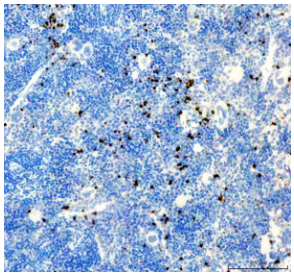
LCN2 Antibody / NGAL Antibody (R32053)

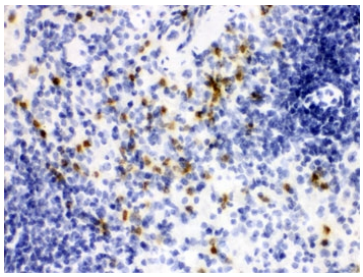
Catalog No.	Formulation	Size
R32053	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

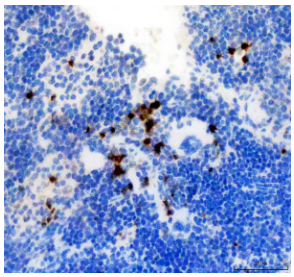
Availability	1-3 business days
Species Reactivity	Mouse, Rat, Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P30152
Localization	Cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 1-2ug/ml ELISA: 0.1-0.5ug/ml (rat protein tested); request BSA-free format for coating
Limitations	This LCN2 Antibody / NGAL Antibody is available for research use only.



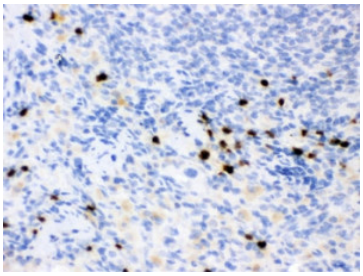
LCN2 Antibody staining of mouse splenic cell populations by IHC. Immunohistochemistry of FFPE mouse spleen sections using the LCN2 Antibody at 2 ug/ml. Scattered brown-positive cells are visible within the splenic tissue against a predominantly blue hematoxylin-counterstained background. Positive staining is relatively focal rather than broadly distributed throughout the section. Heat-mediated antigen retrieval was performed in pH 8 EDTA before overnight primary antibody incubation at 4oC. The localized cellular staining demonstrates tissue detection of Lipocalin 2 with this NGAL Antibody.



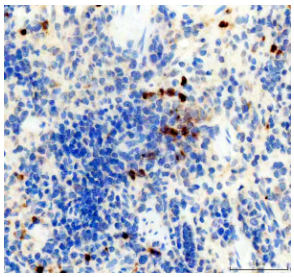
LCN2 Antibody detection of positive cells in mouse spleen by IHC. Immunohistochemistry of FFPE mouse spleen sections using the LCN2 Antibody. At higher magnification, distinct brown staining is visible in a population of cells surrounded by densely packed blue-counterstained splenic cells. The positive cells display predominantly cytoplasmic staining and are clearly distinguishable from the surrounding negative population. Heat-induced epitope retrieval was performed by boiling sections in pH 6 citrate buffer for 20 minutes followed by cooling before testing. The staining demonstrates cellular detection of Lipocalin 2 with this NGAL Antibody.



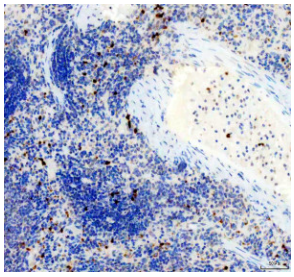
LCN2 Antibody staining of focal cellular regions in mouse spleen by IHC. Immunohistochemistry of FFPE mouse spleen sections using the LCN2 Antibody. Strong brown staining is concentrated within discrete groups of cells, while much of the surrounding densely cellular splenic tissue remains comparatively negative. The localized staining provides a second view of the heterogeneous distribution of LCN2-positive cells within mouse spleen. Heat-induced epitope retrieval was performed by boiling sections in pH 6 citrate buffer for 20 minutes followed by cooling before testing with this NGAL Antibody.



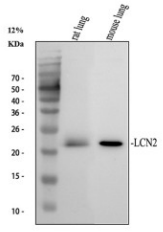
LCN2 Antibody staining of scattered cells in rat spleen by IHC. Immunohistochemistry of FFPE rat spleen sections using the LCN2 Antibody at 2 ug/ml. Scattered brown-positive cells are visible within the blue-counterstained splenic tissue, with positive cells occurring individually and in small localized groups. The surrounding tissue shows substantially less chromogenic signal. Heat-mediated antigen retrieval was performed in pH 8 EDTA before overnight primary antibody incubation at 4oC. The focal cellular staining demonstrates tissue detection of Lipocalin 2 with this NGAL Antibody.



LCN2 Antibody detection of strongly positive cells in rat spleen by IHC. Immunohistochemistry of FFPE rat spleen sections using the LCN2 Antibody at 2 ug/ml. Strong brown cytoplasmic staining is concentrated within a discrete population of cells surrounded by predominantly blue-counterstained splenic cells. The marked contrast between positive and negative populations highlights the heterogeneous cellular distribution of LCN2 within the tissue. Heat-mediated antigen retrieval was performed in pH 8 EDTA before overnight primary antibody incubation at 4oC. The staining demonstrates detection of Lipocalin 2 with this NGAL Antibody.



LCN2 Antibody localization within rat splenic tissue by IHC. Immunohistochemistry of FFPE rat spleen sections using the LCN2 Antibody at 2 ug/ml. Brown-positive cells are distributed primarily within portions of the more densely cellular splenic tissue, while the large pale region and surrounding areas show comparatively limited staining. This lower-magnification view illustrates the nonuniform distribution of LCN2-positive cells across the section. Heat-mediated antigen retrieval was performed in pH 8 EDTA before overnight primary antibody incubation at 4oC. The staining demonstrates tissue recognition with this NGAL Antibody.



LCN2 Antibody detection in rat and mouse lung by WB. Western blot testing of rat lung (lane 1) and mouse lung (lane 2) tissue lysates with the LCN2 Antibody at 0.5 ug/ml under reducing conditions. Thirty micrograms of protein were loaded per lane. A strong predominant band is detected at approximately 22-23 kDa in both samples, consistent with the expected migration of Lipocalin 2. The rat sample also shows a weaker lower-molecular-weight signal, while the major target band is clearly resolved in both species. These results demonstrate detection of LCN2 in rat and mouse lung with this NGAL Antibody.

Description

LCN2 Antibody / NGAL Antibody recognizes lipocalin 2, a secreted glycoprotein encoded by the LCN2 gene. Also known as neutrophil gelatinase-associated lipocalin, NGAL, siderocalin and 24p3, LCN2 belongs to the lipocalin family of small proteins characterized by a beta-barrel structure capable of binding hydrophobic molecules and other ligands. LCN2 is particularly notable for its ability to bind iron-loaded bacterial siderophores, connecting this protein with regulation of iron availability and host defense against microbial infection.

During bacterial infection, innate immune signaling can stimulate production and secretion of LCN2. By binding siderophores used by susceptible bacteria to acquire iron, lipocalin 2 restricts access to this essential nutrient and can inhibit bacterial growth. This mechanism represents an important component of nutritional immunity, in which the host alters the availability of metals required by invading microorganisms. An LCN2 Antibody can therefore support research examining antimicrobial defense, innate immune signaling and mechanisms regulating iron homeostasis during infection and inflammation.

NGAL is also associated with inflammatory responses and tissue injury. Expression can increase rapidly in response to cellular stress, cytokine signaling and other inflammatory stimuli. LCN2 has consequently been investigated as a biomarker in renal injury and in research involving inflammatory disease, cardiovascular biology and cancer. Its biological functions extend beyond antimicrobial iron sequestration and include interactions with cellular iron metabolism, differentiation, survival and tissue remodeling. An NGAL Antibody provides a useful reagent for investigating these diverse functions and the mechanisms controlling lipocalin 2 expression and activity.

LCN2 can occur in different molecular forms and may associate with matrix metalloproteinase 9, an interaction reflected in the historical name neutrophil gelatinase-associated lipocalin. The broad involvement of LCN2 in host defense, inflammatory biology and iron handling makes it an important link between innate immunity and cellular metabolism. NSJ Bioreagents provides this polyclonal reagent for researchers investigating lipocalin 2 biology. An LCN2 Antibody provides a useful tool for studying NGAL and its roles in innate immune defense, siderophore sequestration, iron homeostasis and inflammatory responses.

This LCN2 Antibody is part of our Innate Immunity Antibodies collection.

Application Notes

Optimal dilution of the LCN2 Antibody / NGAL Antibody should be determined by the researcher.

Immunogen

Amino acids 21-198 of rat Lipocalin 2 were used as the immunogen for the LCN2 antibody.

Storage

After reconstitution, the LCN2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

NGAL antibody, Lipocalin 2 antibody, Neutrophil gelatinase-associated lipocalin antibody, Siderocalin antibody, 24p3 antibody, Uterocalin antibody

Copyright © NSJ Bioreagents. All rights reserved.