

# Human Lactotransferrin / LTF Protein (His Tag)

Catalog Number: 11096-H08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

GIG12; HEL110; HLF2; LF

### Protein Construction:

A DNA sequence encoding the human LTF (P02788) (Met 1-Lys 710) was expressed, fused with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Gly 20

### Molecular Mass:

The secreted recombinant human LTF consists of 702 amino acids and has a predicted molecular mass of 77.5 kDa. As a result of glycosylation, the apparent molecular mass of rhLTF is approximately 80 kDa in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

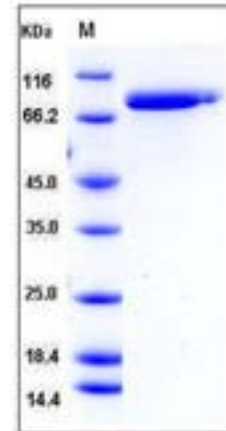
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Lactotransferrin, also known as Lactoferrin, Talalactoferrin and LTF, is a secreted protein which belongs to the transferrin family. Transferrins are iron binding transport proteins which can bind two Fe<sup>3+</sup> ions in association with the binding of an anion, usually bicarbonate. Lactotransferrin has antimicrobial activity which depends on the extracellular cation concentration. Lactoferrins A, B and C have opioid antagonist activity. Lactoferrin A shows preference for mu-receptors, while lactoferrin B and lactoferrin C have somewhat higher degrees of preference for kappa-receptors than for mu-receptors. Lactoferrin / LTF is a globular glycoprotein that is widely represented in various secretory fluids, such as milk, saliva, tears, and nasal secretions. Lactoferrin / LTF is also present in secondary granules of PMN and is secreted by some acinar cells. Lactoferrin / LTF can be purified from milk or produced recombinantly. Human colostrum has the highest concentration, followed by human milk, then cow milk. Lactoferrin / LTF is one of the components of the immune system of the body; it has antimicrobial activity (bactericide, 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.

## References

1. Sánchez L, et al., 1992, Arch. Dis. Child. 67 (5): 657 - 61.
2. Wakabayashi H, et al., 2000, J. Antimicrob. Chemother. 46 (4): 595-602.
3. Nozaki A, et al., 2003, J. Biol. Chem. 278 (12): 10162-73.

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