

Anti-Lipocalin-2/NGAL Antibody
Catalog # ABO12295**Specification**

Anti-Lipocalin-2/NGAL Antibody - Product Information

Application	WB, IHC-P, IHC-F, E
Primary Accession	P30152
Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Neutrophil gelatinase-associated lipocalin(LCN2) detection.
Tested with WB, IHC-P, IHC-F, ELISA in Mouse; Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Lipocalin-2/NGAL Antibody - Additional Information

Gene ID 170496

Other Names

Neutrophil gelatinase-associated lipocalin, NGAL, Alpha-2-microglobulin-related protein, Alpha-2U globulin-related protein, Lipocalin-2, Siderocalin LCN2, p25, Lcn2

Calculated MW

22476 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, By
Heat
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml

ELISA , 0.1-0.5
µg/ml
Western blot, 0.1-0.5 µg/ml

Subcellular Localization

Secreted . Upon binding to the SLC22A17 (24p3R) receptor, it is internalized. .

Protein Name

Neutrophil gelatinase-associated lipocalin

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

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.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.

Anti-Lipocalin-2/NGAL Antibody - Protein Information

Name Lcn2

Function

Iron-trafficking protein involved in multiple processes such as apoptosis, innate immunity and renal development (By similarity). Binds iron through association with 2,3-dihydroxybenzoic acid (2,3- DHBA), a siderophore that shares structural similarities with bacterial enterobactin, and delivers or removes iron from the cell, depending on the context. Iron-bound form (holo-24p3) is internalized following binding to the SLC22A17 (24p3R) receptor, leading to release of iron and subsequent increase of intracellular iron concentration. In contrast, association of the iron-free form (apo-24p3) with the SLC22A17 (24p3R) receptor is followed by association with an intracellular siderophore, iron chelation and iron transfer to the extracellular medium, thereby reducing intracellular iron concentration. Involved in apoptosis due to interleukin-3 (IL3) deprivation: iron-loaded form increases intracellular iron concentration without promoting apoptosis, while iron-free form decreases intracellular iron levels, inducing expression of the proapoptotic protein BCL2L11/BIM, resulting in apoptosis (By similarity). Involved in innate immunity; limits bacterial proliferation by sequestering iron bound to microbial siderophores, such as enterobactin. Can also bind siderophores from M.tuberculosis (By similarity).

Cellular Location

Secreted {ECO:0000250|UniProtKB:P80188}. Cytoplasmic granule lumen {ECO:0000250|UniProtKB:P80188}. Cytoplasmic vesicle lumen {ECO:0000250|UniProtKB:P80188}. Note=Upon binding to the SLC22A17 (24p3R) receptor, it is internalized (By similarity). Releases the bound iron in the acidic lumen of cytoplasmic vesicles (By similarity). {ECO:0000250|UniProtKB:P11672, ECO:0000250|UniProtKB:P80188}

Tissue Location

Detected in the ureteric bud in embryonic kidney (at protein level).

Anti-Lipocalin-2/NGAL Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Lipocalin-2/NGAL Antibody - Images

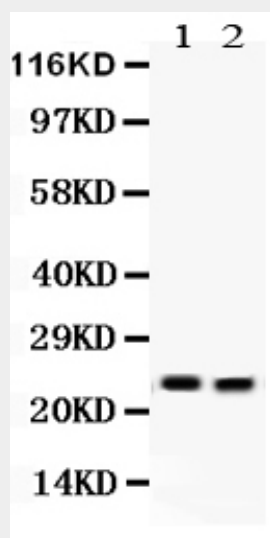


Figure 1. Western blot analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12295). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Mouse Lung Tissue Lysate, Lane 2: Mouse Intestine Tissue Lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-Lipocalin 2 antigen affinity purified polyclonal antibody (Catalog # ABO12295) at 0.5 μ g/mL overnight at 4 $^{\circ}$ 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 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for Lipocalin 2 at approximately 22KD. The expected band size for Lipocalin 2 is at 22KD.

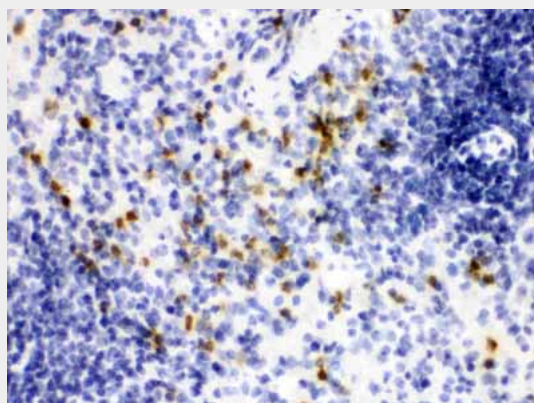


Figure 2. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12295). Lipocalin 2 was detected in paraffin-embedded section of Mouse Spleen Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-Lipocalin 2 Antibody (ABO12295) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

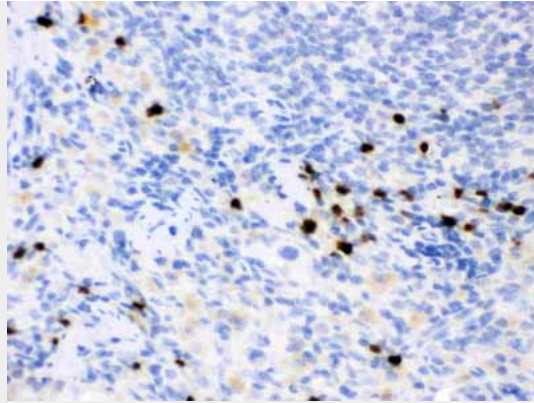


Figure 3. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12295). Lipocalin 2 was detected in paraffin-embedded section of Rat Spleen Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-Lipocalin 2 Antibody (ABO12295) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

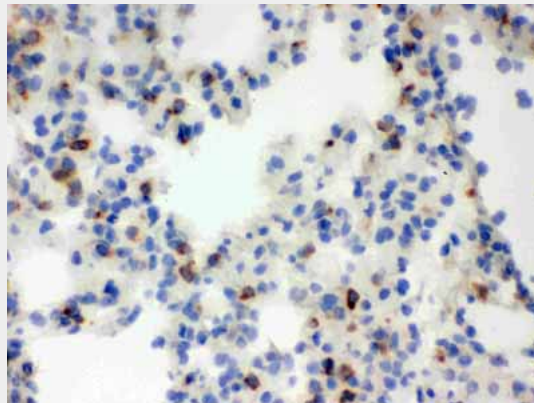


Figure 4. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12295). Lipocalin 2 was detected in frozen section of mouse lung tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-Lipocalin 2 Antibody (ABO12295) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

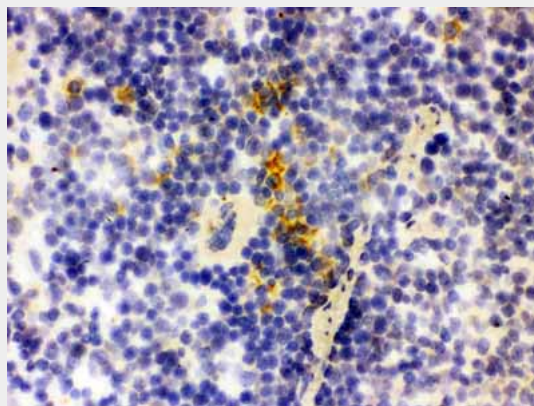


Figure 5. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12295). Lipocalin 2 was

detected in frozen section of mouse spleen tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-Lipocalin 2 Antibody (ABO12295) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

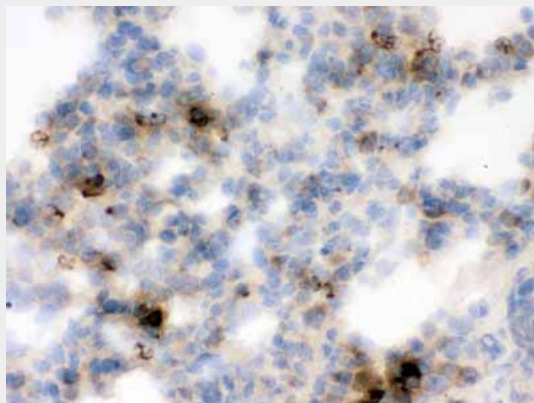


Figure 6. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12295). Lipocalin 2 was detected in frozen section of rat lung tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-Lipocalin 2 Antibody (ABO12295) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

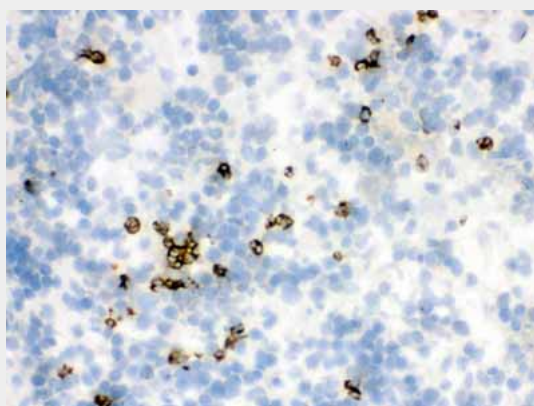


Figure 7. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12295). Lipocalin 2 was detected in frozen section of rat spleen tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-Lipocalin 2 Antibody (ABO12295) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Anti-Lipocalin-2/NGAL Antibody - Background

Euophile 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.