

AP31449FC-N**Polyclonal Antibody to Lactotransferrin - FITC****Alternate names:**

EC=3.4.21, LF, LTF, Lactoferrin, Talalactoferrin

Quantity:

1 ml

Concentration:

10 mg/ml

Background:

Lactoferrin is an iron binding glycoprotein with an approximate molecular weight of 80 kDa. The protein has two iron binding domains each housing one Fe³⁺ and the synergistic CO₃²⁻ ion. The crystal structure form of human lactoferrin at 2.2Å resolution exhibits 5330 protein atoms, 2Fe²⁺, 2CO₃²⁻ and 98 carbohydrate atoms. Lactoferrin is absorbed from intestine by apical side of the membrane and localized to the nuclei. Intravenous infusion of lactoferrin is protective against lethal doses of E coli and induce bacteremia by a mechanism that downregulates neutrophil TNF alfa secretion. Recombinant human lactoferrin (rhLF), expressed and extracted from rice seed, is being evaluated for use as a dietary supplement to treat iron deficiency and/or iron deficiency induced anemia. Lactoferrin has been shown to have a role in the immune system and in early development of the embryo. A specific receptor for lactoferrin binding has been implicated in the human fetal intestine. Early embryonic localisation of lactoferrin by IHC has suggested its presence in various tissues including intestinal epithelium, kidney, and various regions of the brain.

Uniprot ID:[P02788](#)**NCBI:**[NP_001186078](#)**GeneID:**[4057](#)**Host / Isotype:**

Goat / IgG

Immunogen:

Exocrine organs produce various secretions, each with its characteristic function. Proteins found in secretions may be divided into two groups: those specific for the particular secretion, and plasma proteins independent of the type of exocrine cells. Lactoferrin belongs to the first group. It is an iron containing protein with a molecular weight of 75,000 and it is antigenically different from transferrin. Lactoferrin has a slight antimicrobial action. Originally identified in milk, its presence has also been demonstrated in other secretions as saliva, semen and tears. The immunogen has been isolated from monkey milk. Freund's complete adjuvant is used in the first step of the immunization procedure.

Format:**State:** Lyophilised hyperimmune Ig fraction**Purification:** DEAE-column Chromatography**Buffer System:** PBS, pH 7.2

No preservative added, as it may interfere with the antibody activity. No foreign proteins added.

Label: FITC – Fluorescein isothiocyanate isomer 1*Absorption / Emission:* 492nm/515nm*Molar Ratio:* 1,6**Reconstitution:** Restore with 1 ml sterile distilled water

Applications:	Can be used as reagent for the direct detection of lactoferrin in monkey cells, tissues and body fluids in immunofluorescence; as detection reagent in non-isotopic methodology and solid phase immunochemistry (e.g. ELISA). This immunoconjugate is not pre-diluted. The optimum working dilution of each conjugate should be established by titration before being used. Excess labelled antibody must be avoided because it may cause high unspecific background staining and interfere with the specific signal. <u>Working dilutions:</u> are usually between 1:20 and 1:80. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	In immunoelectrophoresis against rhesus monkey milk a single precipitin line is obtained. The antiserum does not react with any other protein component of monkey serum or plasma. <u>Cross-reactivity:</u> The antiserum does not cross-react with any other monkey plasma proteins as tested in gel-diffusion techniques. Inter-species cross-reactivity is a normal feature of antibodies to plasma or milk proteins, since homologous proteins of different species frequently share antigenic determinants. Cross-reactivity of this antiserum has not been tested in detail, however a strong cross-reaction with lactoferrin in human milk has been observed. Species: Monkey. Other species not tested.
Add. Information:	Adsorption: Immunoaffinity adsorbed using insolubilized fractions of monkey serum and lactoferrin-depleted monkey milk as required, to eliminate antibodies reacting with other monkey serum or milk proteins. The use of insolubilized adsorption antigens prevents the presence of excess adsorbent protein or immune complexes in the antiserum.
Storage:	Prior to reconstitution store at 2-8°C. Following reconstitution store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.