abcam

Product datasheet

Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free ab230156

Recombinant RabMAb

10 Images

Overview

Product name	Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free
Description	Rabbit monoclonal [EPR21769] to CD8 alpha - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB, IHC-Fr, Flow Cyt, IP
Species reactivity	**Reacts with:** Mouse
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Mouse spleen tissue.
General notes	ab230156 is the carrier-free version of **ab217344**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. 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. 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. 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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR21769
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab230156 in the following tested applications.

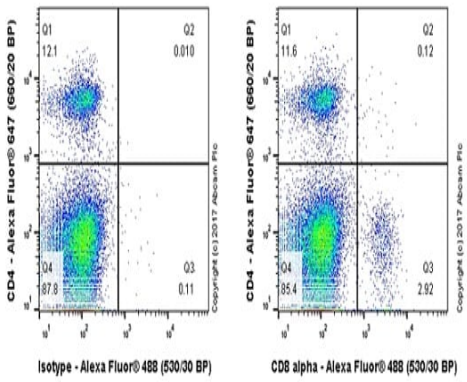
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. Background staining was observed in mouse testis samples.
WB		Use at an assay dependent concentration. Detects a band of approximately 34-38 kDa (predicted molecular weight: 27 kDa).
IHC-Fr		Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration.
IP		Use at an assay dependent concentration.

Target

Function	Identifies cytotoxic/suppressor T-cells that interact with MHC class I bearing targets. CD8 is thought to play a role in the process of T-cell mediated killing. CD8 alpha chains binds to class I MHC molecules alpha-3 domains.
Involvement in disease	Defects in CD8A are a cause of familial CD8 deficiency (CD8 deficiency) [MIM:608957]. Familial CD8 deficiency is a novel autosomal recessive immunologic defect characterized by absence of CD8+ cells, leading to recurrent bacterial infections.
Sequence similarities	Contains 1 Ig-like V-type (immunoglobulin-like) domain.
Post-translational modifications	All of the five most carboxyl-terminal cysteines form inter-chain disulfide bonds in dimers and higher multimers, while the four N-terminal cysteines do not.
Cellular localization	Secreted and Cell membrane.

Images

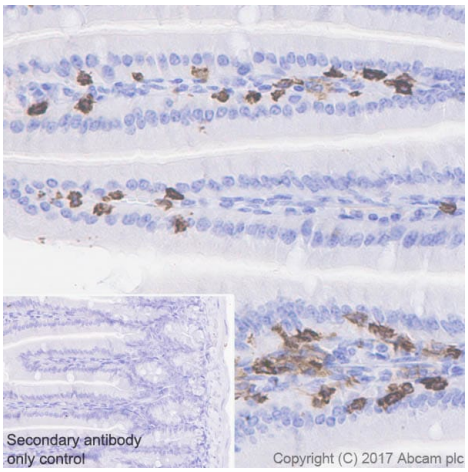


Flow Cytometry - Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free (ab230156)

Flow cytometric analysis of mouse primary splenocytes labeling CD8 alpha with **ab217344** at 1/500 dilution (right panel) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (**ab172730**) (left panel). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) at 1/2000 dilution was used as the secondary antibody.

Cells were surface stained with CD4-Alexa Fluor® 647, then stained with rabbit IgG (Left) / **ab217344** (Right) separately. CD4 and CD8 alpha are mutually exclusive expressed in mouse spleen. Gated on total viable cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab217344**).



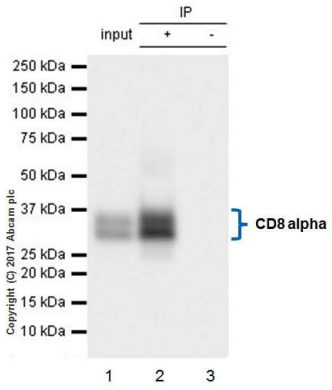
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free (ab230156)

Immunohistochemical analysis of paraffin-embedded mouse colon tissue labeling CD8 alpha with **ab217344** at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining on stromal cells of mouse colon. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab217344**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free (ab230156)

CD8 alpha was immunoprecipitated from 0.35 mg of mouse thymus lysate with **ab217344** at 1/30 dilution. Western blot was performed from the immunoprecipitate using **ab217344** at 1/2000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

Lane 1: Mouse thymus lysate 10 µg (Input).

Lane 2: **ab217344** IP in mouse thymus lysate.

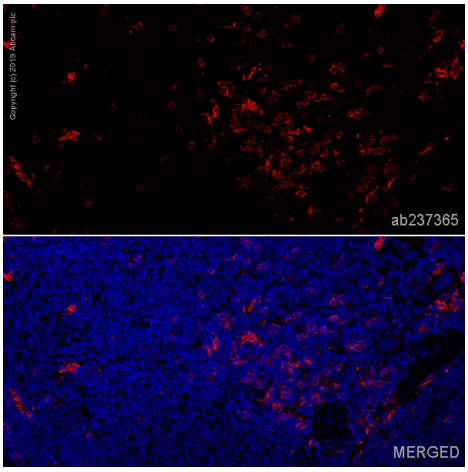
Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab214344** in mouse thymus lysate.

Exposure time: 5 seconds.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

The two bands are different isoforms that are consistent with the literature (PMID 3085089).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab217344**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free (ab230156)

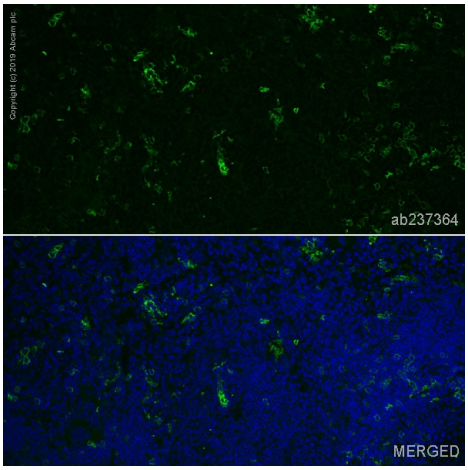
Clone EPR21769 (ab230156) has been successfully conjugated by Abcam. This image was generated using Anti-CD8 alpha antibody [EPR21769] (Alexa Fluor® 647). Please refer to **ab237365** for protocol details.

IHC image of CD8 alpha staining in a section of formalin-fixed paraffin-embedded normal mouse spleen.

The section was pre-treated using heat mediated antigen retrieval with Tris/EDTA buffer (pH9, epitope retrieval solution 2) for 20mins, performed on a Leica BOND™. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M (w/v) glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with **ab237365** at 1/100 dilution (shown in red). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For other IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antigen retrieval conditions, antibody concentrations and incubation times.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free (ab230156)

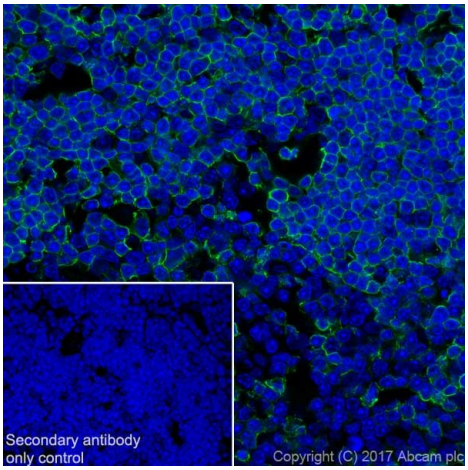
Clone EPR21769 (ab230156) has been successfully conjugated by Abcam. This image was generated using Anti-CD8 alpha antibody [EPR21769] (Alexa Fluor® 488). Please refer to **ab237364** for protocol details.

IHC image of CD8 alpha staining in a section of formalin-fixed paraffin-embedded normal mouse spleen.

The section was pre-treated using heat mediated antigen retrieval with Tris/EDTA buffer (pH9, epitope retrieval solution 2) for 20mins, performed on a Leica BOND™. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M (w/v) glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with **ab237364** at 1/100 dilution (shown in green). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For other IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antigen retrieval conditions, antibody concentrations and incubation times.



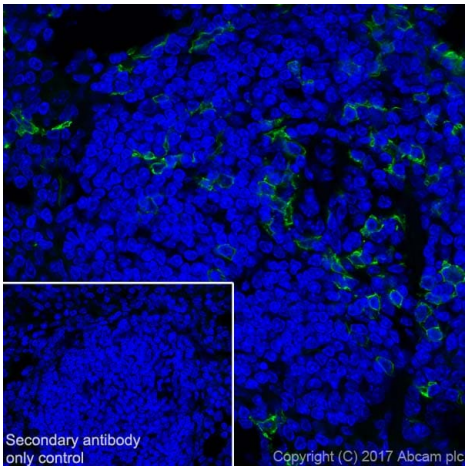
Immunohistochemistry (Frozen sections) - Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free (ab230156)

Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100 permeabilized frozen mouse thymus tissue labeling CD8 alpha with **ab217344** at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Positive membrane staining on mouse thymus tissue section (PMID: 25616911).

The nuclear counter stain is DAPI (blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab217344**).



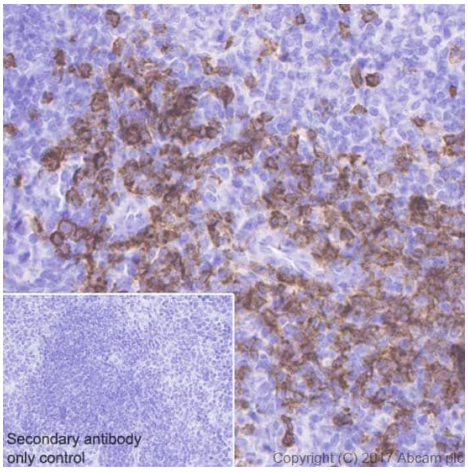
Immunohistochemistry (Frozen sections) - Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free (ab230156)

Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100 permeabilized frozen mouse spleen tissue labeling CD8 alpha with **ab217344** at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Positive membrane staining on mouse spleen (PMID: 25616911).

The nuclear counter stain is DAPI (blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab217344**).



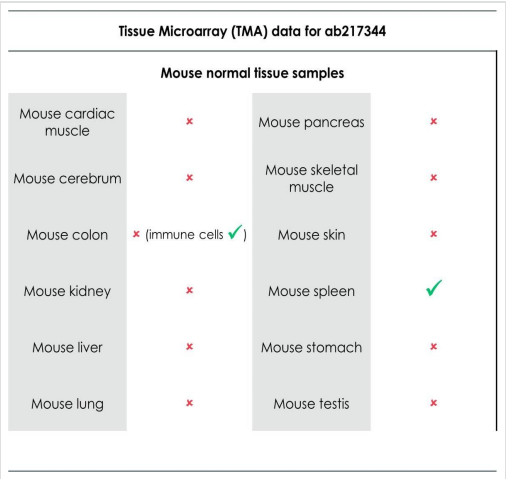
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free (ab230156)

Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling CD8 alpha with **ab217344** at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining on the white pulp of mouse spleen (PMID: 23482450; PMID: 25826597). Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab217344**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Tissue Microarray (TMA) data for ab217344

Mouse normal tissue samples

Mouse cardiac muscle	×	Mouse pancreas	×
Mouse cerebrum	×	Mouse skeletal muscle	×
Mouse colon	× (immune cells ✓)	Mouse skin	×
Mouse kidney	×	Mouse spleen	✓
Mouse liver	×	Mouse stomach	×
Mouse lung	×	Mouse testis	×

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free (ab230156)

Tissue Microarrays stained for " Anti-CD8 alpha antibody [EPR21769]" using " **ab217344**" in immunohistochemical analysis. This table provides a detailed overview of positive (tick mark) and negative (cross mark) staining per sample type tested. The sections were pre-treated using Heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0). The sections were incubated with **ab217344** at +4°C overnight followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer).

Anti-CD8 alpha antibody [EPR21769] - BSA and Azide free (ab230156)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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