abcam

ab326885

Anti-CD38 antibody [EPR31124-571] - BSA and Azide free

Recombinant | RabMAb | 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	EPR31124-571
Purification technique	Affinity purification Protein A
Concentration	1.07 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-

Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

WB

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information CD38

Function	Multifunctional transmembrane glycoprotein able to exert enzymatic activities and also to mobilize calcium, to transduce signals, to adhere to hyaluronan and to other ligands. Synthesizes cyclic ADP-ribose (cADPR), a second messenger for glucose-induced insulin secretion (PubMed:7961800, PubMed:8253715). Synthesizes the Ca(2+) mobilizer nicotinate-adenine dinucleotide phosphate, NAADP(+), from 2'-phospho-cADPR and nicotinic acid, as well as from NADP(+) and nicotinic acid. At both pH 5.0 and pH 7.4 preferentially transforms 2'-phospho-cADPR into NAADP(+), while preferentially cleaving NADP(+) to cADPR and ADPRP rather than into NADDP(+) (PubMed:16690024). Has cADPR hydrolase activity (PubMed:7961800, PubMed:8253715). Functions also as a receptor that binds the

ligand CD31 on endothelial cells, promoting lymphocyte activation, proliferation, and migration across the endothelial barrier (PubMed:9551996). Involved in the regulation of crucial dendritic cell functions acquired at the mature stage, such as CCL21-driven migration, survival, and Th1-polarizing activity (PubMed:16293598). In lamina propria T lymphocytes, CD38/CD31 cognate interactions initiate a multistep signaling pathway resulting in activation of LCK anf LAT, followed by cytokine release (PubMed:11259373).

Storage

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

Notes

ab326885 is the carrier-free version of ab326878.

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.

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.

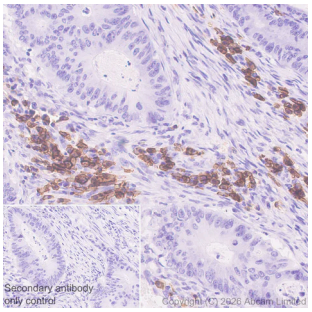
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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11 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

CD38 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human colon carcinoma using rabbit Anti-CD38 antibody

This data was developed using ab326878, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Human colon carcinoma tissue labeling CD38 with ab326878 at 1/1000 (0.535 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on immune cells of human colon carcinoma.

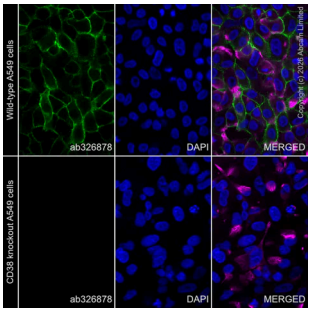
The primary antibody was incubated for 30 mins at room temperature.

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-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

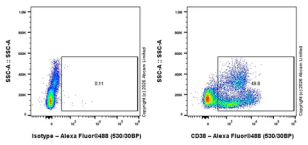
CD38 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD38 antibody

This data was developed using ab326878, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized A549 (human lung carcinoma epithelial cell) and CD38 KO A549 (ab289025) cells labelling CD38 with ab326878 at 1/200 (2.675 µg/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green).

Confocal image showing mainly membrane staining in parental A549 cells (shown in green) and no staining in CD38 knockout A549 cells. The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab7291 Anti-alpha Tubulin mouse monoclonal antibody was used to counterstain tubulin at 1/1000 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).



Flow Cytometry - Anti-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

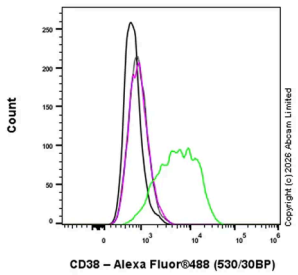
CD38 Flow Cytometry staining of Human PBMC (human peripheral blood mononuclear cell) using rabbit Anti-CD38 antibody

This data was developed using ab326878, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of Human PBMC (human peripheral blood mononuclear cell) cells labelling CD38 with ab326878 at 1/50 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

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

Gated on viable cells.



Flow Cytometry - Anti-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

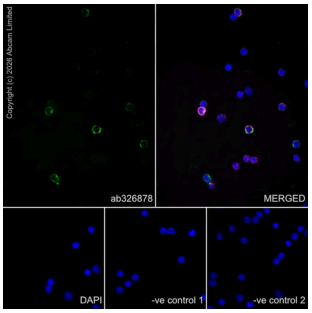
CD38 Flow Cytometry staining using rabbit Anti-CD38 antibody

This data was developed using ab326878, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of A549 (human lung carcinoma epithelial cell, Green and black) and CD38 KO A549 (CA050605) (Magenta and grey) cells labelling CD38 with ab326878 at 1/50 dilution (1ug) / Magenta and Green compared with a Rabbit monoclonal IgG (ab172730) / Black and Grey isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

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

Gated on viable cells.



Immunocytochemistry/ Immunofluorescence - Anti-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

CD38 Immunocytochemistry/ Immunofluorescence staining of Human PBMC (human peripheral blood mononuclear cell) using rabbit Anti-CD38 antibody

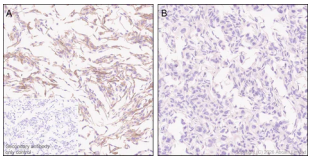
This data was developed using ab326878, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Human PBMC (human peripheral blood mononuclear cell) cells labelling CD38 with ab326878 at 1/200 (2.675 µg/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green).

Confocal image showing cytoplasmic staining in a subset of human PBMC (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab7291 Anti-alpha Tubulin mouse monoclonal antibody was used to counterstain tubulin at 1/1000 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

-ve control 1: ab326878 at 1/200 dilution, followed by ab150120 at 1/1000 dilution.
-ve control 2: ab7291 at 1/1000 dilution, followed by ab150081 at 1/1000 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

CD38 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD38 antibody

This data was developed using ab326878, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded:
(A) Wild-type A549 cell pellet (human lung carcinoma epithelial cell) cell pellet
(B) CD38 knockout A549 cell pellet
labeling CD38 with ab326878 at 1/100 (5.35 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on (A) Wild-type A549 cell pellet, no staining on (B) CD38 knockout A549 cell pellet.

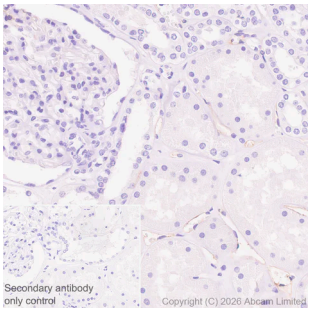
The primary antibody was incubated for 30 mins at room temperature.

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-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

CD38 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD38 antibody

This data was developed using ab326878, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling CD38 with ab326878 at 1/1000 (0.535 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Low expression tissue: Weak staining on stromal cells of human kidney.

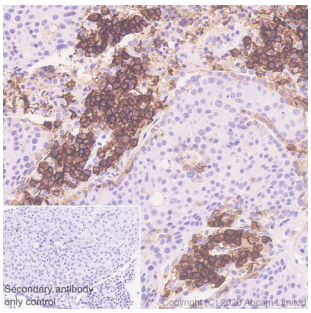
The primary antibody was incubated for 30 mins at room temperature.

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-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

CD38 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human lung carcinoma using rabbit Anti-CD38 antibody

This data was developed using ab326878, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Human lung carcinoma tissue labeling CD38 with ab326878 at 1/1000 (0.535 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on immune cells of human lung carcinoma (PMID: 38881920).

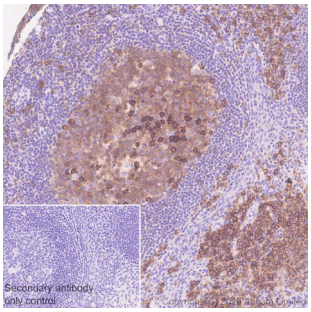
The primary antibody was incubated for 30 mins at room temperature.

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-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

CD38 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human chronic tonsillitis using rabbit Anti-CD38 antibody

This data was developed using ab326878, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Human chronic tonsillitis tissue labeling CD38 with ab326878 at 1/1000 (0.535 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human chronic tonsillitis.

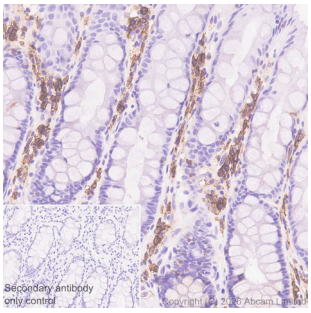
The primary antibody was incubated for 30 mins at room temperature.

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-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

CD38 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human colon using rabbit Anti-CD38 antibody

This data was developed using ab326878, the same antibody clone in a different buffer formulation.

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling CD38 with ab326878 at 1/1000 (0.535 µg/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on immune cells of human colon.

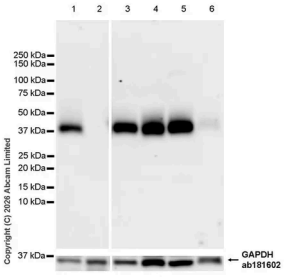
The primary antibody was incubated for 30 mins at room temperature.

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



Western blot - Anti-CD38 antibody [EPR31124-571] - BSA and Azide free (ab326885)

CD38 Western blot staining using rabbit Anti-CD38 antibody

This data was developed using ab326878, the same antibody clone in a different buffer formulation.

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

In Western blot, ab326878 was shown to bind specifically to CD38.
Target of interest was observed at 37 kDa in wild-type A549 cell lysates (lane 1) with no signal observed at this size in CD38 knockout cell line (lane 2) (lane 2, knockout cell line ab289025).

Low expression: kidney.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) (1:200000) (36KDa).

All lanes:
Western blot - Anti-CD38 antibody [EPR31124-571] (ab326878) at 1/1000 dilution

Lane 1:
Wild-type A549 (human lung carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
CD38 knockout A549 whole cell lysate at 20 µg

Lane 3:
Human lymph node tissue lysate at 20 µg

Lane 4:
Human tonsil tissue lysate at 20 µg

Lane 5:
Human spleen tissue lysate at 20 µg

Lane 6:
Human kidney tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Performed under reducing conditions.

Observed band size: 37 kDa, 36 kDa

Exposure time: 15s

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