Multi-Probiotic® 4 Billion

Gastrointestinal and immune health‡

DESCRIPTION

Multi-Probiotic[®] 4 Billion capsules from Douglas Laboratories provide 4 billion CFUs of probiotic strains from the lactobacillus and bifidobacterium genera, mixed in a base of prebiotic fructooligosaccharides in each acid-resistant capsule. These special capsules bypass the stomach and breakdown in the small intestinal fluid to allow target release in the intestinal tract.

INDICATIONS

Support for the intestinal microflora and immune health. [‡]

FUNCTIONS AND MECHANISMS OF ACTION

Probiotic dietary lactobacilli colonize the intestinal tract, depending on the specific bacterium-to-host affinity. Bacteria are continually in competition for colonization space. The original bacterial colonies have an advantage over transient bacteria; nevertheless, the composition of the intestinal microflora is dynamic and constantly changing. If harmful microorganisms proliferate, the equilibrium is disturbed, and it becomes difficult even for indigenous bacteria to maintain their necessary territory to colonize the intestine. Antibiotics tend to kill off both beneficial and harmful bacteria, and thus may also disturb the normal, healthy balance of intestinal microorganisms. Consuming a probiotic supplement regularly increases the chance to establish and maintain a healthy population of beneficial intestinal microorganisms. Once established, a normal intestinal microflora rich in lactobacilli creates acidic conditions that are unfavorable for the settlement of pathogenic microorganisms.

The ability for probiotic cultures to survive stomach acidity and pH has been in question. Lactobacillus rhamnosus is one of the most widely studied probiotics, noted and valued for its ability to survive in the harsh conditions of the digestive and urinary tracts. Studies have shown that, taken regularly, L. rhamnosus can be an effective supplement in promoting and maintaining digestive tract health. In vitro studies of Bifidobacteria have shown that some strains are resistant to low pH in the stomach and bile acids in the duodenum. L. acidophilus La14 incorporates proprietary cryoprotectant agents and stabilizers to maintain cell viability in low pH conditions, and decreases the potential of bacterial transformations of primary bile acid. Lactobacillus and bifidobacterium can also support bile acid deconjugation and potentially promote fecal excretion.

Prebiotics, such as FOS, are carbohydrates that have short molecular chains. They function as non-digestible ingredients that can positively affect selected groups of beneficial intestinal microflora. While probiotics merely add beneficial microflora, prebiotics provide an energy source so that beneficial colonies of microflora can flourish. ‡

FORMULA (#202449)

One Acid-Resistant Vegetarian Capsule Contains:

Multi-Strain Probiotic Blend Containing:	4 Billion CFU
Lactobacillus acidophilus (La-14)	1 15 Billion CELL
Lactobacillus rhamnosus (Lr-32)	
Bifidobacterium lactis (HN019)	
Lactococcus lactis (LI-23)	275 Million CFU
Bifidobacterium longum (BI-05)	275 Million CFU
Bifidobacterium bifidum (Bb-02)	275 Million CFU
Lactobacillus gasseri (Lg-36)	
Streptococcus thermophilus (St-21)	150 Million CFU

Multi-Probiotic® 4 Billion

Other ingredients: Microcrystalline cellulose, capsule (hydroxypropyl methylcellulose, pectin, glycerol, purified water).

Non-GMO, Gluten-Free

SUGGESTED USE

As a dietary supplement, adults take one capsule, one to three times daily or as directed by a healthcare professional.

SIDE EFFECTS

No adverse side effects have been reported.

STORAGE

Store in a cool, dry place, away from direct light. Refrigerate after opening for optimal results. This product should be kept sealed tightly in the bottle. Keep out of reach of children.

REFERENCES

Shoaib A, Dachang W, Xin Y. Genet Mol Res. 2015 Feb 20;14(1):1526-37.

Rondanelli M, et al. World J Clin Cases. 2015 Feb 16;3(2):156-62.

Lin CS, et al. Biomed J. 2014 Sep-Oct;37(5):259-68.

Nauta AJ, et al. Am J Clin Nutr. 2013 Aug;98(2):586S-93S.

Lollo PC, et al. Dairy Sci. 2012 Jul;95(7):3549-58.

Jarocki P, et al. PLoS One. 2014 Dec 3;9(12):e114379.

Bergström A, et al. BMC Res Notes. 2012 Aug 2;5:402.

Tsai CC, et al. Scientific World Journal. 2014;2014:690752.

Degirolamo C, et al. Cell Reports, 2014: April;1(7),10,12-18.

Ding W, et al. *J Food Prot.* 2005 Nov;68(11):2295-300.

Arnold JW, et al. Microbiol., 2018: February.

Claes IJ, et al. Mol Nutr Food Res. 2011 Oct;55(10):1441-53.

Yan Zhang, Jim Chen, Jinshan Wu, et al. Hepatobiliary Surg Nutr. 2013 Jun; 2(3): 142-147.

C.E. Rycroft., et al. J Applied Microbiology: 91, 5; Nov 2001, 878-887.

Bouhnik, Y., et al. Journal, 2006: 5(1), 8.

Bouhnik Y et al. *J Nutrition*, 1999, 12:1,113–116.

For more information on Multi-Probiotic® 4 Billion visit douglaslabs.com

‡ 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.

Manufactured by Douglas Laboratories 600 Boyce Road Pittsburgh, PA 15205 800-245-4440 douglaslabs.com

