



MORE THAN
LACTOFERRIN

Inferrin

Lactoferrin supports a healthy immune and digestive system.

Inferrin™ shields lactoferrin from breakdown in the stomach delivering more lactoferrin to where it needs to be. Inferrin expands lactoferrin's effectiveness and applications.



WHAT IS **LACTOFERRIN?**

Lactoferrin is an iron containing protein found in the human immune system and also found naturally in milk. Scientific studies have shown that lactoferrin has antibacterial, antiviral, antioxidant activities, anti-inflammatory and immunomodulatory functions and is involved in the regulation of iron absorption and homeostasis¹⁻²

Lactoferrin is a key protein in mother's milk where it supports the health and development of infants. Cows milk also contains lactoferrin, which shares a similar structure and function with human milk lactoferrin³, making it an ideal bioactive for use in supplements and functional food systems.

The gut plays host to almost 70% of the human immune system.

LACTOFERRIN BENEFITS INCLUDE:

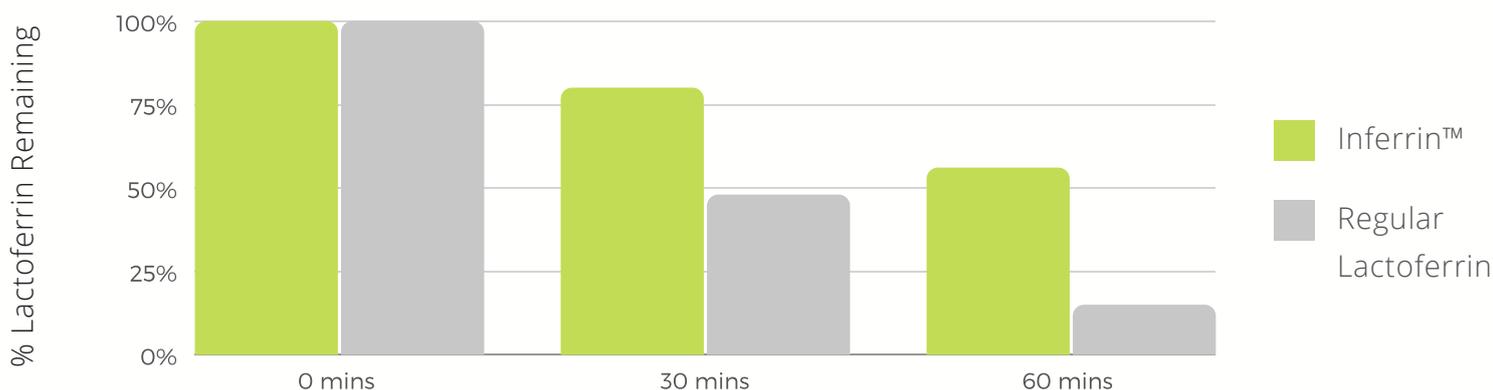
- ✓ Immune Support
- ✓ Iron Absorption & Metabolism
- ✓ Gastrointestinal health & function
- ✓ Anti-inflammatory
- ✓ Skin Care

WHAT IS INFERRIN™?

Lactoferrin is sensitive to degradation by the acid and digestive enzymes in the stomach. Inferrin™ utilises patented microencapsulation technology that provides an enteric barrier protecting lactoferrin in the stomach and delivering more of it intact to the small intestine where it can act on its targets.^{1,5} Inferrin™ ensures lactoferrin is more biologically available and effective.⁶

- ✓ Targeted release at site of absorption
- ✓ 6 x more resistant to gastric degradation than regular lactoferrin
- ✓ Supports gastrointestinal and immune health
- ✓ Made with patented technology
- ✓ Produced in Australia to the highest of quality standards
- ✓ Non-GMO, Halal, Kosher and vegetarian friendly

Inferrin™ is 6x more resistant to degradation in simulated gastric fluid than regular lactoferrin⁶





Inferrin™ is clinically researched

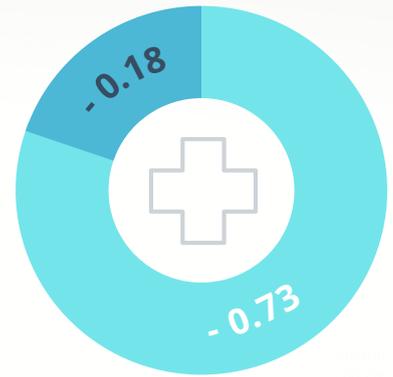
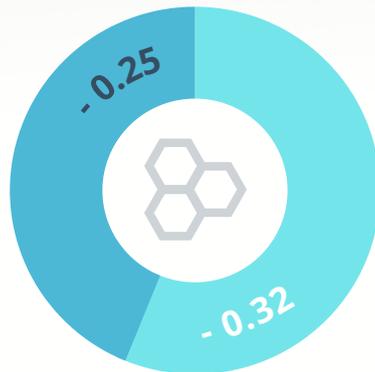
A cross-over study on 12 healthy adult males showed that Inferrin™ was able to increase the amount of lactoferrin transiting the gastrointestinal tract, modulate the activity of specific immune cells and the gut microbiome.



Change in % of CD69 activated CD8 Cytotoxic T-cells before and after 4-week treatment

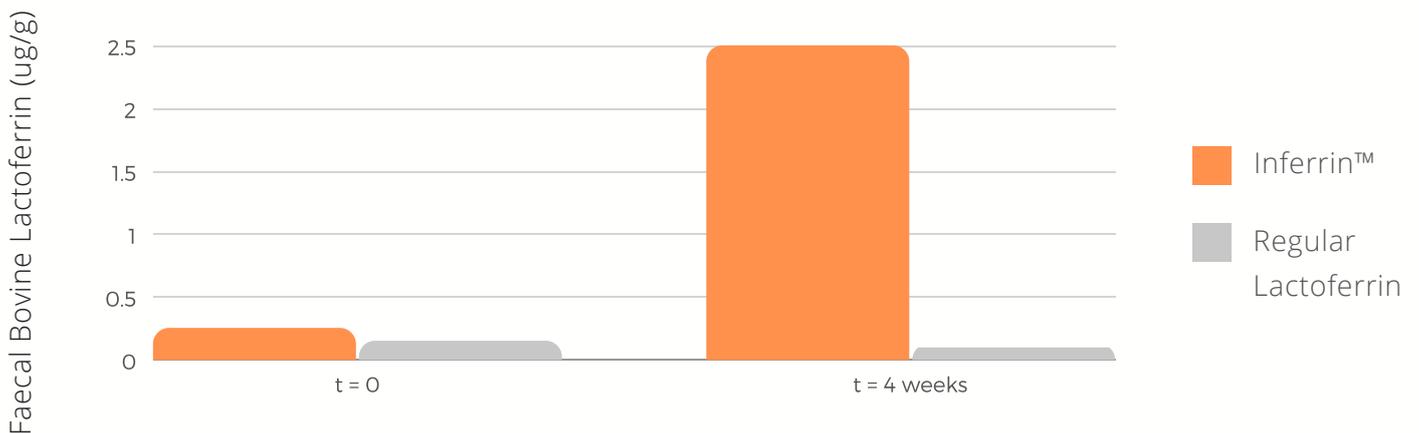
Change in % of CD69 activated CD4 T Helper cells before and after 4-week treatment

Consumption of Inferrin™ for 4-weeks saw a reduction in certain microbial populations, including E.coli, in the faecal matter of healthy male participants. Consumption of Inferrin™ also resulted in lower immune cell activity, suggesting less infection or inflammation in the participants.⁶



■ Inferrin
■ Regular Lactoferrin

Inferrin™ delivers more lactoferrin through the intestinal system of adults⁶



Reference: Dix C et al. (2018). Bioavailability of a Novel Form of Microencapsulated Bovine Lactoferrin and Its Effect on Inflammatory Markers and the Gut Microbiome: A Pilot Study. *Nutrients*. 10(8):1115

BROAD APPLICATIONS

Inferrin™ is well suited for a variety of product formulations and offers formulators a strong USP over regular lactoferrin products.



APPLICATIONS

Inferrin™ is suitable for use in a range of production applications including capsules, powders and liquids



STABLE WITH OTHER ACTIVES

Inferrin™ is suitable for use in formulations with other active ingredients including probiotics; Inferrin™ has a low water activity (<0.1aw).



COST-EFFECTIVE

Inferrin™ can reduce the cost in use of lactoferrin by allowing a lower effective dose to be used in formulations.



FOOD GRADE

Inferrin™ is made with food grade material making it well suited to various food applications



UNIQUE

FUNCTIONS & BENEFITS



YOUR PARTNER IN INNOVATION



**DIETARY
SUPPLEMENTS**



**FOOD &
BEVERAGES**



**ADULT NUTRITIONAL
POWDERS**



**INFANT & EARLY LIFE
NUTRITION**

ABOUT US

Bega Bionutrients is part of the Bega Cheese Group. Founded in 1899, Bega Cheese Group is one of Australia's leading food companies, listed on the Australian Securities Exchange. Bega Bionutrients began producing milk derived specialty health and nutrition ingredients in 2002 with Tatura Lactoferrin and have since grown to be one of the largest lactoferrin suppliers in the world. Explore our full range of products at www.begabio.com.

- Unique bioactive ingredients from milk**
- Australian made and owned**
- Products made to the highest of quality standards**

References:

1. Lonnerdal B (2009). Nutritional roles of Lactoferrin. *Current Opinion in Clinical Nutrition and Metabolic Care*, 12, 293-297.
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3. King JC Jr et al. (2007). *J. Pediatr. Gastroenterol. Nutr.* 44: 245-251
4. Saffran M et al. (1986). *Science* 233:1081-1084
5. Takeuchi T et al. (2006). *Experimental Physiology* 91,6:1033-1040
6. Dix C (2018). *Nutrients*. 10(8):1115

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