

LactoMason's Functional Probiotics

Bifidobacterium animalis subsp. *lactis* LM1017

Lactobacillus casei CJNU0588

Lactobacillus rhamnosus LM1011



In-vitro



Bone health
and antidiabetes

Bifidobacterium animalis
subsp. *lactis* LM1017



Growth stimulation
of bifidus

Lactobacillus
casei CJNU0588



Antimicrobial
effects

Lactobacillus
rhamnosus LM1011



B. lactis
LM1017

- Isolation from a healthy infant
- Good stability during shelf-life
- Antidiabetes and bone health effect (in-vitro)



L. casei
CJNU0588

- Isolation from cheese
- Growth stimulation of bifidus (Patent)



L. rhamnosus
LM1011

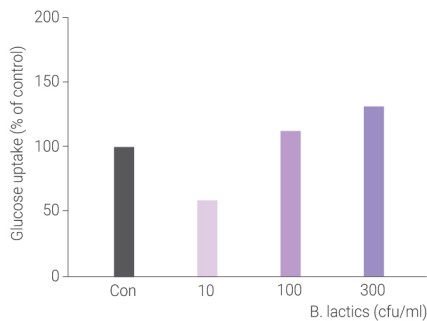
- Isolation from cheese
- Antimicrobial effects (Research paper)

LactoMason

Functional Probiotics (In-vitro test)

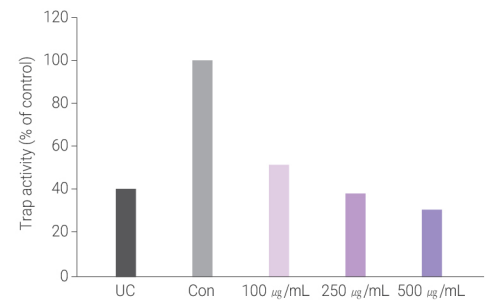
B. lactis LM1017

Increase of blood sugar absorption in fat cells



- In-vitro, pre-adipocytic 3T3-L1
- Up-take of 2-NBDG, fluorescence glucose analog

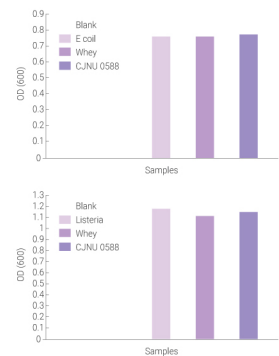
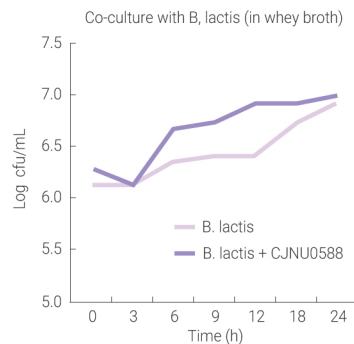
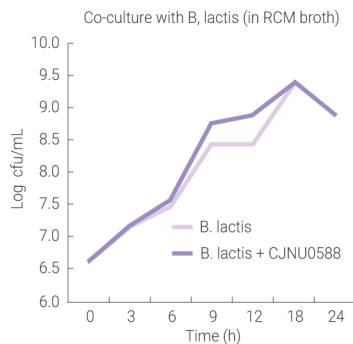
Inhibitory effects of osteoclast differentiation



- Differentiation to osteoclast from RAW 264.7 cell was
- Inhibited with treatment of Extra-polysaccharides (EPS) from
- *B. lactis* LM1017 culture (100 ~500 mg/ml), TRACP staining

L. casei CJNU0588

Stimulation of growth of *B. lactis* regardless of media



Reference

1. Moon, Gi-Seong. "Bifidobacterial growth stimulation by Lactobacillus casei via whey fermentation." *Preventive Nutrition and Food Science* 14.3 (2009): 265-268.
2. Lee, Jong-Kwang, et al. "Optimal production of fermented whey presenting bifidogenic growth stimulator activity." *Food Science and Biotechnology* 20.5 (2011): 1451-1455.
3. J.E.Eom and G.S.Moon. "Leuconostoc mesenteroides CJNU 0147 and Lactobacillus casei CJNU0588 Improve Growth of Bifidobacterium lactis strain in Co-Culture", *J Food Sci Nutr.* 16. (2011): 386~389.

- Selective increase of Bifidobacterium
- *E. coli* and *L. monocytogenes* are not increased.

L. rhamnosus LM1011

Antimicrobial spectrum of CJNU 0519 cells and partially purified rhamnocin 519

Target strain		Deferred antagonism assay ¹⁾	Spot-on-lawn assay ²⁾
Gram-positive	Lactic acid bacteria	Lactobacillus reuteri KCTC 3679	-
		Lactobacillus casei CJNU 0588	-
		Lactobacillus acidophilus	+
		Leuconostoc mesenteroides CJNU 0147	-
		Pediococcus acidilactici K10	+
	Bacillus	Enterococcus faecium MK3	-
		B. licheniformis 1-B-12	+
Pathogenic bacteria	Listeria monocytogenes KCTC 3569	+	
	Staphylococcus aureus ATCC 14458	+	
Gram-negative	Escherichiacoil DH5α	-	
Yeast	Saccharomyces cerevisiae ATCC 24858	-	