

Anti-Lipocalin 2/LCN2 Antibody Picoband®

Catalog Number: PB9609

About Lcn2

Europhile gelatinase-associated lipocalin (NGAL) is a protein that in humans is encoded by the LCN2 gene. The binding of lipocalin-2 to bacterial siderophores is important in the innate immune response to bacterial infection. Upon encountering invading bacteria the toll-like receptors on immune cells stimulate the synthesis and secretion of lipocalin-2. Secreted lipocalin-2 then limits bacterial growth by sequestering iron-containing siderophores. Lipocalin-2 also functions as a growth factor.

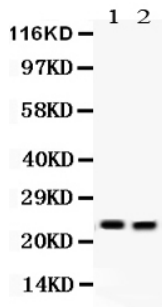
Overview

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| Product Name | Anti-Lipocalin 2/LCN2 Antibody Picoband® |
| Reactive Species | Human, Mouse, Rat |
| Description | Boster Bio Anti-Lipocalin 2/LCN2 Antibody Picoband® catalog # PB9609. Tested in ELISA, IHC, IHC-F, 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 | IHC, IHC-F, WB, ELISA (Cap) |
| Clonality | Polyclonal |
| Formulation | Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.01mg NaN ₃ . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required. |
| 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 | P30152 |

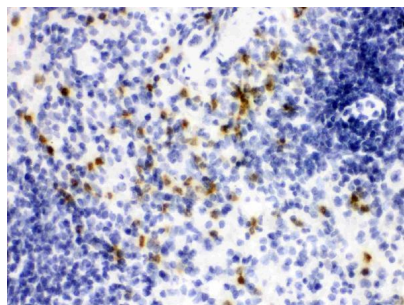
Technical Details

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| Immunogen | E. coli-derived rat Lipocalin 2 recombinant protein (Position: Q21-N198). Rat Lipocalin 2 shares 64.4 % and 81.1 % amino acid (aa) sequence identity with human and mouse Lipocalin 2, respectively. |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and IHC(F). |
| Cross Reactivity | No cross-reactivity with other proteins |

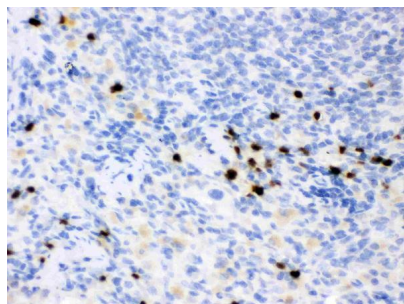
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| Isotype | Rabbit IgG |
| Form | Lyophilized |
| Concentration | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml. |
| Purification | Immunogen affinity purified. |
| Suggested Dilutions | Western blot, 0.1-0.5ug/ml, Mouse Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat Immunohistochemistry (Frozen Section), 0.5-1ug/ml, Mouse, Rat ELISA (cap) ,1-5ug/ml, Rat |



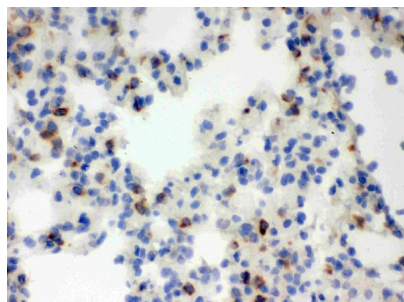
Western blot analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (PB9609). Electrophoresis was performed on a 4-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 10 µg of sample under reducing conditions. Lane 1: Mouse Lung Tissue Lysate, Lane 2: Mouse Intestine Tissue Lysate. Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. The membrane was blocked with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Lipocalin 2 affinity purified polyclonal antibody (Catalog # PB9609) at 0.5 ug/mL overnight at 4°C, then washed 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:1000 for 1 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # E6100, Tanon 5200 system). A specific band was detected for Lipocalin 2 at approximately 22KD. The expected molecular weight of Lipocalin 2 is at 22KD.



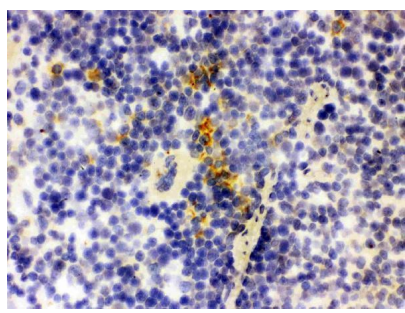
IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (PB9609). Lipocalin 2 was detected in paraffin-embedded sections of Mouse Spleen Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with anti-Lipocalin 2 Antibody (PB9609) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SA1022) with DAB as the chromogen.



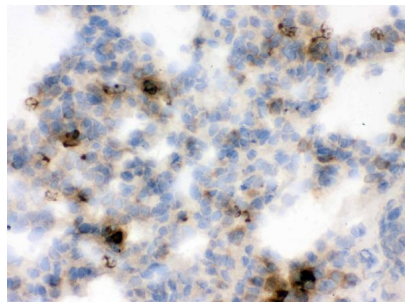
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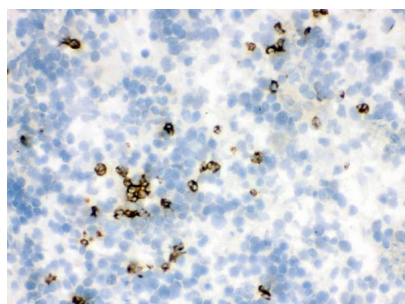
IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (PB9609). Lipocalin 2 was detected in frozen sections of lung tissue. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with anti-Lipocalin 2 Antibody (PB9609) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SA1022) with DAB as the chromogen.



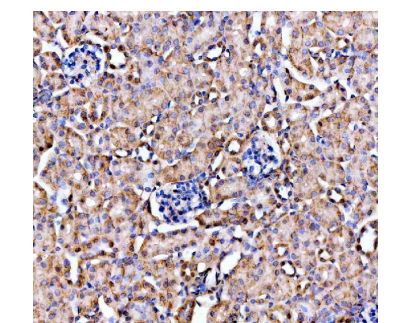
IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (PB9609). Lipocalin 2 was detected in frozen spleen tissue. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with rabbit anti-Lipocalin 2 Antibody (PB9609) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as second antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SA1022) with DAB as the chromogen.



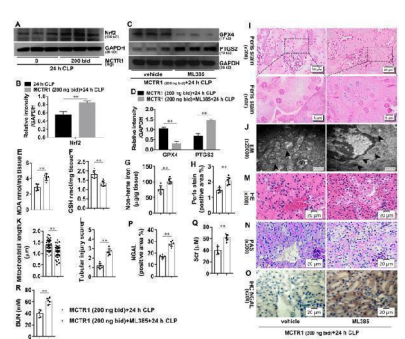
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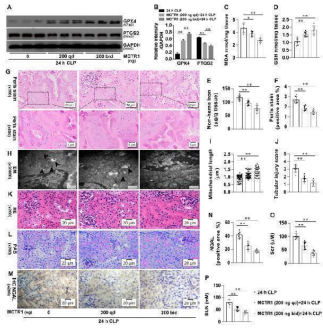


IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (PB9609). Lipocalin 2 was detected in a paraffin section of mouse kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0 solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with rabbit anti-Lipocalin 2 Antibody (PB9609) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as second antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated DAB-Vector Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



Effects of Nrf2 on MCTR1-regulated ferroptosis in CLP-induced AKI. Mice were given ML385 (30 mg/kg) or vehicle (0.5% DMSO) 7 days before CLP, and ML385 injection with or without a twice-daily administration mode of MCTR1 as described before in our experiment. All kidney samples were collected at 24 h after CLP. A–D Shown are representative western blots and quantitative analyses of Nrf2, GPX4, and PTGS2. E – G Quantitative analyses of MDA, GSH, and non-heme iron. H Quantitative analyses of Perl's stain. I Representative Perl's stain images. J Representative TEM images. The black dots represent ferroptosis-like mitochondria. K Quantitative analyses of mitochondrial length. L Histological analyses of kidney tissue. M, N Representative HE stains and PAS stain. O Representative IHC images for NGAL. P Quantitative analyses of NGAL. Q, R Quantitative analyses of serum Scr and BUN. n = 6 mice/group, mean ± SD were presented. *p < 0.05, **p < 0.01, ***p < 0.001. All data were analyzed by Student's t-test. The data were available on Pubmed under a CC BY license. PMID: 34961563

Effects of MCTR1 on ferroptosis in CLP-induced AKI. Mice were given MCTR1 once, twice, or not during



The once-daily administration mode (qd): Mice were given MCTR1 (200 ng/mice, iv) 0.5 h before being given MCTR1 (200 ng/mice, iv) 12 h after CLP. The twice-daily administration mode (bid): Mice were given MCTR1 (200 ng/mice, iv) 0.5 h before being given MCTR1 (200 ng/mice, iv) 12 h after CLP, then an additional MCTR1 (200 ng/mice, iv) was given 12 h after CLP. All kidney samples were collected and analyzed. A, B Shown are representative western blotting and quantification of GPX4 and PTGS2. C-E Quantitative analyses of GSH, and non-heme iron. F Quantitative analyses of Perl's stain. G Representative Perl's stain images. H-I Quantitative analyses of mitochondria. J TEM images. The black arrow indicates ferroptosis-like mitochondria. I Quantitative analyses of mitochondrial injury. K, L Shown are representative HE stains and PAS stain. M, N Shown are representative images for NGAL. N Quantitative analyses of IHC stain of NGAL. O, P Quantitative analyses of serum. Data are presented as mean \pm SD per mice/group, mean \pm SD were presented. **P < 0.01. iv: intravenous Index in PubMed under a CC BY license. ID: 34961563

6 Publications Citing This Product

1. PubMed ID: 10.1186/s13578-021-00734-x, Maresin conjugates in tissue regeneration-1 suppresses ferroptosis in sepsis-induced acute kidney injury
2. PubMed ID: 10.1080/08923973.2017.1418883, Inhibition of plasma kallikrein-kinin system to alleviate renal injury in rats with adjuvant-induced arthritis
3. PubMed ID: -, Chunmei Zhang, Mengying Suo, Lingxin Liu, Yan Qi, Chen Zhang, Lin Xie, Xuehui Zheng, Chang Ma, Jingyuan Wang, "Melatonin Alleviates Contrast-Induced Acute Kidney Injury by Activation of Sirt3", *Oxidative Medicine and Cellular Longevity*, 2021, 6668887, 21 pages, 2021. <https://doi.org/10.1155/2021/6668887>

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Anti-Lipocalin 2/LCN2 Antibody

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