BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-Lactoferrin/LTF Antibody Picoband®

Catalog Number: A00633-1

About LTF

Lactoferrin (LF), also known as lactotransferrin (LTF), is a multifunctional protein of the transferrin family. The protein is a major iron-binding protein in milk and body secretions with an antimicrobial activity, making it an important component of the non-specific immune system. The protein demonstrates a broad spectrum of properties, including regulation of iron homeostasis, host defense against a broad range of microbial infections, anti-inflammatory activity, regulation of cellular growth and differentiation and protection against cancer development and metastasis. Antimicrobial, antiviral, antifungal and antiparasitic activity has been found for this protein and its peptides.

Submit a product review to Biocompare.com



Submit a review of this product to Biocompare.com to receive a $20 Amazon.com giftcard! Your reviews help your fellow scientists make the right decisions. Thank you for your contribution.

Overview

Product Name	Anti-Lactoferrin/LTF Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Lactoferrin/LTF Antibody Picoband® catalog # A00633-1. Tested in ELISA, IF, IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P02788

Technical Details

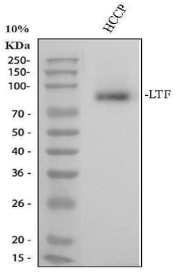
Immunogen	E. coli-derived human Lactoferrin recombinant protein (Position: D529-K710).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

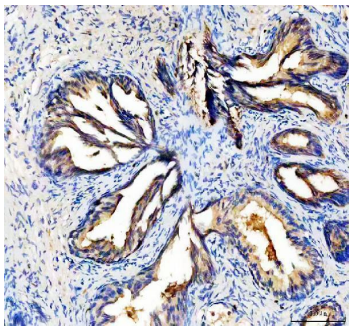
	blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Immunofluorescence, 5ug/ml, Human ELISA, 0.1-0.5ug/ml, -

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

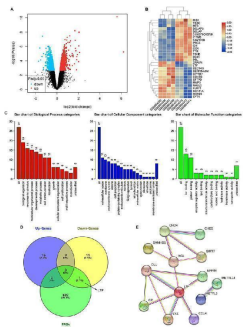
Anti-Lactoferrin/LTF Antibody Picoband® (A00633-1) Images



Western blot analysis of LTF using anti-LTF antibody (A00633-1). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human hepatocellular carcinoma paracancerous tissue (HCCP) lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-LTF antigen affinity purified polyclonal antibody (A00633-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for LTF at approximately 85 kDa. The expected band size for LTF is at 78 kDa.



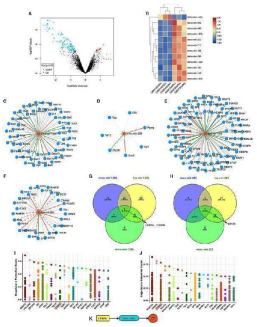
IHC analysis of LTF using anti-LTF antibody (A00633-1). LTF was detected in a paraffin-embedded section of human prostatic cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-LTF Antibody (A00633-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



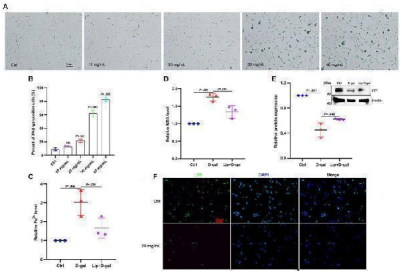
LTF, a ferroptosis-related gene, is identified in aging cochleae. (A) The volcano diagram of shows 43385 DEGs between the old group (~864316) and young group (~864308). (B) The heatmap shows 28 statistically significant DEGs. (C) Functional analysis of the statistically significant DEGs. (D) LTF, the hub gene, is obtained from the intersection of Up-Gens, Down-Gens (based on the statistically significant DEGs), and FRGs. (E) The PPI network shows that 12 proteins are interacting with LTF.Index in PubMed under a CC BY license. PMID: 38282692

TF-miRNA-mRNA network in cochlear ferroptosis. (A) The volcano diagram of shows 7512 DEMs between the old group (~1095954) and young group (~1095948). (B) The heatmap shows 12 statistically significant DEMs. (C–F) TFs predicted by mmu-mir-130b (C) , mmu-mir-205 (D) , hsa-mir-130b (E) , and hsa-mir-205 (F) . (G) CEBPA and CEBPB were predicted by mir-130b. (H) STAT3 was predicted by

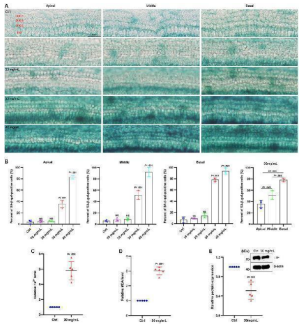
BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com



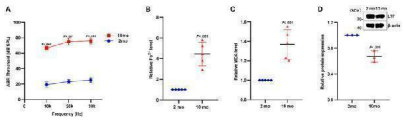
mir-205. (I,J) The top 20 TFs predicted by LTF in mice (I) and humans (J) , CEBPA (Red box) was identified through the intersection of (I,J) , and TFs predicted by miRNAs in (G,H) . (K) The regulatory network was constructed.Index in PubMed under a CC BY license. PMID: 38282692



Ferroptosis in aging HEI-OC1 cells. (A) SA-beta-gal staining in HEI-OC1 cells treated with different concentrations of D-gal for 48 h. (B) Quantification of SA-beta-positive cells in (A) . Compared with the control group, the percentage of positive cells is observed to have a statistical difference at 20 mg/mL D-gal ($p < 0.001$; $N = 3$). (C–E) Compared with the control group, the expression of Fe 2+ (C) and MDA (D) is increased in aging HEI-OC1 cells with 20 mg/mL D-gal ($p = 0.006$ and $p < 0.001$; $N = 3$). Oppositely, the expression of LTF (E) is decreased ($p < 0.001$; $N = 3$). More importantly, Liproxstatin-1 reversed the above phenomenon of ferroptosis in aging HEI-OC1 cells with 20 mg/mL D-gal ($p = 0.038$, $p = 0.012$, and $p = 0.046$; $N = 3$). (F) Immunofluorescence staining also shows decreased expression of LTF in aging HEI-OC1 cells with 20 mg/mL D-gal (LTF-green, DAPI-blue). Ctrl, control; Lip, Liproxstatin-1.Index in PubMed under a CC BY license. PMID: 38282692



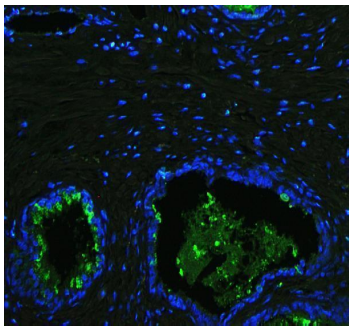
Ferroptosis in aging cochlear explants. (A) SA-beta-gal staining in the basement membrane treated with different concentrations of D-gal for 48 h. (B) Quantification of SA-beta-positive cells in (A) . Compared with the control group, the percentage of positive cells is observed to have a statistical difference at 30 mg/mL D-gal ($p < 0.001$; $N = 3$). (C–E) Compared with the control group, the expression of Fe 2+ (C) and MDA (D) is increased in aging cochlear explants with 30 mg/mL D-gal ($p < 0.001$; $N = 5$). Oppositely, the expression of LTF (E) is decreased in aging cochlear explants with 30 mg/mL D-gal ($p < 0.001$; $N = 5$). OHC, outer hair cell; IHC, inner hair cell; Ctrl, control.Index in PubMed under a CC BY license. PMID: 38282692



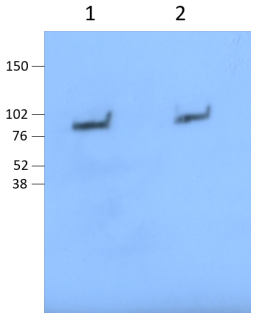
Ferroptosis in aging cochleae. (A) Compared with young mice (2mo), the distinctly increased ABR thresholds are shown in old mice (10mo) at all frequencies ($p < 0.001$; $N = 6$ mice). (B–D) Compared with young mice, the expression of Fe 2+ (B) and MDA (C) is increased in aging cochleae ($p < 0.001$; $N = 5$). Oppositely, the expression of LTF (D) is decreased ($p < 0.005$; $N = 3$).Index in PubMed under a CC BY license. PMID: 38282692

IF analysis of LTF using anti-LTF antibody (A00633-1). LTF was detected in a paraffin-embedded section of human

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com



prostatic cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/mL rabbit anti-LTF Antibody (A00633-1) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of Lactoferrin/LTF using anti-Lactoferrin/LTF Antibody (A00633-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: Total LTF from mouse neutrophil cell lysates. Lane 2: degranulated LTF. Ratio 1:20. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% BSA for 1.5 hour at RT. The membrane was incubated with rabbit anti-Lactoferrin/LTF antigen affinity purified polyclonal antibody (A00633-1) at 1:2000 1h overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:3000 dilution at RT for 1 hour. The signal is developed using HRP. A specific band was detected for Lactoferrin/LTF at approximately 77 kDa. The expected band size for Lactoferrin/LTF is at 77 kDa.

Anti-Lactoferrin/LTF Antibody

For Research Use Only. Not for use in diagnostic procedures.