abcam

ab315290

Anti-CD23 antibody [EPR28712-26] - BSA and Azide free

Recombinant | RabMAb | Advanced Validation

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	EPR28712-26
Purification technique	Affinity purification Protein A
Concentration	1.022 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

mIHC

Tested

Species	Mouse
Dilution info	-

Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information Fcer2

Function	Low-affinity receptor for immunoglobulin E (IgE) and CR2/CD21. Has essential roles in the regulation of IgE production and in the differentiation of B cells. On B cells, initiates IgE-dependent antigen uptake and presentation to T cells. On macrophages, upon IgE binding and antigen cross-linking induces intracellular killing of parasites through activation of L-Arginine-nitric oxide pathway.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab315290 is the carrier-free version of ab315289.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

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	CD23 also known as Fc epsilon receptor II (FcεRII) or BU38 is a type II integral membrane protein with a molecular mass of approximately 45 kDa. It is expressed mainly on B cells but also appears on various other cell types such as macrophages eosinophils and Langerhans cells. CD23 expression occurs in both soluble and membrane-bound forms. The protein consists of a lectin-like extracellular domain a short transmembrane domain and a cytoplasmic tail.
Biological function summary	CD23 facilitates several immune functions including the regulation of immunoglobulin E (IgE) production and its receptor-mediated endocytosis. It has a role in cell adhesion growth and differentiation. CD23 exists independently localizing primarily to the surface of CD23-positive cells. Furthermore this protein influences the release and activity of various cytokines impacting both innate and adaptive immunity.
Pathways	CD23 plays central roles in IgE-mediated immune responses and allergic reactions. It is importantly involved in the synthesis and regulation of IgE connecting it to the IgE signaling pathway and immune system pathways. CD23 interacts with IgE and its receptors which include the high-affinity receptor FcεRI forming an interface between the antigen and immune effector functions. Additionally CD23 participates in pathways that involve immune response modulation and inflammation prevention.
Associated diseases and disorders	CD23 is most notably associated with allergic diseases such as asthma and allergic rhinitis due to its role in IgE regulation. It is also linked to chronic lymphocytic leukemia (CLL) in which CD23 serves as a marker for disease progression. In CLL interactions involving CD23 and related proteins such as BCMA and BAFF have been studied to better understand the disorder and its treatment. Anti-CD23 antibodies have been used as both diagnostic tools and therapeutic agents to target CD23-positive cells in these diseases.

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

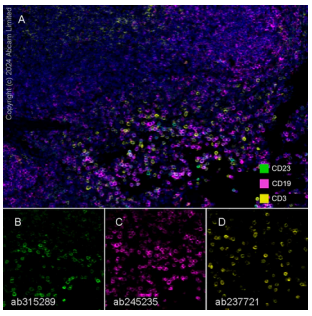
We do not recommend this combination. It is not covered by our product promise.

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.

11 product images



Multiplex immunohistochemistry - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

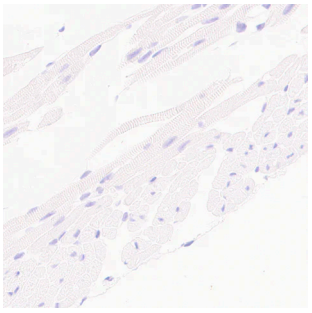
This data was developed using the same antibody clone in a different buffer formulation (ab315289).

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded mouse spleen tissue staining CD23 with ab315289 at a 1/2000 dilution (0.253 µg/ml), CD19 with ab245235 at 1/1000 dilution (0.444 µg/ml), and CD3 with ab237721 at 1/8000 dilution (0.07 µg/ml), followed by a ready to use secondary antibody Opal Polymer HRP Ms + Rb.

Panel A: merged staining of anti-CD23 (green; Opal™520), anti-CD19 (magenta; Opal™570) and anti-CD3 (yellow; Opal™690) on mouse spleen.
Panel B: anti-CD23 staining B lymphocytes in mouse spleen.
Panel C: anti-CD19 staining B lymphocytes in mouse spleen.
Panel D: anti-CD3 staining T lymphocytes in mouse spleen.
Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab315289, ab245235 and ab237721 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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

CD23 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse cardiac muscle using rabbit Anti-CD23 antibody

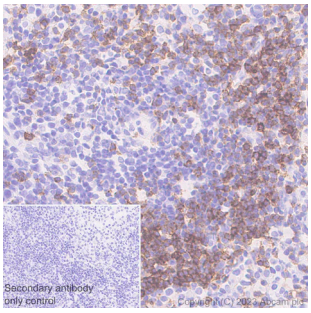
This data was developed using ab315289, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Mouse cardiac muscle tissue labeling CD23 with ab315289 at 1/2000 (0.253 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: No staining on mouse cardiac muscle. The section was incubated with ab315289 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

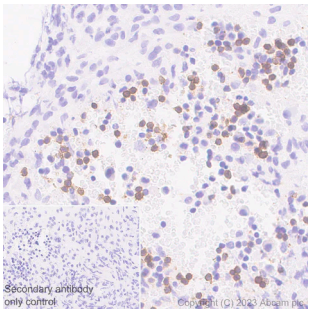
This data was developed using ab315289, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling CD23 with ab315289 at 1/2000 (0.253 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Membranous staining on mouse spleen. The section was incubated with ab315289 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

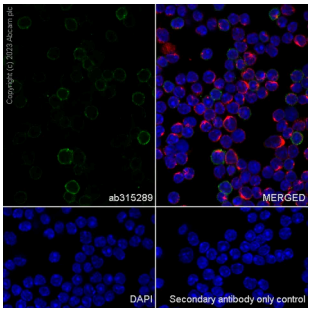
This data was developed using ab315289, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Mouse pancreas tumor tissue labeling CD23 with ab315289 at 1/2000 (0.253 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Membranous staining on several immune cells of mouse pancreas tumor. The section was incubated with ab315289 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

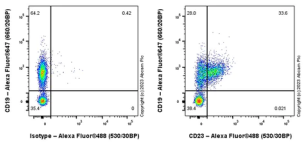
This data was developed using ab315289, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized mouse splenocytes cells labelling CD23 with ab315289 at 1/100 (5.06 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green).

Confocal image showing membranous staining in subsets of mouse splenocytes. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.



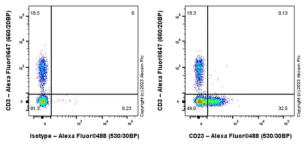
Flow Cytometry - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

This data was developed using ab315289, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of Mouse splenocytes cells labelling CD23 with ab315289 at 1/500 dilution (0.1 ug, Right) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control.

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells are co-stained with CD19 conjugated to Alexa Fluor®647. Gated on viable cells.



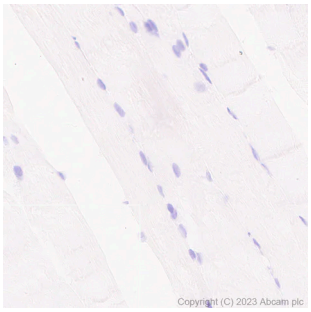
Flow Cytometry - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

This data was developed using ab315289, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of Mouse splenocytes cells labelling CD23 with ab315289 at 1/500 dilution (0.1 ug, Right) compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control.

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Cells are co-stained with CD3 conjugated to Alexa Fluor®647. Gated on viable cells.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

CD23 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse skeletal muscle using rabbit Anti-CD23 antibody

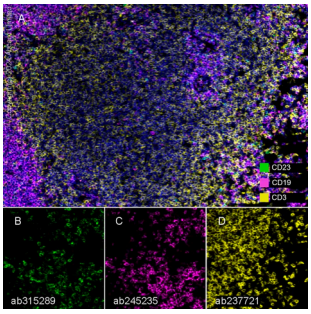
This data was developed using ab315289, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Mouse skeletal muscle tissue labeling CD23 with ab315289 at 1/2000 (0.253 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: No staining on mouse skeletal muscle. The section was incubated with ab315289 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Multiplex immunohistochemistry - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

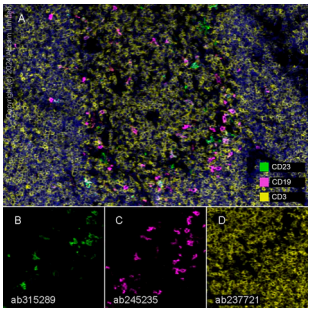
This data was developed using the same antibody clone in a different buffer formulation (ab315289).

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded mouse lymph node tissue staining CD23 with ab315289 at a 1/2000 dilution (0.253 µg/ml), CD19 with ab245235 at 1/1000 dilution (0.444 µg/ml), and CD3 with ab237721 at 1/8000 dilution (0.07 µg/ml), followed by a ready to use secondary antibody Opal Polymer HRP Ms + Rb.

Panel A: merged staining of anti-CD23 (green; Opal™520), anti-CD19 (magenta; Opal™570) and anti-CD3 (yellow; Opal™690) on mouse lymph node.
Panel B: anti-CD23 staining B lymphocytes in mouse lymph node.
Panel C: anti-CD19 staining B lymphocytes in mouse lymph node.
Panel D: anti-CD3 staining T lymphocytes in mouse lymph node.
Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab315289, ab245235 and ab237721 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.



Multiplex immunohistochemistry - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

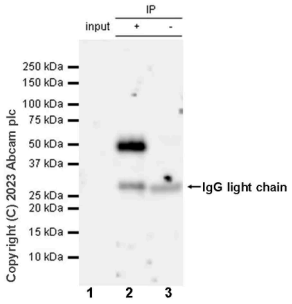
This data was developed using the same antibody clone in a different buffer formulation (ab315289).

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded mouse thymus tissue staining CD23 with ab315289 at a 1/2000 dilution (0.253 µg/ml), CD19 with ab245235 at 1/1000 dilution (0.444 µg/ml), and CD3 with ab237721 at 1/8000 dilution (0.07 µg/ml), followed by a ready to use secondary antibody Opal Polymer HRP Ms + Rb.

Panel A:merged staining of anti-CD23 (green; Opal™520), anti-CD19 (magenta; Opal™570) and anti-CD3 (yellow; Opal™690) on mouse thymus.
Panel B: anti-CD23 staining B lymphocytes in mouse thymus.
Panel C: anti-CD19 staining B lymphocytes in mouse thymus.
Panel D: anti-CD3 staining T lymphocytes in mouse thymus.
Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab315289, ab245235 and ab237721 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.



Immunoprecipitation - Anti-CD23 antibody [EPR28712-26] - BSA and Azide free (ab315290)

This data was developed using ab315289, the same antibody clone in a different buffer formulation.

CD23 was immunoprecipitated from 0.35 mg Mouse spleen whole cell lysate with ab315289 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab315289 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Lane 1: Mouse spleen whole cell lysate

Lane 2: ab315289 IP in Mouse spleen whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab315289 in mouse spleen whole cell lysate

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

All lanes:
Immunoprecipitation - Anti-CD23 antibody [EPR28712-26] (ab315289) at 1/30 dilution

All lanes:
Mouse spleen whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 125s

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