

NeuroBiota

Shelf-stable probiotic blend important for the gut-brain axis, improvement of mood, neurotransmitter synthesis, and balancing the immune response*

- ✓ Room temperature stable
- ✓ Acid resistant capsule to protect against stomach acidity*
- ✓ Unique, mood-boosting strains^{1,2*}
- ✓ Moisture-decreasing glass bottle



Key Ingredients

Lactobacillus paracasei HA-196

- In a double-blind, placebo controlled study, *L. paracasei* HA-196 significantly impacted **bowel movement regularity** and consistency^{22*}

Lactobacillus rhamnosus GG

- Demonstrates protective effects on **epithelial barrier function against an unbalanced microbiota** both *in vitro* and *in vivo*^{5,6*}

Lactobacillus helveticus Rosell®-52

- In a double-blind, placebo-controlled study, *L. helveticus* Rosell®-52 and *B. longum* Rosell®-175 (Cerebiome®) significantly improved **mood and median cortisol levels**^{1*}

Bifidobacterium animalis ssp. *lactis* LAFTI® B94

- Synergistic activity with **inulin**, reduced feelings of **abdominal discomfort and bloating** and displayed protective effects against **opportunistic pathogens** *in vivo*^{20,21*}

Lactobacillus brevis HA-112

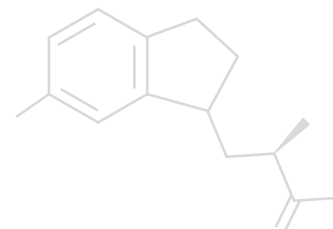
- Demonstrates the most significant **GABA production** compared to 91 strains^{2*}

Bifidobacterium longum Rosell®-175

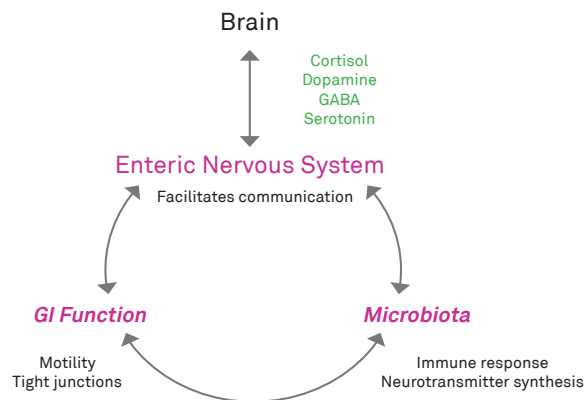
- Quality of life questionnaires revealed participants felt **more energetic and less tired** with supplementation^{22*}

The Science

- The brain receives neurotransmitters synthesized in the gut and promotes gut health through **motility, immune health, and tight junction function**⁶⁻⁹
- The enteric nervous system contains **5x** as many neurons as the spinal cord and helps relay messages from the brain to the gut⁸⁻¹⁰
- Proper gut health promotes **balanced immune function, healthy neurotransmitter production**, and improved digestion⁸



The Gut-Brain Connection

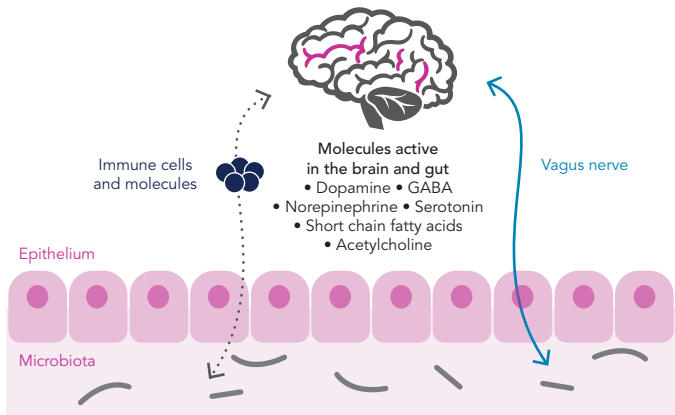


Green = Biomarker

*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.

MORE SCIENCE BEHIND NEUROBIOTA

Figure 1. Neurotransmitters and the Gut



The microbiota helps regulate neurotransmitter synthesis and gut health

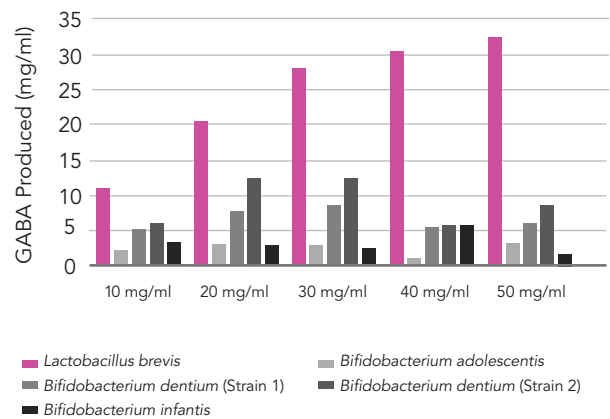
The gut creates and stores a significant number of neurotransmitters and neurotransmitter receptors¹²

- The gut contains more than 90% of the body's serotonin and more than 50% of the body's dopamine¹³
- GABA receptors along the gastrointestinal tract help modulate gut motility, gastric emptying, and immune function^{13,14}

A properly balanced microbiota is essential to promote general GI health and neurotransmitter levels^{15,16}

- The microbiota regulates key neurotransmitter levels including GABA, norepinephrine, dopamine, and serotonin¹⁶
- Conversely, a poor microbiota can directly impact serotonin migration to the brain and expression of brain-derived neurotropic factor (BDNF) as seen *in vivo*^{17,18}

Figure 2. Probiotic Strain by Production of GABA



Benefits of Specific Strains in NeuroBiota

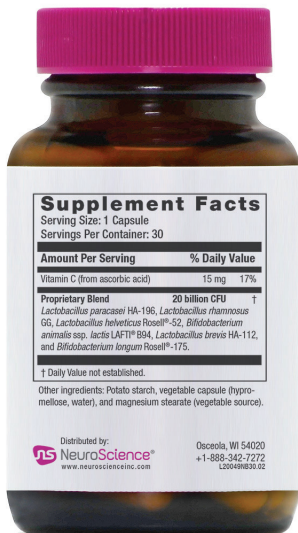
Certain probiotics influence neurotransmitter production and emotional well-being more than other strains

- Of the 91 strains tested, only 5 produced GABA, and *L. brevis* produced the most GABA (Fig. 2)^{2,13*}
- In a double-blind, placebo-controlled study, *L. paracasei* HA-196 and *B. longum* Rosell®-175 were shown to **increase emotional well-being and social functioning** after 8 weeks^{22*}

Including a variety of probiotic strains can help to improve the immune response and gut integrity^{3,4*}

- An *in vivo* study found that a postbiotic created by *L. rhamnosus* (GG) helped modulate **intestinal barrier function** by **regulating immune factors** like TNF- α ^{19*}
- *L. helveticus* Rosell®-52 and *B. longum* Rosell®-175 (Cerebiome®) significantly improved feelings of **nausea and abdominal discomfort** during times of stress^{23*}

NeuroBiota contains a unique probiotic blend to help populate the microbiota with specific strains important for emotional well-being^{1*}



Item Number	Available Sizes	Serving Size
20049	30 Capsules	1 Capsule



Find the right supplement with NeuroSelect

Learn more at www.neuroselect.com

All NeuroScience products undergo rigorous third-party testing to guarantee label claims of each ingredient and the absence of heavy metals, pesticides, residual solvents, and microbes

- Messaoudi M, et al. Br J Nutr. 2011;105(5):755-64.
- Barrett E, et al. J Appl Microbiol. 2012;113(2):411-7.
- Di Cerbo A, et al. J Clin Pathol. 2016;69(3):187-203.
- Cai S, et al. J Immunol Res. 2016;2016:7402760.
- Johnson-Henry K, et al. Infect Immun. 2008;76(4):1340-8.
- Mao X, et al. PLoS One. 2016;11(1):e0146312.
- Rhee S, et al. Nat Rev Gastroenterol Hepatol. 2009 May;6(5):306-14.
- Saulnier D, et al. Gut Microbes. 2013 Jan-Feb;4(1):17-27.
- Rao M, and Gershon M. Nat Rev Gastroenterol Hepatol. 2016 Sep;13(9):517-528.
- Bansal T. Proc Natl Acad Sci U S A. 2010.
- Shimada Y. PLoS One. 2013 Nov 20;8(11):e80604.
- Gershon M and Tack J. Gastroenterology. 2007 Jan;132(1):397-414.
- Hyland N, and Cryan J. Front Pharmacol. 2010; 1:124.
- Auteri M, et al. Pharmacol Res. 2015 Mar;93:11-21.
- Guinane CI and Cotter P. Ther Adv Gastroenterol. 2013 Jul;6(4):295-308.
- Strandwitz P. Brain Res. 2018 Aug 15;1693(Pt B):128-133.
- O'Mahony S, et al. Behav Brain Res. 2015 Jan 15;277:32-48.
- Clarke G, et al. Mol Psychiatry. 2013 Jun;18(6):666-7.
- Gao J, et al. Front Microbiol. 2019 Mar 14;10:477.
- Zhang L, et al. Helicobacter. 2008;13(3):183-90.
- Basturk A, et al. Turk J Gastroenterol. 2016;27(5):439-443.
- Lewis E, et al. Nutrients. 2020;12(4):1159.
- Diop L, et al. Nutr Res. 2008;28(1):1-5.

*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.

(888) 342-7272 www.neuroscienceinc.com

Copyright © 2022 NeuroScience 093022-N2028