

Food Safety



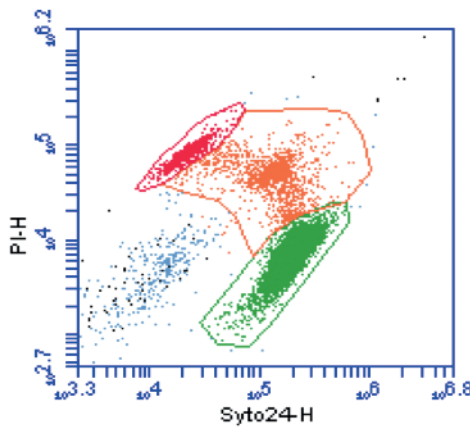
Live lactic probiotic bacteria in powder form, commonly used by the food industry and perfectly safe for human consumption in food supplements. This species figures on the EFSA's list of micro-organisms used in food (QPS "Qualified Presumption of Safety list" 2013).

Do not contain allergens according to European Regulation 1169/2011.

Viability



Flow cytometry is used to analyse cell viability, one by one, with the help of a fluorescent compound, tracer of the integrity of *Lactobacillus rhamnosus* Lbrh2's membrane.



9 % of dead cells
12 % of damaged cells
79 % of live cells

Stability in powder



Lbrh2 is a **stable** strain at 20°C when correctly formulated in a sachet or capsule.

Duration (Months)	20°C		25°C / 60% RH	
	Viability (CFU/g)	Billion(s) per unit	Viability (CFU/g)	Billion(s) per unit
0	1.0E+10	70	1.0E+10	70
3	9.5E+09	67	9.7E+09	68
6	8.5E+09	60	7.6E+09	53
9	6.3E+09	44	5.6E+09	39
12	7.0E+09	49	6.7E+09	47
18	5.5E+09	39	4.3E+09	30
24	6.0E+09	42	4.7E+09	33

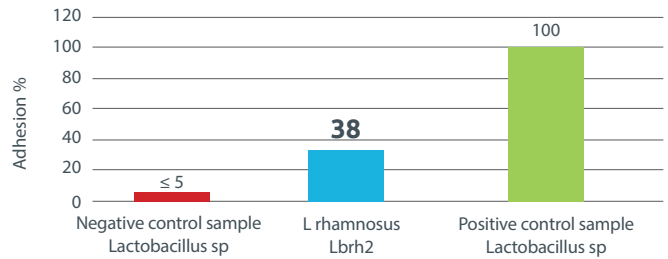
CFU: Colony Forming Unit ; RH : Relative Humidity

60% of the initial viability is still present after 2 years storage at 20°C.

Intestinal mucosa adhesion



Lbrh2 adheres **correctly** to Caco-2 cells' surface (human intestinal cells).



Production of antimicrobial substances



Lbrh2 inhibits the growth of pathogenic micro-organisms in agar medium.

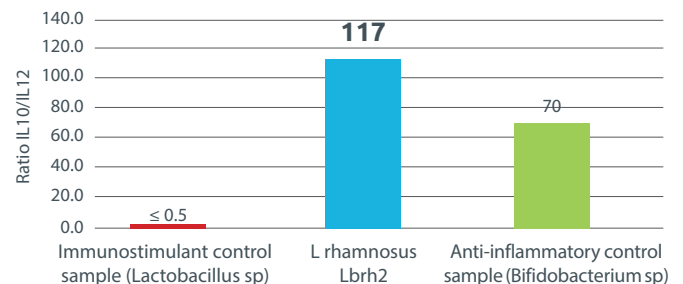
Pathogen	Result
<i>Escherichia Coli</i>	I
<i>Salmonella typhimurium</i>	S
<i>Listeria monocytogenes</i>	I
<i>Clostridium perfringens</i>	I

R = Resistant; S = Susceptible; I = Intermediate

Immunomodulatory properties



Lbrh2 has an *in vitro* **anti-inflammatory** immune profile (PBMC model, peripheral blood mono nuclear cells).



This technical information is supplied to inform our clients and may be modified at a later date. Additional information and *in vitro* experimental protocols are available upon simple request.