

LACTOFERRIN

□ DESCRIPTION

Lactoferrin is a purified and spray dried milk protein fraction. It is an iron-binding protein with broad antimicrobial and antiviral activities that also functions as an immune system modulator.

□ APPLICATIONS

Lactoferrin is specially developed for applications in health supplements, functional foods and drinks, infant formulas, cosmetics, oral care products, and animal feed.

□ BENEFITS OF LACTOFERRIN

The properties of lactoferrin relate to its iron binding activity. The main functional characteristics of lactoferrin are:

- *Antimicrobial activity*^{1,2}: lactoferrin binds iron, producing an iron-deficient environment that limits microbial growth of a variety of bacteria, yeast and fungi. It is also involved in direct interaction with the bacterial cell surface, killing sensitive organisms.
- *Immunomodulatory functions*³: lactoferrin contributes to the defense against pathogens by activation of cells involved in the anti-inflammatory response during the course of microbial infection.
- *Antiviral activity*⁴: by inhibiting absorption, lactoferrin prevents entry of viruses, like herpes, into mammalian cells.
- *Natural antioxidant*⁵: lactoferrin prevents oxidative tissue damage by inhibiting the production of free radicals; thus,

- Lactoferrin may reduce the susceptibility to aging processes and disease.
- *Iron transport and absorption*⁶: lactoferrin is an excellent iron carrier and increases the bioavailability of iron.

□ TECHNICAL SERVICES AND R&D

Vitalus's technical staff provides customers with on-site research, applications assistance, and new product development.

□ QUALITY ASSURANCE

Vitalus's QA/QC departments closely monitor and ensure the superior quality of our products. Our plants are HACCP certified and follow good manufacturing practices.

References:

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Vitalus Nutrition Inc.
4200 Meridian Street
Bellingham, WA 98226
USA

Telephone: 360.527.1919
Facsimile: 360.527.1881
Toll Free: 888.388.3447
Web Site: www.vitalus.com