abcam

ab223503

Anti-Lysozyme antibody [SP329]

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.6 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	SP329
Purification technique	Affinity purification Protein A/G
Concentration	0.262 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/400
Notes	Primary antibody incubation for 30 minutes at 4°C.

Predicted

Species	Rabbit
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/400
Notes	Primary antibody incubation for 1 hour at room temperature.

Predicted

Species	Rabbit
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Perform heat mediated antigen retrieval with EDTA buffer pH 8.0 before commencing with IHC staining protocol. Primary antibody incubation for 30 minutes at room temperature.

Predicted

Species	Rabbit
Dilution info	-
Notes	-

Target data

See full target information LYZ

Function	Lysozymes have primarily a bacteriolytic function; those in tissues and body fluids are associated with the monocyte-macrophage system and enhance the activity of immunoagents.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Lysozyme also known as muramidase is a protein with enzymatic activity that breaks down bacterial cell walls by hydrolyzing the glycosidic bonds of peptidoglycan. The molecular weight of lysozyme is approximately 14 kDa. This protein is expressed in various tissues and body fluids including egg whites human saliva tears and milk. Lysozyme acts as an antimicrobial agent and plays a significant role in the innate immune system.
Biological function summary	Lysozyme contributes to host defense by targeting bacteria. It is not part of a complex but functions as a single enzyme. By compromising the integrity of bacterial cell walls it clears pathogens swiftly from the body. Lysozyme activity assays measure its ability to hydrolyze bacterial peptidoglycan reflecting its role in immune defense. Many cells such as neutrophils and macrophages express lysozyme during the immune response aiding in pathogen clearance.
Pathways	Lysozyme is chiefly involved in the antibacterial humoral response pathway. Its action aligns with other antimicrobial proteins such as lactoferrin. Both lysozyme and lactoferrin are integral to the body's first line of defense against bacterial invasion. In addition lysozyme is relevant in the pathway managing mucosal immunity working in conjunction with proteins that enhance pathogen clearance like defensins.

Associated diseases and disorders	Lysozyme has links to conditions such as sarcoidosis and hereditary renal amyloidosis. In sarcoidosis altered expression patterns of lysozyme may serve as a marker for disease activity. In hereditary renal amyloidosis mutations in the lysozyme gene result in amyloid fibril formation leading to renal dysfunction. Understanding these connections helps in the diagnosis and treatment of related conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

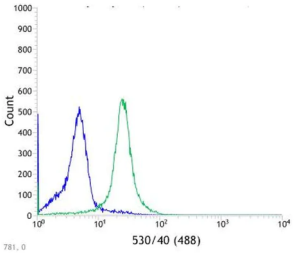
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

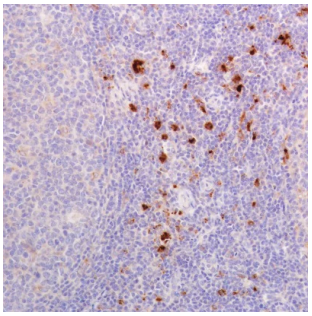
12 product images



Flow Cytometry (Intracellular) - Anti-Lysozyme antibody [SP329] (ab223503)

Lysozyme Flow Cytometry (Intracellular) staining using rabbit Anti-Lysozyme antibody

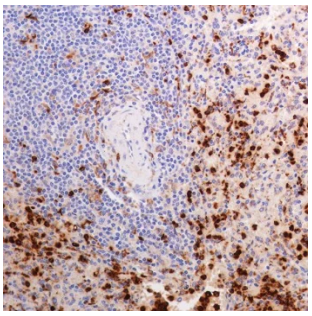
Flow cytometric analysis of HL-60 (human promyelocytic leukemia cell line) cell line labeling Lysozyme with ab223503 at 1/100 dilution (green) compared with a negative control of rabbit IgG (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP329] (ab223503)

Lysozyme Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Lysozyme antibody

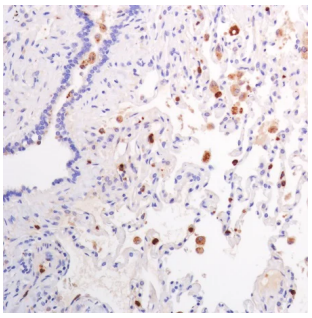
Formalin-fixed, paraffin-embedded human tonsil tissue stained for Lysozyme using ab223503 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP329] (ab223503)

Lysozyme Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Lysozyme antibody

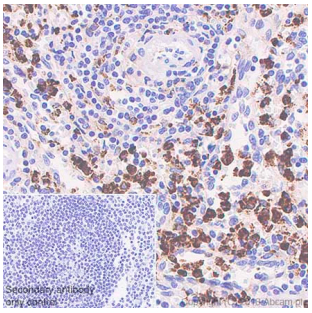
Formalin-fixed, paraffin-embedded human spleen tissue stained for Lysozyme using ab223503 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP329] (ab223503)

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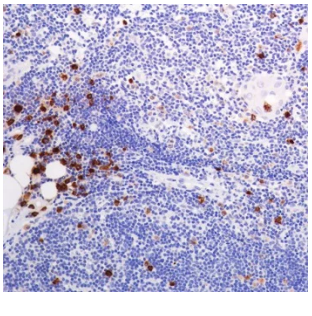
Formalin-fixed, paraffin-embedded human lung tissue stained for Lysozyme using ab223503 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP329] (ab223503)

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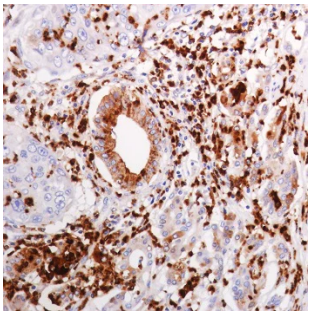
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human spleen tissue sections labeling Lysozyme with ab223503 at 1/100 dilution (2.62 µg/ml). Cytoplasmic staining on the human spleen, performed on a Leica Biosystems BOND® RX instrument. The section was incubated with ab223503 for 10 mins at room temperature. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP329] (ab223503)

Lysozyme Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Lysozyme antibody

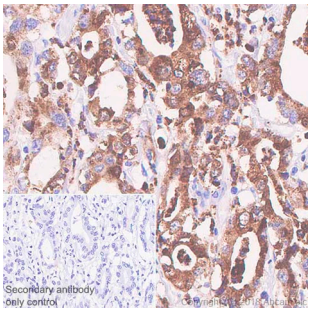
Formalin-fixed, paraffin-embedded human thymus tissue stained for Lysozyme using ab223503 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP329] (ab223503)

Lysozyme Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Lysozyme antibody

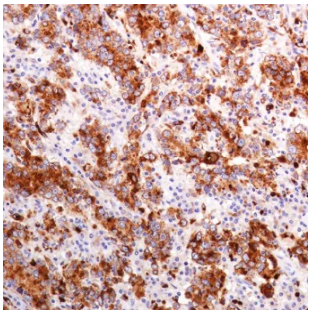
Formalin-fixed, paraffin-embedded human pancreatic adenocarcinoma tissue stained for Lysozyme using ab223503 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP329] (ab223503)

Lysozyme Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Lysozyme antibody

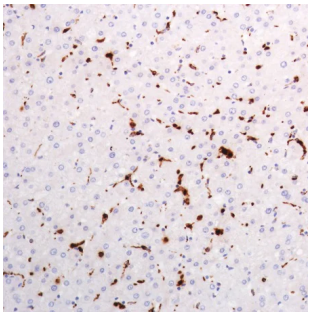
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human stomach carcinoma tissue sections labeling Lysozyme with ab223503 at 1/100 dilution (2.62 µg/ml). Cytoplasmic staining on the human stomach carcinoma and the stromal cells, performed on a Leica Biosystems BOND® RX instrument. The section was incubated with ab223503 for 10 mins at room temperature. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP329] (ab223503)

Lysozyme Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Lysozyme antibody

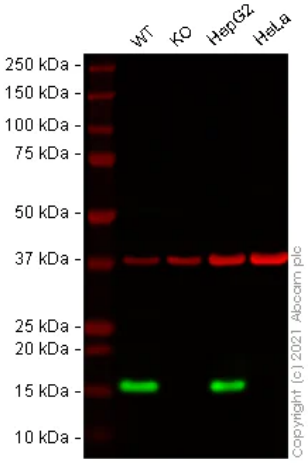
Formalin-fixed, paraffin-embedded human stomach adenocarcinoma tissue stained for Lysozyme using ab223503 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP329] (ab223503)

Lysozyme Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Lysozyme antibody

Formalin-fixed, paraffin-embedded human liver tissue stained for Lysozyme using ab223503 at 1/100 dilution in immunohistochemical analysis.



Western blot - Anti-Lysozyme antibody [SP329] (ab223503)

Lanes 1 - 4: Merged signal (red and green). Green - ab223503 observed at 16 kDa. Red - loading control ab8245 (Mouse anti-GAPDH antibody [6C5]) observed at 37 kDa.
ab223503 was shown to react with Lysozyme in wild-type THP1 cells in Western blot with loss of signal observed in LYZ knockout sample.Wild-type THP1 and LYZ knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween®) before incubation with ab223503 and ab8245 (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 400 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.

All lanes:
Western blot - Anti-Lysozyme antibody [SP329] (ab223503) at 1/400 dilution

Lane 1:
Wild-type THP1 cell lysate at 20 µg

Lane 2:
LYZ knockout THP1 cell lysate at 20 µg

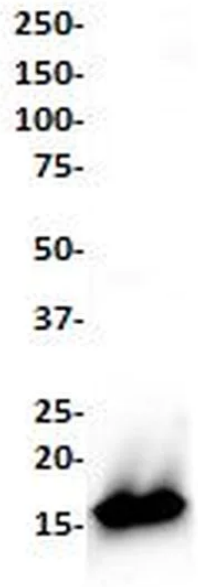
Lane 3:
HepG2 cell lysate at 20 µg

Lane 4:
HeLa cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 16 kDa

Observed band size: 16 kDa



Western blot - Anti-Lysozyme antibody [SP329] (ab223503)

All lanes:
Western blot - Anti-Lysozyme antibody [SP329] (ab223503) at 1/400 dilution

All lanes:
HL-60 (human promyelocytic leukemia cell line) cell lysate

Predicted band size: 16 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.