abcam

Product datasheet

Anti-Granzyme B antibody [EPR20129-217] - BSA and Azide free ab219803

Recombinant RabMAb

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Overview

Product name	Anti-Granzyme B antibody [EPR20129-217] - BSA and Azide free
Description	Rabbit monoclonal [EPR20129-217] to Granzyme B - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, mIHC, WB **Unsuitable for:** Flow Cyt
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant full length protein. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human colon and cervix cancer tissues. mIHC: Human breast cancer tissue.
General notes	ab219803 is the carrier-free version of **ab208586**. 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.

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	EPR20129-217
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab219803 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	★★★★☆ (3)	Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
mIHC		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Predicted molecular weight: 28 kDa.

Application notes Is unsuitable for Flow Cyt.

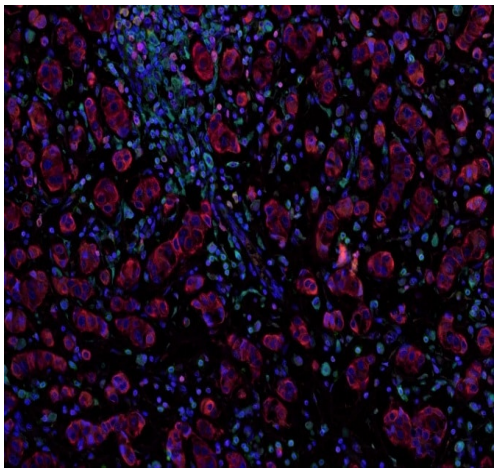
Target

Function This enzyme is necessary for target cell lysis in cell-mediated immune responses. It cleaves after Asp. Seems to be linked to an activation cascade of caspases (aspartate-specific cysteine proteases) responsible for apoptosis execution. Cleaves caspase-3, -7, -9 and 10 to give rise to active enzymes mediating apoptosis.

Sequence similarities Belongs to the peptidase S1 family. Granzyme subfamily.
Contains 1 peptidase S1 domain.

Cellular localization Cytoplasmic granule. Cytoplasmic granules of cytolytic T-lymphocytes and natural killer cells.

Images



Multiplex immunohistochemistry - Anti-Granzyme B antibody [EPR20129-217] - BSA and Azide free (ab219803)

This image is courtesy of ImmunoAtlas.

Fluorescence multiplex immunohistochemical analysis of Human breast cancer tissue (formalin-fixed paraffin-embedded section).

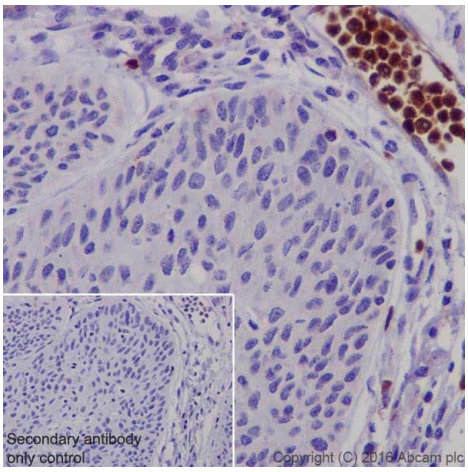
Merged staining of Anti-PD-L1 (**ab251611**; cyan; Opal™ 520), Anti-Granzyme B (ab219803; yellow; Opal™ 540), Anti-PD1 (**ab251613**; magenta; Opal™ 570), Anti-pan Cytokeratin (**ab264485**; red; Opal™ 620), Anti-EpCAM (**ab225894**; red; Opal™ 620), Anti-CD8 alpha (**ab251596**; green; Opal™ 650) and Anti-FOXP3 (**ab96048**; orange; Opal™ 690). EpCAM and pan-cytokeratin share the same dye and color. Dyes are pseudo-colored for better contrast of the markers.

The immunostaining was performed on a Leica Biosystems BOND® MAX instrument with an Opal™ 6-Plex Detection Kit (NEL821001KT, Akoya Biosciences®).

The section was incubated in six rounds of staining; sequentially for **ab251611** (1/750 dilution), ab219803 (1/250 dilution), **ab251613** (1/750 dilution), **ab264485** (0.5 µg/ml), **ab225894** (1/1250 dilution), **ab251596** (1/1500 dilution) and **ab96048** (10 µg/ml); each using a separate fluorescent tyramide signal amplification system. EDTA based antigen retrieval (Leica Biosystems BOND® Epitope Retrieval Solution 2, pH 9.0, 20 minutes) was used in between rounds of tyramide signal amplification to remove the antibody from the previous round, to avoid any cross-reactivity. DAPI (dark blue) was used as a nuclear counter stain.
Microscopy and pseudocoloring of individual Opal™ dyes was performed using a Vectra 3 Imaging System (Akoya Biosciences®).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab208586**).

This data is courtesy of ImmunoAtlas and it can be found **here**.



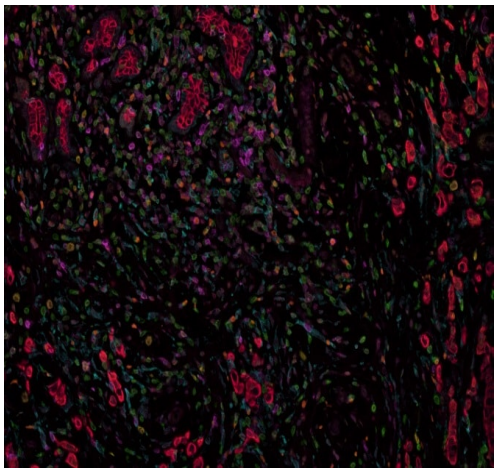
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Granzyme B antibody [EPR20129-217] - BSA and Azide free (ab219803)

This IHC data was generated using the same anti-Granzyme B antibody clone [EPR20129-217] in a different buffer formulation (cat# **ab208586**).

Immunohistochemical analysis of paraffin-embedded human cervix cancer tissue labeling Granzyme B with **ab208586** at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasmic staining on neutrophils and stroma cells of human cervix cancer is observed [PMID: 14512315]. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Multiplex immunohistochemistry - Anti-Granzyme B antibody [EPR20129-217] - BSA and Azide free (ab219803)

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Fluorescence multiplex immunohistochemical analysis of Human breast cancer tissue (formalin-fixed paraffin-embedded section).

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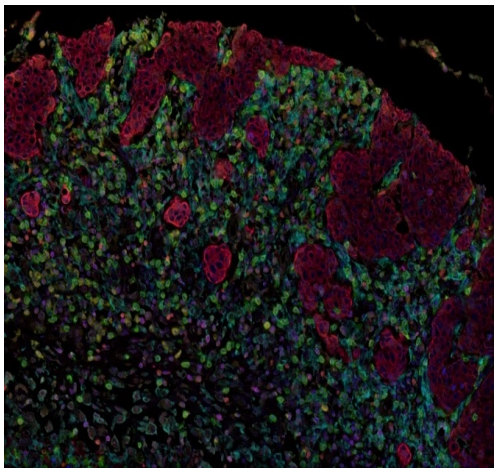

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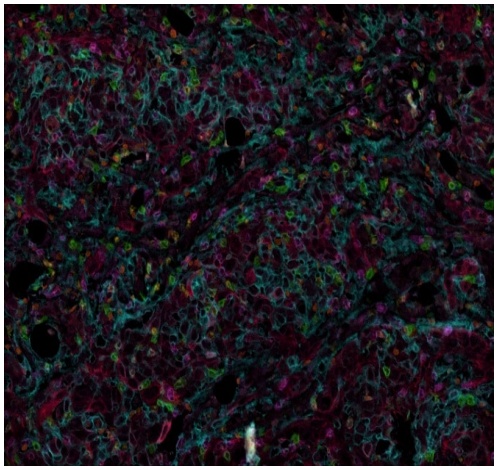

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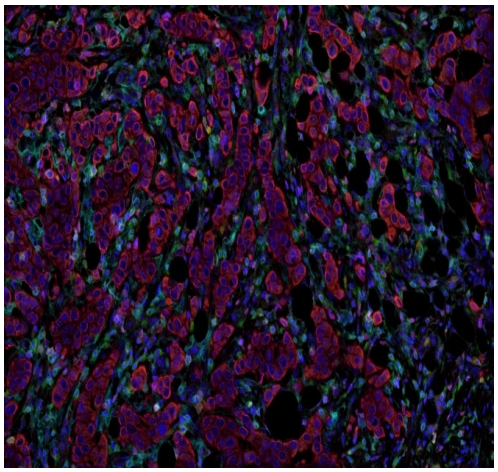

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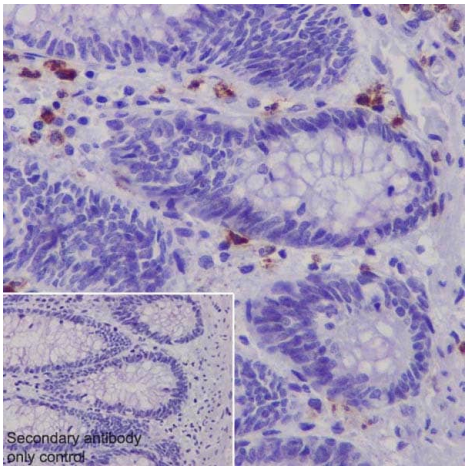


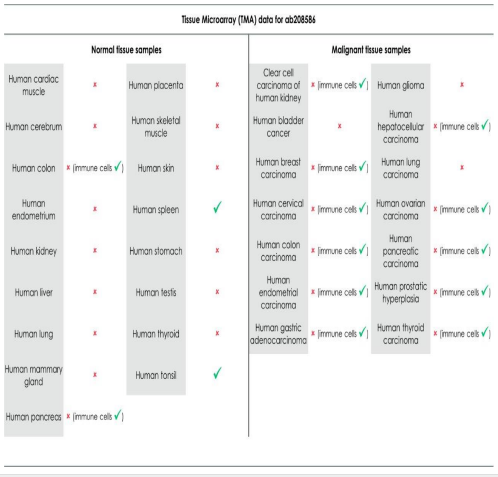
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Granzyme B antibody [EPR20129-217] - BSA and Azide free (ab219803)

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling Granzyme B with **ab208586** at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Cytoplasmic staining on some stromal cells of human colon is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab208586**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

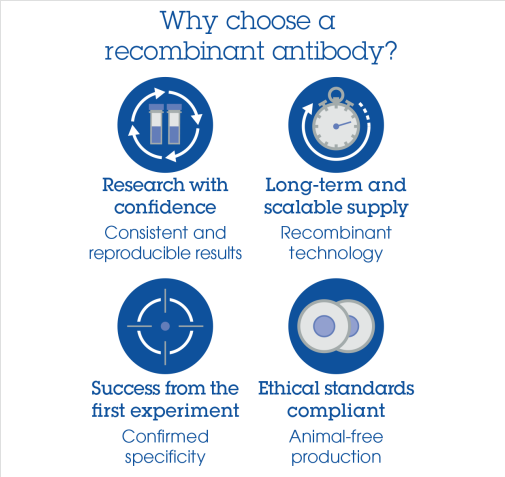


Tissue Microarray (TMA) data for ab208586

Normal tissue samples				Malignant tissue samples			
Human cardiac muscle	x	Human placenta	x	Clear cell carcinoma of human kidney	x (immune cells ✓)	Human glioma	x
Human cerebrum	x	Human skeletal muscle	x	Human bladder cancer	x	Human hepatocellular carcinoma	x (immune cells ✓)
Human colon	x (immune cells ✓)	Human skin	x	Human breast carcinoma	x (immune cells ✓)	Human lung carcinoma	x
Human endometrium	x	Human spleen	✓	Human cervical carcinoma	x (immune cells ✓)	Human ovarian carcinoma	x (immune cells ✓)
Human kidney	x	Human stomach	x	Human colon carcinoma	x (immune cells ✓)	Human pancreatic carcinoma	x (immune cells ✓)
Human liver	x	Human testis	x	Human endometrial carcinoma	x (immune cells ✓)	Human prostatic hyperplasia	x (immune cells ✓)
Human lung	x	Human thyroid	x	Human gastric adenocarcinoma	x (immune cells ✓)	Human thyroid carcinoma	x (immune cells ✓)
Human mammary gland	x	Human tonsil	✓				
Human pancreas	x (immune cells ✓)						

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Granzyme B antibody [EPR20129-217] - BSA and Azide free (ab219803)

Tissue Microarrays stained for " Anti-Granzyme B antibody [EPR20129-217]" using " **ab208586**" 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 Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes. The sections were incubated with **ab208586** for 30 mins at room temperature followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Anti-Granzyme B antibody [EPR20129-217] - BSA and Azide free (ab219803)

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

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