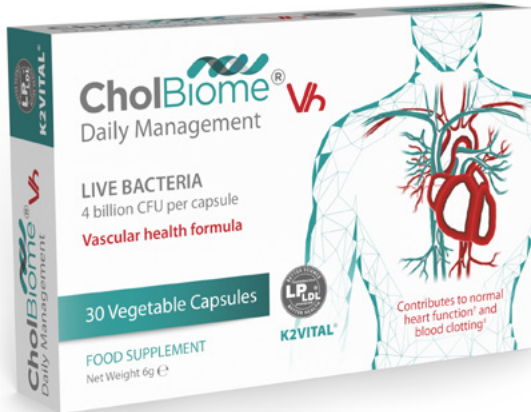


# CholBiome<sup>®</sup> VH

with *L. plantarum* LP<sub>LDL</sub><sup>®</sup>



## CholBiome<sup>®</sup> VH

CholBiome<sup>®</sup> VH (vascular health) is a food supplement that combines three science-backed, natural ingredients to provide a multi-targeted mechanism for maintaining a healthy heart and circulatory system. It has been formulated to work against the build-up of cholesterol and calcium deposits in the blood vessels, to improve cardiovascular health.

### Consisting of three key ingredients:

- 1 **Lactobacillus plantarum** LP<sub>LDL</sub>, a patented, naturally occurring and proprietary probiotic strain discovered by OptiBiotix with clinically-proven efficacy to regulate the metabolism of bile acids from the liver to reduce cholesterol and blood pressure<sup>1,2</sup>.
- 2 **Thiamine (Vitamin B1)**, a vitamin that contributes to the normal function of the heart<sup>3</sup>. Thiamine deficiencies have been associated with heart health complications.
- 3 **Vitamin K2 MK7**, a vitamin that contributes to normal blood clotting<sup>4</sup> and reduces vascular calcification, putting calcium in balance. Vitamin K2 MK7, activates proteins that bind and direct calcium away from the arteries, preventing calcification and the loss of vascular elasticity<sup>5,6</sup>.

- **GMO FREE**
- **GOOD MANUFACTURING PRACTICE (GMP)**
- **ALLERGEN FREE**
- **SUITABLE FOR VEGANS**

### Cardiovascular disease facts

- High LDL cholesterol is a major risk factor for atherosclerosis, a chronic inflammatory disease of the arteries and the underlying cause of Cardiovascular Disease, responsible for approximately 50% of all deaths in westernized society.
- The presence of vascular calcification is a recognised risk factor for cardiovascular health, and is associated with a three to four-fold higher risk of mortality and cardiovascular events<sup>7</sup>.

## Gastric Acid protection technology

CholBiome<sup>®</sup> VH utilises a Stomach Acid Protection Technology in the form of a specialised HPMC capsule to protect the actives within CholBiome<sup>®</sup> VH as it travels through the harsher internal environments in the body. **This grants greater survivability and ensures optimum activity once the ingredients reach their target destination.** CholBiome<sup>®</sup> VH features Vitamin K2 MK7 from Kappa Bioscience, a unique form that has significantly higher stability and absorption in comparison to other grades of Vitamin K2.

The inclusion of Thiamine, allows CholBiome<sup>®</sup> VH to make the following EFSA recognised health claim:

“ Supports Normal Cardiac Function ”

The inclusion of Vitamin K, allows CholBiome<sup>®</sup> VH to make the following EFSA cognised health claim:

“ Vitamin K contributes to normal blood coagulation ”

### Directions for use

Take one capsule orally per day with a glass of water, preferably after a main meal.

Available in boxes of 20 or 30 tablets.

## Optimised for vascular health

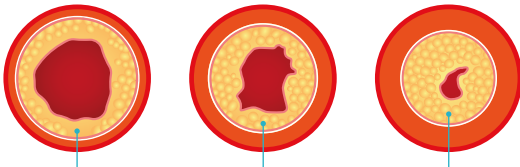
LP<sub>LDL</sub> reduces LDL cholesterol, the main risk factor for the development of atherosclerosis and cardiovascular disease. Over time, if left unchecked, cholesterol deposits build up and eventually restrict blood flow, increasing the risk of blood clot formation. LP<sub>LDL</sub> also increases HDL cholesterol, an inverse predictor of atherosclerosis risk.

Vitamin K2 plays an important role in directing calcium away from the circulatory system. Calcium, when out of balance, can be associated with atherosclerotic plaque formation but can also directly deposit on the arterial walls and heart valves causing stiffening and occlusion resulting in reduced blood flow, hypertension and microcirculation damage.

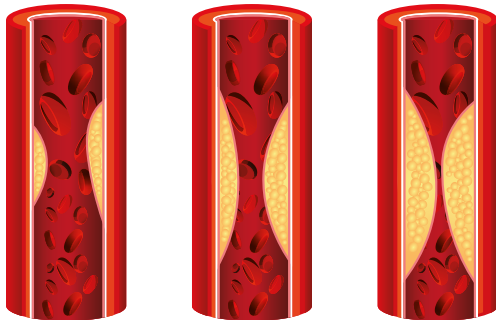
In CholBiome<sup>®</sup><sub>VH</sub>, the complementary activities of LP<sub>LDL</sub> and Vitamin K2 are combined with thiamine to provide a complete solution for vascular health.

## Atherosclerotic plaque progression

Cholesterol, calcium and other particles gradually build up, obstructing blood flow and reducing vascular elasticity if left untreated.



Cholesterol, calcium and cellular debris deposits



LP<sub>LDL</sub> and Vitamin K2 work against the build-up of cholesterol and calcium deposits in the blood vessels to prevent the progression of atherosclerosis. Together with vitamin B1 they help support cardiovascular health.

To find out more please contact ProBiotix on:

✉ [info@probiotixhealth.com](mailto:info@probiotixhealth.com)

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## About *Lactobacillus plantarum* LP<sub>LDL</sub>

LP<sub>LDL</sub> is a naturally occurring strain of the bacterial species *Lactobacillus plantarum* (isolated from plants) with GRAS certification. Lactobacilli are common components of the human intestinal microbiome and have traditionally been used as probiotics.

LP<sub>LDL</sub> was selected using OptiBiotix's OptiScreen<sup>®</sup> proprietary technology platform from a collection of over 4,000 microbial candidates for its outstanding capacity to hydrolyse bile salts, which act as mediators of gut-liver communication, involved in the regulation of blood lipid profiles. This activity is not only crucial for bacterial survival in the harsh conditions of the intestine, but also mediates LP<sub>LDL</sub>'s cholesterol-lowering mechanism of action. LP<sub>LDL</sub> showed to be completely safe and well tolerated and provide the following results:

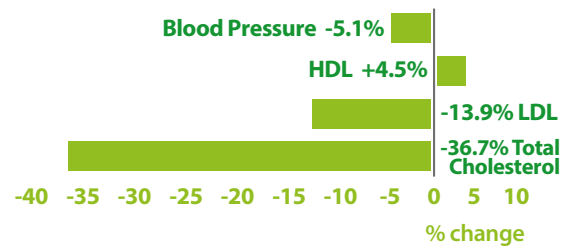
### Aim

Evaluate the impact of LP<sub>LDL</sub> (4x10<sup>9</sup>CFU LP<sub>LDL</sub>/day) on blood lipids in normal to mildly hypercholesterolemic adults.

### Method

An independent, double blind, randomised, placebo-controlled human study in 49 adults (males and females over the age of 18) with total cholesterol between 5.16 and 7.64 mmol/L.

## 12 Week results of LP<sub>LDL</sub> vs placebo



LP<sub>LDL</sub> showed to be completely safe and well tolerated.

## About the Gut-Liver Axis

The liver and the gut microbiome have an intense and bidirectional communication known as the Gut-Liver Axis. In this metabolic cooperation, the liver produces and releases bile salts influencing cholesterol metabolism.

It is now known that certain microbes, such as LP<sub>LDL</sub>, are able to metabolise bile salts, releasing metabolites that interact with the human body. This activity can help regulate high cholesterol and blood pressure and is involved in the regulation of physiological processes such as glucose regulation, vitamin metabolism and liver function.

### Supporting literature

- (1) Costabile A et al., (2017). PLoS One. 12(12): e0187964
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- (3) EFSA Journal 2009; 7(9):1222
- (4) EFSA Journal 2009; 7 (9): 1228
- (5) Geleijnse, J.M et al. (2004). 134(11): 3100-3105.
- (6) Knapen M.H.J et al.,(2015). 113(5): 1135-1144.
- (7) Schantl AE, Ivarsson ME, Leroux J-C. (2019). 2(1): 1800094