

Product Specification Sheet

□ **Cat.** LTF16-N-100

Lactoferrin, Apo, Human milk (>98% pure)

**SIZE:** 100 ug

Lactoferrin (LF), also known as lactotransferrin (LTF), is a multifunctional protein of the transferrin family. Lactoferrin is a globular glycoprotein with a molecular mass of about 80 kDa that is widely represented in various secretory fluids, such as milk, saliva, tears, and nasal secretions. Lactoferrin is also present in secondary granules of PMN and is secreted by some acinar cells. Lactoferrin can be purified from milk or produced recombinantly. Human colostrum ("first milk") has the highest concentration, followed by human milk, then cow milk (150 ug/ml). Lactoferrin is one of the components of the immune system of the body; it has antimicrobial activity (bacteriocide, fungicide) and is part of the innate defense, mainly at mucosae. In particular, lactoferrin provides antibacterial activity to human infants. Lactoferrin interacts with DNA and RNA, polysaccharides and heparin, and shows some of its biological functions in complexes with these ligands.

Lactoferrin is one of the transferrin proteins that transfer iron to the cells and control the level of free iron in the blood and external secretions. It exists in two forms: iron-rich hololactoferrin and iron-free apolactoferrin. It exists in two forms: iron-rich hololactoferrin and iron-free apolactoferrin. Both in blood plasma and in secretory fluids lactoferrin can exist in different polymeric forms ranging from monomers to tetramers. Lactoferrin tends to polymerize both in vitro and in vivo, especially at high concentrations. Lactoferrin belongs to the innate immune system. Apart from its main biological function, namely binding and transport of iron ions, lactoferrin also has antibacterial, antiviral, antiparasitic, catalytic, anti-cancer, anti-allergic and radioprotecting functions and properties.

Mature human lactoferrin is 691 aa (~58 kda).

**Source of Antigen and Antibodies**

Human lactoferrin was purified from human breast milk using proprietary technique (>95% pure). It is supplied in 10 mM Tris, 150 mM NaCl, pH 7.4 and 0.05% azide liquid or powder form. Reconstitute powder in water and store in suitable size aliquots at -20oC or below. Do not freeze, thaw, or heat repeatedly.

**Storage**

**Short-term:** unopened, undiluted liquid vials at -20oC and powder at 4oC or -20oC..

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder

**Recommended Usage**

**Western Blotting** load 100-500 ng/well and detect with appropriate antibodies # LTF38-A. Lactoferrin is ~58 Kda.

**ELISA:** Control antigen can be used to coat ELISA plates at 1-5 ug/ml.

**General References:** Rey MW (1990) Nucl. Acid. Res. 18, 5288; Baker EN (2005) Cell Mol. Life. Sci. 62, 2531-2539; Farnaud S (2003) Mol. Immunol. 40, 395-405;

\*This product is for in vitro research use only.

**Related material available from ADI**

Catalog#	Prod Description
8090	Bovine Lactoferrin ELISA Kit, 96 tests, Quantitative
LTF15-N-50	Lactoferrin, Human Neutrophil
LTF11-A	Anti-human lactoferrin IgG, aff pure
LTF17-R-100	Human recombinant (>97%) holo lactoferrin (For cell culture, low endotoxin, >95%, animal free)
LTF13-BTN	Anti-bovine lactoferrin IgG-biotin conjugate
LTF13-A	Anti-bovine lactoferrin IgG, aff pure
LTF16-N-100	Lactoferrin, Apo, Human milk (>98% pure)
LTF14-M	Mouse monoclonal Anti-human lactoferrin IgG, aff pure
LTF15-M	Mouse monoclonal Anti-rat/mouse lactoferrin IgG
LTF25-N-1	Lactoferrin, Bovine milk (95%)
LTF26-N-1	Lactoferrin Apo, Bovine milk (95%)
LTF18-N-1	Lactoferrin, Human milk (>95% pure; iron saturated)
LTF12-A	Anti-human lactoferrin IgG, aff pure
LTF20-R-10	Recombinant Mouse Lactoferrin (>95%, low endotoxin, human cells, his-tag)
LTF13-HRP	Anti-bovine lactoferrin IgG-HRP conjugate
LTF13-C	Purified bovine Lactoferrin protein control for Western
3300-260-LFG	Human Anti-Lactoferrin IgG ELISA kit, 96 tests, Quantitative
LTF19-R-10	Recombinant Human Lactoferrin (>95%, low endotoxin, human cells, his-tag)
8095	Sheep Lactoferrin ELISA Kit, 96 tests, Quantitative

LTF16-N-100-Lactoferrin-Human

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