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Anti-Lipocalin-2/NGAL Antibody
Catalog # ABO12294

Specification

Anti-Lipocalin-2/NGAL Antibody - Product Information

Application	**WB, IHC-P, IHC-F, E**
Primary Accession	P11672
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 16819

Other Names
Neutrophil gelatinase-associated lipocalin, NGAL, Lipocalin-2, SV-40-induced 24P3 protein, Siderocalin LCN2, p25, Lcn2

Calculated MW
22875 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.

Tissue Specificity
Detected in lung, spleen, uterus, vagina and epididymis. .

Protein Name
Neutrophil gelatinase-associated lipocalin

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E. coli-derived mouse Lipocalin 2 recombinant protein (Position: Q21-N200). Mouse Lipocalin 2 shares 62 % and 81.1 % amino acid (aa) sequence identity with human and rat 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 (PubMed:12453413). 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. Involved in innate immunity; limits bacterial proliferation by sequestering iron bound to microbial siderophores, such as enterobactin (PubMed:15531878, PubMed:16446425). Can also bind siderophores from M.tuberculosis (By similarity).

Cellular Location
Secreted. 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 (PubMed:16377569). Releases the bound iron in the acidic lumen of cytoplasmic vesicles (By similarity) {ECO:0000250|UniProtKB:P80188, ECO:0000269|PubMed:16377569}

Tissue Location
Expressed in the cortical tubules of the kidney (at protein level) (PubMed:30418175). Also expressed in the medullary tubules of the kidney (PubMed:30418175). Detected in lung, spleen, uterus, vagina and epididymis (PubMed:8687399)

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 Cytomety
- Cell Culture

Anti-Lipocalin-2/NGAL Antibody - Images

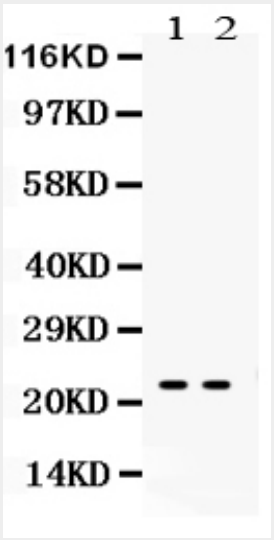

Figure 1. Western blot analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12294). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat Spleen Tissue Lysate, Lane 2: Rat Lung 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 # ABO12294) at 0.5 Î¼g/mL overnight at 4Â°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.

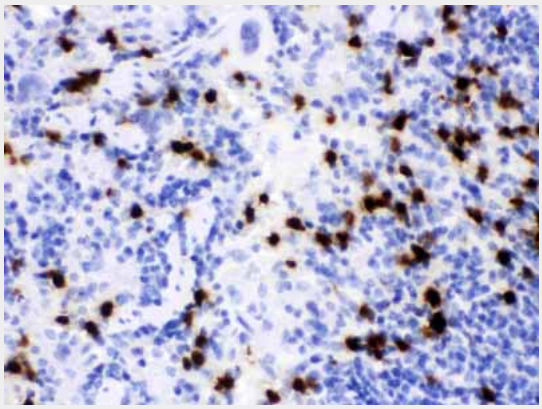

Figure 2. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12294). Lipocalin 2 was detected in paraffin-embedded section of Mouse Spleen Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section

was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-Lipocalin 2 Antibody (ABO12294) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

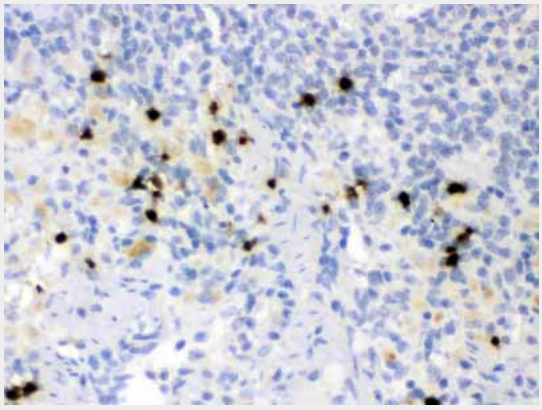

Figure 3. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12294). Lipocalin 2 was detected in paraffin-embedded section of Rat Spleen Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-Lipocalin 2 Antibody (ABO12294) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

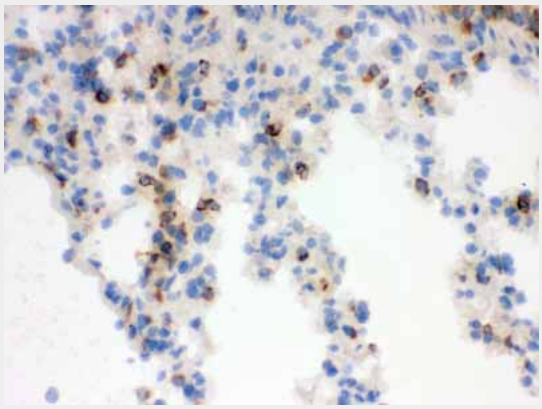

Figure 4. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12294). Lipocalin 2 was detected in frozen section of mouse lung tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-Lipocalin 2 Antibody (ABO12294) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

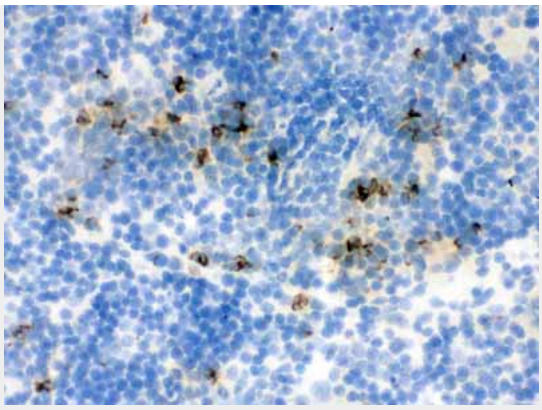

Figure 5. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12294). Lipocalin 2 was detected in frozen section of mouse spleen tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-Lipocalin 2 Antibody (ABO12294) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

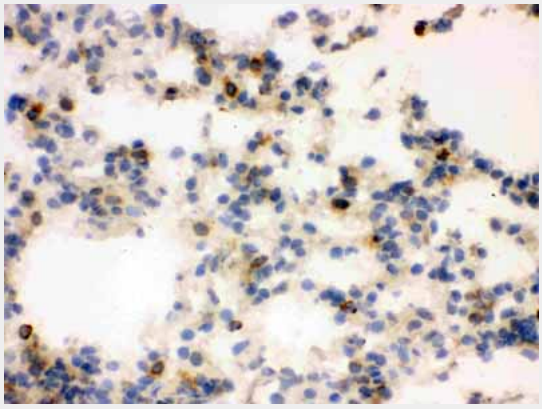

Figure 6. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12294). Lipocalin 2 was detected in frozen section of rat lung tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1Î¼g/ml rabbit anti-Lipocalin 2 Antibody (ABO12294) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

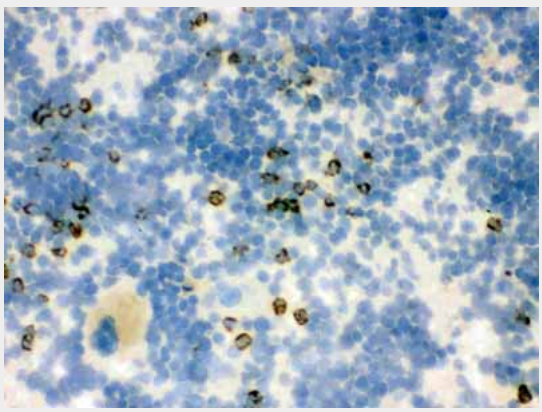

Figure 7. IHC analysis of Lipocalin 2 using anti-Lipocalin 2 antibody (ABO12294). Lipocalin 2 was

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 1Î¼g/ml rabbit anti-Lipocalin 2 Antibody (ABO12294) overnight at 4Â°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37Â°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Anti-Lipocalin-2/NGAL Antibody - Background

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.