by opening up tight junctions between epithelial cells\*
- Immunoactive probiotic strains help support proper cytokine balance at the epithelial surface\*
- Inulin and IMO help nourish beneficial gut microbiota, promoting robust colonization\*
- Glutamine is the preferred food source for enterocytes, helping support cell turnover and overall tissue integrity\*

Supplement Facts			
Serving Size: 1 level scoop (approx. 5 grams)			
Servings Per Container: 30			
Amount Per Serving	%DV*	Amount Per Serving	%DV*
Calories	16	IgY™ Max (Hyperimmunized Egg Powder)	2000 mg **
Calories from Fat	0 g	Lactobacillus Blend (10 billion CFU)	65 mg **
Total Fat	1 g 1%	<i>L. rhamnosus</i> , <i>L. gasseri</i> , <i>L. helveticus</i>	
Total Carbohydrate	2 g <1%	*Percent Daily Values are based on a 2,000 calorie diet	
Dietary Fiber	2 g 7%	** Daily Value (DV) not established.	
Protein	1 g 2%		

**Other Ingredients:** Organic inulin, isomalto-oligosaccharides, D-ribose, stevia (leaf) extract, vanilla flavor.

Supplement Facts			
Serving Size: 1 level scoop (approx. 5 grams)			
Servings Per Container: 30			
Amount Per Serving	%DV*	Amount Per Serving	%DV*
Calories	17	IgY™ Max (Hyperimmunized Egg Powder)	2000 mg **
Calories from Fat	0 g	Lactobacillus Blend (10 billion CFU)	65 mg **
Total Fat	1 g 1%	<i>L. rhamnosus</i> , <i>L. gasseri</i> , <i>L. helveticus</i>	
Total Carbohydrate	1 g <1%	Bovine Collagen	500 mg **
Dietary Fiber	1 g 4%	Bovine Bone Broth	500 mg **
Protein	2 g 4%	*Percent Daily Values are based on a 2,000 calorie diet.	
		** Daily Value (DV) not established.	

**Other Ingredients:** Organic inulin, isomalto-oligosaccharides, D-ribose, stevia (leaf) extract, vanilla flavor, Peruvian cacao, cocoa powder.

**Directions:** Add one level scoop to 8 oz. of water. Take once a day on an empty stomach. Store in a cool/dry location.

**Form:** Powder

**Available Sizes:** 150 g

**Item Codes:** 2573 (Vegetarian Vanilla), 2574 (Carnivore Chocolate)

\*These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease.



# BIOME BREAKTHROUGH

## CLINICAL DISCUSSION

A healthy gut lining is among the most important factors for maintaining overall health. Disruption related to damaged villi, inflammation, and hyperpermeability can lead to impaired nutrient digestion and absorption, microbiome disturbance, immune dysfunction, and neurotransmitter imbalance.

The intestinal epithelium serves a critical role as a physical and biochemical barrier, preventing the passage of pathogens, toxins and allergens, while allowing essential nutrients and biochemicals to pass through.<sup>1</sup> One key barrier component is the presence of tight junctions, which are highly complex, intercellular gaps that contain a host of proteins (such as JAM and occludin) involved in carefully regulating the passage of various compounds through the intestinal wall.<sup>1</sup>

Tight junction permeability is regulated via a protein called zonulin; in fact, this protein is the *only* biochemical modulator of intercellular tight junctions discovered to date.<sup>2</sup> In a healthy gut, zonulin levels are low and the gut is selectively permeable. When minor barrier defects occur, zonulin production increases and the intercellular gaps widen. This allows undesirable, antigenic compounds to pass through, which, in turn, further feeds the inflammatory cascade and results in the production of yet more zonulin.<sup>3</sup> In this way, relatively minor intestinal insults can lead to chronic intestinal inflammation, which can have far-reaching effects both inside and outside the GI.

One way to disrupt this perpetual cycle is to target inflammation and reduce zonulin levels. IgY Max®, a patented immunoglobulin blend, has been shown in studies to reduce zonulin levels, promote healthy microbiota, and increase gut wall integrity.<sup>4</sup> *L. rhamnosus* and other beneficial probiotic strains have demonstrated inflammation-attenuating effects involving the intestinal mucosa.<sup>5,6</sup> Glutamine has been extensively studied for its role in reducing inflammation and gut permeability; more recently, scientists have discovered that glutamine acts directly on tight junctions, influencing the expression of proteins like occludin, claudin-1, and ZO-1.<sup>7</sup>

## REFERENCES

1. Suzuki T. Regulation of the intestinal barrier by nutrients: The role of tight junctions. *AnimSci J.* 2020 Jan-Dec;91(1):e13357.
2. Fasano A. Zonulin and its regulation of intestinal barrier function: the biological door to inflammation, autoimmunity, and cancer. *PhysiolRev.* 2011 Jan;91(1):151-75.
3. Fasano A. All disease begins in the (leaky) gut: role of zonulin-mediated gut permeability in the pathogenesis of some chronic inflammatory diseases.
4. <https://igynutrition.com/wp-content/uploads/2021/04/IgY-Max-Flyer.pdf>
5. Peng X, Ed-Dra A, Song Y, Elbediwi M, Nambiar RB, Zhou X, Yue M. *Lactobacillus rhamnosus* alleviates intestinal inflammation and promotes microbiota-mediated protection against *Salmonella* fatal infections. *Front Immunol.* 2022 Aug 11;13:973224.
6. Panpetch W, Hiengrach P, Nilgate S, Tumwasorn S, Somboonna N, Wilantho A, Chatthanathon P, Prueksapanich P, Leelahavanichkul A. Additional *Candida albicans* administration enhances the severity of dextran sulfate solution induced colitis mouse model through leaky gut-enhanced systemic inflammation and gut-dysbiosis but attenuated by *Lactobacillus rhamnosus* L34. *Gut Microbes.* 2020 May 3;11(3):465-480.
7. Li N, Lewis P, Samuelson D, Liboni K, Neu J. Glutamine regulates Caco-2 cell tight junction proteins. *Am J Physiol Gastrointest Liver Physiol.* 2004 Sep;287(3):G726-33.

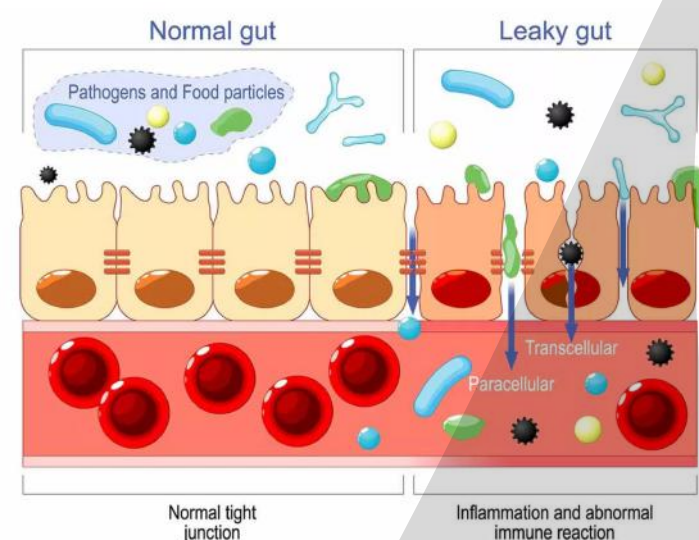


Fig. 1. Gut hyperpermeability. Food and pathogens pass through tight junctions leading to inflammation and immune response.