abcam

ab228876

Anti-EpCAM/CD326 antibody [EPR20533-63] - BSA and Azide free

Recombinant | RabMAb

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	EPR20533-63
Purification technique	Affinity purification Protein A
Concentration	1.012 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	-

Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG (Low endotoxin, Azide free), is suitable for use as an isotype control with this antibody.

WB

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information EpCAM/CD326

Function	May act as a physical homophilic interaction molecule between intestinal epithelial cells (IECs) and intraepithelial lymphocytes (IELs) at the mucosal epithelium for providing immunological barrier as a first line of defense against mucosal infection. Plays a role in embryonic stem cells proliferation and differentiation. Up-regulates the expression of FABP5, MYC and cyclins A and E (By similarity).

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

ab228876 is the carrier-free version of ab221552.

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	EpCAM also known as epithelial cell adhesion molecule is a transmembrane glycoprotein with a molecular weight of around 40 kDa. Alternative names include CD326 and TACSTD1. This protein is expressed on the surface of most epithelial cells and plays a role in cell adhesion. It is involved in maintaining the integrity of epithelial tissues by mediating homotypic cell-cell interactions which are important for the structure and function of tissues.
Biological function summary	EpCAM facilitates signaling pathways that impact cellular processes like proliferation and differentiation. It is not a part of a larger protein complex but interacts directly with other cellular machinery to transmit intracellular signals. EpCAM influences stem cell behavior and is important in tissue homeostasis assisting in both normal regenerative processes and wound healing.
Pathways	EpCAM participates in regulatory mechanisms involving the Wnt/β-catenin signaling pathway which affects gene expression and cell fate decisions. Through its action EpCAM modulates components like E-cadherin which is important for cell adhesion and the maintenance of the epithelial layer. It indirectly influences pathways relating to MYC a transcription factor that regulates cell cycle progression and apoptosis.
Associated diseases and disorders	EpCAM is associated with various types of cancer including colorectal and breast cancer. Its overexpression often correlates with aggressive cancer phenotypes and poor prognosis. Besides cancers EpCAM mutations can lead to congenital tufting enteropathy a rare condition affecting intestinal epithelial structure and function. Aberrant EpCAM expression affects β-catenin levels impacting cellular pathways linked to tumor progression and epithelial integrity.

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

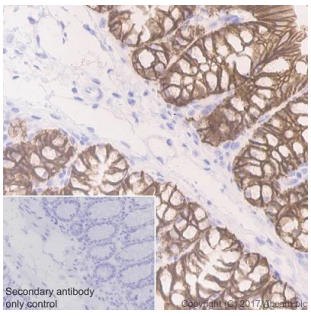
We do not recommend this combination. It is not covered by our product promise.

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.

6 product images



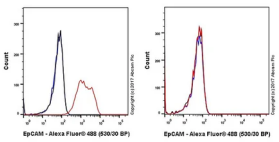
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EpCAM/CD326 antibody [EPR20533-63] - BSA and Azide free (ab228876)

EpCAM/CD326 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-EpCAM/CD326 antibody

Immunohistochemical analysis of paraffin-embedded mouse colon tissue labeling EpCAM with ab221552 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Membranous staining on mouse colon is observed (PMID: 15637741). 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 (ab221552).

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



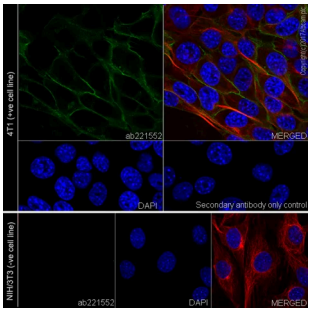
Flow Cytometry - Anti-EpCAM/CD326 antibody [EPR20533-63] - BSA and Azide free (ab228876)

EpCAM/CD326 Flow Cytometry staining using rabbit Anti-EpCAM/CD326 antibody

Flow cytometric analysis of 4% paraformaldehyde-fixed 4T1 (mouse mammary gland carcinoma cell line) and NIH/3T3 (mouse embryo fibroblast cell line) cells labeling EpCAM with ab221552 at 1/500 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.
Flow cytometry was performed with fresh cells without fixation and permeabilization.

Negative control: NIH/3T3 (PMID:23264216).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab221552).



Immunocytochemistry/ Immunofluorescence - Anti-EpCAM/CD326 antibody [EPR20533-63] - BSA and Azide free (ab228876)

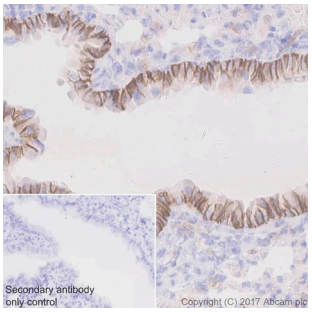
EpCAM/CD326 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-EpCAM/CD326 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized 4T1 (mouse mammary gland carcinoma cell line) and NIH/3T3 (mouse embyro fibroblast cell line) cells labeling EpCAM with ab221552 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing Membranous staining on 4T1 cells.
Negative control: NIH/3T3 (PMID:23264216).

The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody 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 (ab221552).



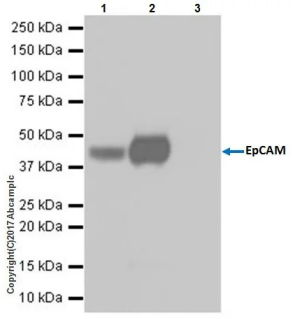
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EpCAM/CD326 antibody [EPR20533-63] - BSA and Azide free (ab228876)

EpCAM/CD326 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-EpCAM/CD326 antibody

Immunohistochemical analysis of paraffin-embedded mouse lung tissue labeling EpCAM with ab221552 at 1/2000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Membranous staining on mouse lung is observed (PMID: 15637741). 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 (ab221552).

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



Immunoprecipitation - Anti-EpCAM/CD326 antibody [EPR20533-63] - BSA and Azide free (ab228876)

EpCAM was immunoprecipitated from 0.35 mg of mouse kidney lysate with ab221552 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab221552 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.
Lane 1: Mouse kidney lysate 10 µg (Input).

Lane 2: ab221552 IP in mouse kidney lysate.

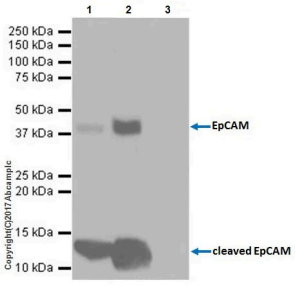
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab221552 in mouse kidney lysate.

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

Exposure time: 3 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab221552).
All lanes:
Immunoprecipitation - Anti-EpCAM/CD326 antibody [EPR20533-63] (ab221552)

Predicted band size: 35 kDa



Immunoprecipitation - Anti-EpCAM/CD326 antibody [EPR20533-63] - BSA and Azide free (ab228876)

EpCAM was immunoprecipitated from 0.35 mg of 4T1 (mouse mammary gland carcinoma cell line) whole cell lysate with ab221552 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab221552 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.
Lane 1: 4T1 (Mouse mammary gland carcinoma) whole cell lysate 10 µg (Input).

Lane 2: ab221552 IP in 4T1 whole cell lysate .

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab221552 in 4T1 whole cell lysate .

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

Exposure time: 30 seconds.

The band between 12-15kDa has been documented in literature as the cleaved form of EpCAM (PMID: 23409978).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab221552).

All lanes:
Immunoprecipitation - Anti-EpCAM/CD326 antibody [EPR20533-63] (ab221552)

Predicted band size: 35 kDa

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