ProbioMax DF™
100 Billion CFU Probiotic

Clinical Applications

» Maintain Healthy Intestinal Microecology
» Support the Natural Immune Response
» Support Bowel Regularity

ProbioMax DF™ is a vegetarian, gluten-free, four-strain probiotic totaling 30 billion CFU per vegetable capsule, packaged in nitrogen-purged blister packs to assure viability. Each strain has clinically proven health benefits, proven safety, acid and bile resistance, adherence to the human intestinal mucosa, survival/activity in the gastrointestinal tract.

Available in 30 capsules

Discussion

HOWARU™ Bifido (Bifidobacterium lactis HN019): Discovered in 1899, bifidobacteria play a key role in the human microflora throughout life. Internationally-renowned researchers have identified Bifidobacterium lactis HN019 as having the best probiotic potential of more than 2,000 strains based upon its resistance to bile and acidity in vitro. Further, medical and scientific experts are confident that Bifidobacterium lactis HN019 is safe for humans and does not contribute to antibiotic resistance. This strain has been shown to adhere in high numbers to cultured intestinal epithelial cells, enabling it to better modulate immunity. Also demonstrated for this specific strain are G.I. tract survival and support for the preservation or restoration of healthy intestinal microbiota. International studies involving middle-aged to elderly people revealed that Bifidobacterium lactis HN019 increases cytotoxic activity of NK cells and phagocytic activity of peripheral blood mononuclear cells and does not cause inflammation. In a year-long, double-blind, placebo-controlled trial (n=600), children (aged 1-3) receiving this strain along with galacto-oligosaccharides showed improved immunity, iron status, and growth.

Lactobacillus acidophilus (L. acidophilus La-14): This common inhabitant of the human mouth, intestinal tract, and vagina has diverse health benefits. Phenotypic and genotypic methods have confirmed the strain present among six subspecies to be type a1 L. acidophilus, a strain of human origin that is deposited in the American Type Culture Collection as SD5212. In vitro studies indicate that L. acidophilus La-14 has excellent adhesion to human epithelial cell lines (HT-29), limiting the ability of enteric pathogens to colonize. This vancomycin-sensitive strain has shown inhibition of common bacterial strains in vitro, and re-establishment of the population of lactobacillus and bifidobacterium in the intestinal tracts of mice after antibiotic therapy. L. acidophilus La-14 has been demonstrated to support specific immunity in humans, shifting the immune system to the Th1 response (induced IL-12 and moderately induced TNF-α in vitro). It degrades oxalate 100%.

Lactobacillus plantarum (Lactobacillus plantarum Lp-115): Isolated from plant material, this safe strain, deposited in the American Type Culture Collection as SD5209, is abundantly present in lactic acid-fermented foods such as olives and sauerkraut. In vitro studies have shown that L. plantarum Lp-115 is extremely resistant to low pH conditions, survives the presence of bile at duodenal concentrations, and has excellent adhesion to epithelial cell lines. In vitro, this strain degraded oxalates 40% and either inhibited adhesion or displaced a variety of common pathogens. These studies support the notion that the strain shifts the immune response to the Th1 type. In animal models, L. plantarum Lp-115 reduced gut inflammation. Human studies indicated stimulation of specific immunity (IgG). This strain, like the other strains present, does not appear to contribute to antibiotic resistance.

Bifidobacterium longum (Bifidobacterium longum BI-05): Originally isolated from an unknown source, this strain, well accepted as safe for human consumption, has been deposited in the American Culture Collection as SD5206. B. longum BI-05 is resistant to low pH and bile salts and is well suited to the intestinal environment. It is sensitive to vancomycin and no case of antibiotic resistance transfer has ever been reported.
ProbioMax DF™ Supplement Facts
Serving Size: 1 Capsule

<table>
<thead>
<tr>
<th></th>
<th>Amount Per Serving</th>
<th>% Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOWARU® Bifido</td>
<td>50 Billion CFU*</td>
<td></td>
</tr>
<tr>
<td>(Bifidobacterium lactis HN019)</td>
<td></td>
<td>**</td>
</tr>
<tr>
<td>Proprietary Blend</td>
<td>50 Billion CFU*</td>
<td></td>
</tr>
<tr>
<td>Lactobacillus acidophilus Lb-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lactobacillus plantarum Lp-115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bifidobacterium longum Bl-05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>** Daily Value not established **</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other Ingredients: Inulin, cellulose, magnesium stearate, and silica.

* Colony-Forming Unit

** DIRECTIONS:** Take one capsule with water daily, or as directed by your healthcare practitioner.

**DOES NOT CONTAIN:** Wheat, gluten, corn protein, soy, animal or dairy products, artificial colors, sweeteners, or preservatives.

**CAUTIONS:** Consult your healthcare practitioner before use. Keep out of reach of children. Avoid if allergic to any ingredient.

**STORAGE:** No refrigeration necessary. Store in a cool, dry place.

HOWARU® is a registered trademark of Danisco A/S and used under license.

References

Additional references available upon request.