

lactoferrin (H-65): sc-25622

BACKGROUND

Ferritin and transferrins manage necessary iron-binding functions for iron metabolism. Transferrins comprise a class of single-chain, two-sited, metal-binding proteins expressed throughout the fluid and cells of vertebrates. The three major types of transferrin include serotransferrin, lactotransferrin (lactoferrin), and ovotransferrin. Lactoferrin is found in milk, tears, and leukocytes. Lactoferrin degrades an IgA1 protease secreted by *Haemophilus influenzae* and, consequently, allows the human IgA1 antibody to effectively abolish *H. influenzae* colonization. Lactoferrin also attenuates the pathogenic potential of *H. influenzae* by proteolytic degradation of the Hap adhesin. While lactoferrin may aid in the transmission of human T cell leukemia virus type 1, lactoferrin inhibits HIV-1 replication at the level of viral fusion and entry into cells. The inhibitory effects of lactoferrin on mixed lymphocyte reactions suggest that lactoferrin may have the ability to sense the activation status of lymphocytes. The gene encoding human lactoferrin maps to chromosome 3p21.31.

REFERENCES

1. Aisen, P., et al. 1980. Iron transport and storage proteins. *Annu. Rev. Biochem.* 49: 357-393.
2. Chung, S., et al. 1986. A monoclonal antibody-based immunoassay for human lactoferrin. *J. Immunol. Methods* 84: 135-141.

CHROMOSOMAL LOCATION

Genetic locus: LTF (human) mapping to 3p21.31; Ltf (mouse) mapping to 9 F3.

SOURCE

lactoferrin (H-65) is a rabbit polyclonal antibody raised against amino acids 146-210 of lactoferrin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

lactoferrin (H-65) is recommended for detection of lactoferrin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for lactoferrin siRNA (h): sc-41371, lactoferrin siRNA (m): sc-41372, lactoferrin shRNA Plasmid (h): sc-41371-SH, lactoferrin shRNA Plasmid (m): sc-41372-SH, lactoferrin shRNA (h) Lentiviral Particles: sc-41371-V and lactoferrin shRNA (m) Lentiviral Particles: sc-41372-V.

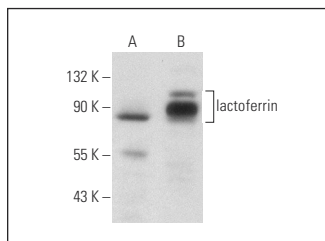
Molecular Weight of lactoferrin: 78 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or human PBL whole cell lysate.

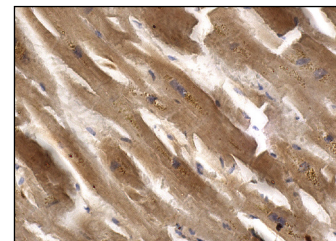
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



lactoferrin (H-65): sc-25622. Western blot analysis of lactoferrin expression in human PBL (A) and HeLa (B) whole cell lysates.



lactoferrin (H-65): sc-25622. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Chen, H.L., et al. 2004. Production of recombinant porcine lactoferrin exhibiting antibacterial activity in methylotrophic yeast, *Pichia pastoris*. *J. Mol. Microbiol. Biotechnol.* 8: 141-149.
2. Wu, S.C., et al. 2007. Recombinant porcine lactoferrin expressed in the milk of transgenic mice enhances offspring growth performance. *J. Agric. Food Chem.* 55: 4670-4677.
3. Pecorini, C., et al. 2009. Lactoferrin at basal side of mouse mammary epithelium derives in part from stroma cells. *Cell Tissue Res.* 338: 241-255.
4. Versura, P., et al. 2010. Tear proteomics in evaporative dry eye disease. *Eye* 24: 1396-1402.
5. Berger, R.G., et al. 2010. Bisphenol-A exposure during the period of blastocyst implantation alters uterine morphology and perturbs measures of estrogen and progesterone receptor expression in mice. *Reprod. Toxicol.* 30: 393-400.
6. Foth, B.J., et al. 2011. Quantitative time-course profiling of parasite and host cell proteins in the human malaria parasite *Plasmodium falciparum*. *Mol. Cell. Proteomics* 10: M110.
7. Versura, P., et al. 2012. A rapid standardized quantitative microfluidic system approach for evaluating human tear proteins. *Mol. Vis.* 18: 2526-2537.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



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Try **lactoferrin (B97): sc-53498** or **lactoferrin (a-bC-lobe): sc-52694**, our highly recommended monoclonal alternatives to lactoferrin (H-65).