abcam

ab242430

Anti-Lysozyme antibody [SP350] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	SP350
Purification technique	Affinity purification Protein A/G
Concentration	1.031 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by protein A/G.

Reactivity data

mIHC

Tested

Species	Human

Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 8.0 before commencing with IHC staining protocol.

Flow Cyt (Intra)

Tested

Species	Human
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	Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab242430 is the carrier-free version of ab227708.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

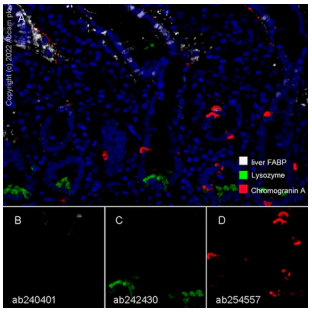
We do not recommend this combination. It is not covered by our product promise.

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.

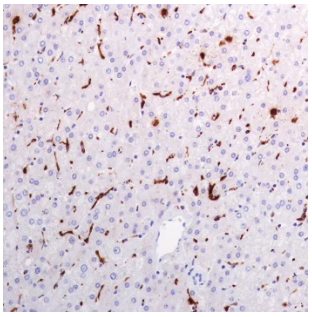
9 product images



Multiplex immunohistochemistry - Anti-Lysozyme antibody [SP350] - BSA and Azide free (ab242430)

Fluorescence multiplex immunohistochemical analysis of the human duodenum (Formalin/PFA-fixed paraffin-embedded sections). Panel A: merged staining of anti-liver FABP (ab240401, gray; Opal™690), anti-Lysozyme (ab242430, green; Opal™520) and anti-Chromogranin A (ab254557, red; Opal™570) on human duodenum. Panel B: anti-liver FABP stained on enterocytes. Panel C: anti-Lysozyme stained on Paneth cells. Panel D: anti-Chromogranin A stained on neuroendocrine cells. Opal Polymer HRP Ms + Rb was used as a secondary antibody. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. The section was incubated in three rounds of staining: in the order of ab240401 (1/8000 dilution), ab242430 (1:250 dilution), and ab254557 (1/5000 dilution) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Leica SP8 confocal microscope.

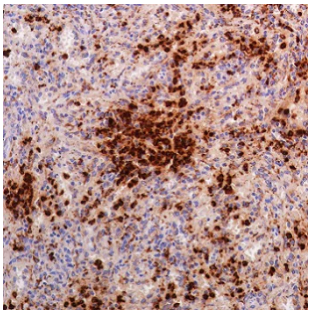
This data was developed using the same antibody clone in a different buffer formulation (ab227708).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP350] - BSA and Azide free (ab242430)

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

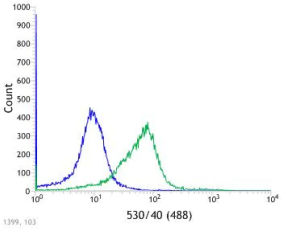
Formalin-fixed, paraffin-embedded human liver tissue stained for Lysozyme using ab227708 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227708).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP350] - BSA and Azide free (ab242430)

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 ab227708 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227708).

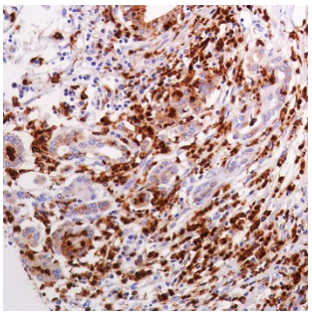


Flow Cytometry (Intracellular) - Anti-Lysozyme antibody [SP350] - BSA and Azide free (ab242430)

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

Intracellular flow cytometric analysis of HL-60 (human promyelocytic leukemia cell line) cell line labeling Lysozyme with ab227708 at 1/100 dilution (green) compared with a Rabbit IgG negative control (blue).

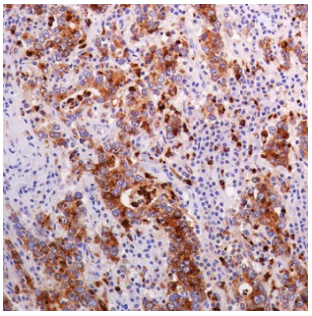
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA,and sodium azide (ab227708).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP350] - BSA and Azide free (ab242430)

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

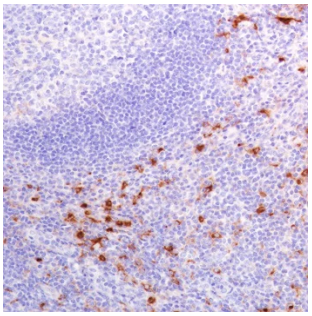
Formalin-fixed, paraffin-embedded human pancreatic adenocarcinoma tissue stained for Lysozyme using ab227708 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227708).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP350] - BSA and Azide free (ab242430)

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

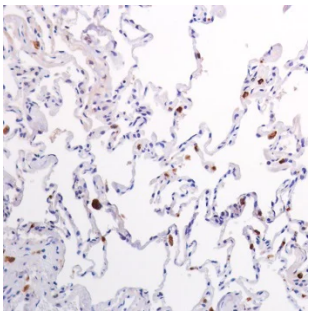
Formalin-fixed, paraffin-embedded human stomach adenocarcinoma tissue stained for Lysozyme using ab227708 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227708).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP350] - BSA and Azide free (ab242430)

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 ab227708 at 1/100 dilution in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227708).

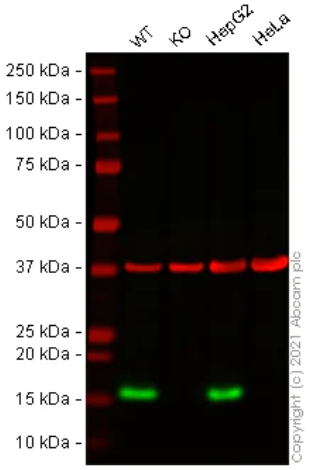


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lysozyme antibody [SP350] - BSA and Azide free (ab242430)

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

Formalin-fixed, paraffin-embedded human lung tissue stained for Lysozyme using ab227708 at 1/100 dilution in immunohistochemical analysis.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, and sodium azide (ab227708).



Western blot - Anti-Lysozyme antibody [SP350] - BSA and Azide free (ab242430)

Lysozyme Western blot staining using rabbit Anti-Lysozyme antibody

This data was developed using the same antibody clone in a different buffer formulation (ab227708).
Lanes 1 - 4: Merged signal (red and green). Green - ab227708 observed at 16 kDa. Red - loading control ab8245 (Mouse anti-GAPDH antibody [6C5]) observed at 37 kDa.

ab227708 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 ab227708 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 [SP350] - C-terminal (ab227708) 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

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