

# LACTOBACILLUS PLANTARUM Lp-115®

The strain *Lactobacillus plantarum* Lp-115 is deposited at the DSMZ under number DSM22266.

## In vitro trials

### Probiotic selection, survival, stability, production

1. Tang C, Xie B, Sun Z. 2017. Antibacterial activity and mechanism of B-type oligomeric procyanidins from lotus seedpod on enterotoxigenic *Escherichia coli*. *Functional Foods* 38, 454-463.

### Immune system modulation

1. Schmidt EGW, Claesson HM, Jensen SS, Ravn P, Kristensen NN. 2009. Antigen-presenting cells exposed to *Lactobacillus acidophilus* NCFM, *Bifidobacterium bifidum* BI-98 and BI-504 reduce regulatory T cell activity. *Inflamm Bowel Dis*. Available online, DOI 10.1002/ibd.21068.
2. Foligné B, Nutten S, Granette C, Dennin V, Goudercourt D, Poiret S, Dewulf J, Brassart D, Mercenier A, Pot B. 2007. Correlation between *in vitro* and *in vivo* immune modulatory properties of lactic acid bacteria. *World J Gastroenterol*. 13: 236-243.

### Antipathogenic/Antitoxic activity and/or Bacteriocins

1. Collado MC, Meriluoto J, Salminen S. 2008. Adhesion and aggregation properties of probiotic and pathogen strains. *Eur Food Res Technol*. 226: 1065-1073.  
*Also listed under Adherence.*
2. Collado MC, Meriluoto J, Salminen S. 2007. Role of commercial probiotic strains against human pathogen adhesion to intestinal mucus. *Letters in Appl Microbiol*. 45: 454-460.  
*Also listed under Adherence.*
3. Burns AJ, Rowland IR. 2004. Antigenotoxicity of probiotics and prebiotics on faecal water-induced DNA damage in human colon adenocarcinoma cells. *Mutat Res*. 551: 233-243.

### Adherence

1. Collado MC, Meriluoto J, Salminen S. 2008. Adhesion and aggregation properties of probiotic and pathogen strains. *Eur Food Res Technol*. 226: 1065-1073.  
*Also listed under Antipathogenic/antitoxic activity.*
2. Collado MC, Meriluoto J, Salminen S. 2007. Role of commercial probiotic strains against human pathogen adhesion to intestinal mucus. *Letters in Appl Microbiol*. 45: 454-460.  
*Also listed under Antipathogenic/antitoxic activity.*

### Intestinal permeability

1. Commane DM, Shortt CT, Silvi S, Cresci A, Hughes RM, Rowland IR. 2005. Effects of fermentation products of pro- and prebiotics on trans-epithelial electrical resistance in an *in vitro* model of the colon. *Nutr Cancer*. 51(1): 102-9.

### Oxalate degradation

1. Turrone S, Vitali B, Bendazzoli C, Candela M, Gotti R, Federici F, Pirovano F, Brigidi P. 2007. Oxalate consumption by lactobacilli: evaluation of oxalyl-CoA decarboxylase and formyl-CoA transferase activity in *Lactobacillus acidophilus*. *J Appl Microbiol*. 103: 1600-1609.

## Animal trials

### Safety

1. Daniel C, Poiret S, Goudercourt D, Dennin V, Leyer G, Pot B. 2006. Selecting lactic acid bacteria for their safety and functionality by use of a mouse colitis model. *Appl Environ Microbiol*. 72: 5799-5805.

### Immune system modulation

1. Foligné B, Nutten S, Granette C, Dennin V, Goudercourt D, Poiret S, Dewulf J, Brassart D, Mercenier A, Pot B. 2007. Correlation between *in vitro* and *in vivo* immune modulatory properties of lactic acid bacteria. *World J Gastroenterol*. 13: 236-243.

## Gastrointestinal health

1. Paroschi TP, Bregano JW, Simão ANC, Dichi I and Miglioranza LHS. 2015. Effects of Sulfasalazine, *Lactobacillus Plantarum* Lp-115 and Fish Oil in Experimental Colitis. SMJ Food Nutri Disord. 1(1): 1005.

## Insulin resistance/metabolic health

1. Mari NL, Bregano JW, Simão ANC, Lozovoy MAB, Bonifacio KL, Alfieri DF, Dichi I and Miglioranza LHS. 2015. *Lactobacillus plantarum* reduces insulin resistance and yacon or symbiotic reduces oxidative stress in rats with metabolic syndrome. Nutrition & Energy Balance 1: 12-17

## Human clinical studies

### Immune system enhancement

1. Paineau D, Carcano D, Leyer G, Darquy S, Alyanakian MA, Simoneau G, Bergmann JF, Brassart D, Bornet F, Ouwehand AC. 2008. Effects of seven potential probiotic strains on specific immune responses in healthy adults: a double-blind, randomized, controlled trial. FEMS Immunol Med Microbiol. 53: 107-13.

### Cholesterol lowering

1. Barreto FM, Colado Simão AN, Morimoto HK, Batisti Lozovoy MA, Dichi I, Helena da Silva Miglioranza L. 2014. Beneficial effects of *Lactobacillus plantarum* on glycemia and homocysteine levels in postmenopausal women with metabolic syndrome. Nutrition Jul-Aug;30(7-8): 939-42. Epub 2013 Dec 14.  
*Also listed under Insulin sensitivity.*

### Insulin sensitivity

1. Barreto FM, Colado Simão AN, Morimoto HK, Batisti Lozovoy MA, Dichi I, Helena da Silva Miglioranza L. 2014. Beneficial effects of *Lactobacillus plantarum* on glycemia and homocysteine levels in postmenopausal women with metabolic syndrome. Nutrition Jul-Aug;30(7-8): 939-42. Epub 2013 Dec 14.  
*Also listed under Cholesterol lowering.*

### General health

1. Zhang Y, Chen J, Wu J, Chalson H, Merigan L, Mitchell A. 2013. Probiotic use in preventing postoperative infection in liver transplant patients. Hepatobiliary Surg Nutr. Jun;2(3): 142-7.

## Product functionality

1. Dharmasena M, Barron F, Fraser A and Jiang X. 2015. Refrigerated Shelf Life of a Coconut Water-Oatmeal Mix and the Viability of *Lactobacillus Plantarum* Lp-115-400B. Foods, 4(3), 328-337.

2. Costa GN, Marcelino-Guimarães FC, Vilas-Bôas GT, Matsuo T, Miglioranza LH. 2014. Potential fate of ingested *Lactobacillus plantarum* and its occurrence in human feces. Appl Environ Microbiol. Feb;80(3): 1013-9. Epub 2013 Nov 22.

3. Tamminen M, Salminen S and Ouwehand AC. 2013. Fermentation of Carrot Juice by Probiotics: Viability and Preservation of Adhesion. International Journal of Biotechnology for Wellness Industries, 2, 10-15.

4. Ding WK, Shah NP. 2009. Effect of various encapsulating materials on the stability of probiotic bacteria. J Food Sci. 74: M100-107.

5. Ding WK, Shah NP. 2007. Acid, bile and heat tolerance of free and microencapsulated probiotic bacteria. J Food Sci. 72: M446-M450.

6. Duffner F, O'Connell M. 1995. Comparative evaluation of plasmid profiling and ribotyping in the analysis of *Lactobacillus plantarum* strain heterogeneity in silage. J Appl Bacteriol. 78(1): 20-27.

7. Duffner F, Fitzsimons A, Brophy G, O'Kiely P, O'Connell M. 1994. Dominance of *Lactobacillus plantarum* strains in grass silage as demonstrated by a novel competition assay. J Appl Bacteriol. 76(6): 583-591.

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