abcam

ab282457

Anti-EpCAM/CD326 antibody [RM1016]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Multiclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Clone number	RM1016
Purification technique	Affinity purification Protein A
Concentration	0.513 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC

Tested

Species	Mouse
Dilution info	1/250
Notes	-

Species	Human

Dilution info	1/250
Notes	-

Expected

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

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Species	Human
Dilution info	1/30
Notes	-

Expected

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

Flow Cyt

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Species	Human
Dilution info	1/50

Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	1/100
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20)

Species	Rat
Dilution info	1/100
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20)

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/4000
Notes	-

Species	Rat
Dilution info	1/4000
Notes	-

Species	Human
Dilution info	1/4000
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.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are recombinant multiclonals?
Recombinant multiclonals are a mixture of recombinant antibodies co-expressed from a library of heavy and light chains. They offer several advantages including:

- The sensitivity of polyclonal antibodies by recognising multiple epitopes
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

View our range of recombinant multiclonal antibodies.

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.

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

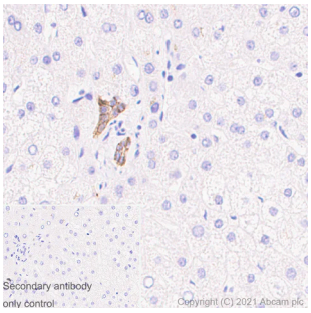
We do not recommend this combination. It is not covered by our product promise.

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.

16 product images



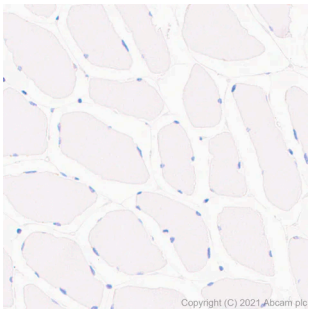
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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

Immunohistochemical analysis of paraffin-embedded human liver tissue labeling EpCAM with ab282457 at 1/4000 (0.124 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous staining on the bile duct in human liver, and no staining on the hepatocytes. The section was incubated with ab282457 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 with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

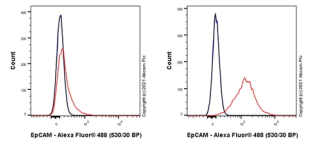


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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

Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue labeling EpCAM with ab282457 at 1/4000 (0.124 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). **Negative control**: no staining on human skeletal muscle. The section was incubated with ab282457 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 with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

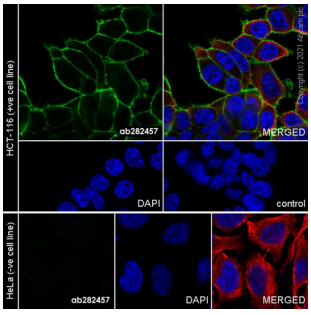


Flow Cytometry - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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

Flow cytometric analysis of HeLa (Human cervix adenocarcinoma epithelial cell, Left) / HCT-116 (Human colorectal carcinoma epithelial cell, Right) cells labelling EpCAM with ab282457 at 1/500 dilution (0.1 µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.
Negative control: HeLa. (PMID: 31806375).

Gated on viable cells.



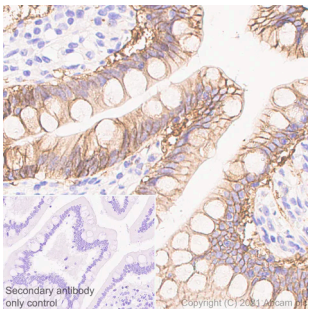
Immunocytochemistry - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HCT 116 and HeLa cells labelling EpCAM with ab282457 at 1/250 (1.976 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 membranous staining in HCT 116 cell line.
Negative control: HeLa (PMID: 31806375).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 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 dilution.

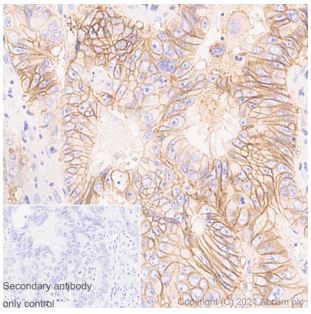


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling EpCAM with ab282457 at 1/4000 (0.124 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous staining on human colon. The section was incubated with ab282457 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 with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

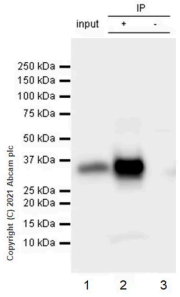


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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

Immunohistochemical analysis of paraffin-embedded human colon carcinoma tissue labeling EpCAM with ab282457 at 1/4000 (0.124 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous staining on human colon carcinoma. The section was incubated with ab282457 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 with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunoprecipitation - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

EpCAM was immunoprecipitated from 0.35 mg human colon lysate 10 µg with ab282457 at 1/30 dilution (2 µg in 0.35 mg lysates). Western blot was performed on the immunoprecipitate using ab282457 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.
Lane 1: Human colon lysate 10 µg

Lane 2: ab282457 IP in human colon lysate

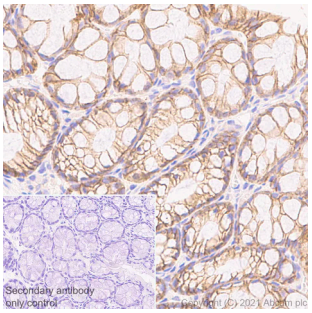
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab282457 in human colon lysate

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

Exposure time: 8 seconds.

The MW observed is consistent with the literature: PMID 19136966; PMID 23618806. The band between 12-15kDa has been documented in literature as the cleaved form of EpCAM (PMID: 23409978).
All lanes:
Immunoprecipitation - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

Predicted band size: 35 kDa

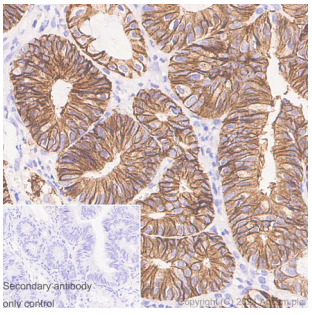


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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 ab282457 at 1/4000 (0.124 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous staining on mouse colon. The section was incubated with ab282457 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 with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

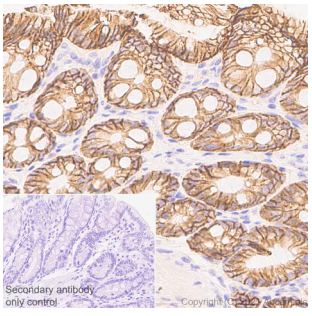


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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

Immunohistochemical analysis of paraffin-embedded mouse colon carcinoma tissue labeling EpCAM with ab282457 at 1/4000 (0.124 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous staining on mouse colon carcinoma. The section was incubated with ab282457 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 with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



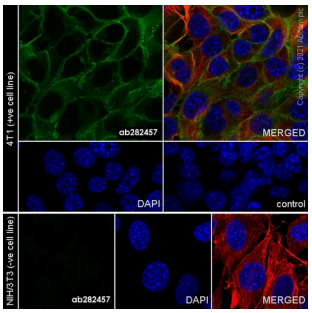
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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

Immunohistochemical analysis of paraffin-embedded rat colon tissue labeling EpCAM with ab282457 at 1/4000 (0.124 µg/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Membranous staining on rat colon. The section was incubated with ab282457 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 with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



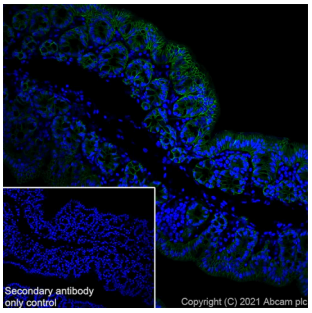
Immunocytochemistry - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized 4T1 and NIH/3T3 cells labelling EpCAM with ab282457 at 1/250 (1.976 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 membranous staining in 4T1 cell line.
Negative control: NIH/3T3 (PMID:31806375).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 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 dilution.

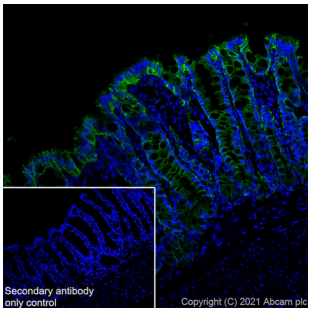


Immunohistochemistry (Frozen sections) - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

EpCAM/CD326 Immunohistochemistry (Frozen sections) staining using rabbit Anti-EpCAM/CD326 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen mouse colon tissue labeling EpCAM with ab282457 at 1/100 (4.94 µg/ml) dilution followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (Green). Membranous staining on mouse colon is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

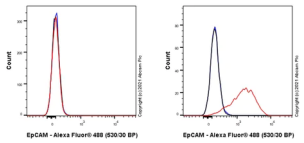


Immunohistochemistry (Frozen sections) - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

EpCAM/CD326 Immunohistochemistry (Frozen sections) staining using rabbit Anti-EpCAM/CD326 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen rat colon tissue labeling EpCAM with ab282457 at 1/100 (4.94 µg/ml) dilution followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (Green). Membranous staining on rat colon is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

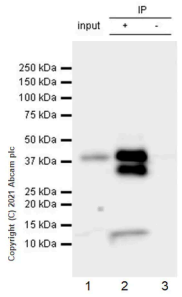


Flow Cytometry - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

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

Flow cytometric analysis of NIH/3T3 (Mouse embryonic fibroblast, Left) / 4T1 (Mouse mammary gland carcinoma epithelial cell, Right) cells labelling EpCAM with ab282457 at 1/50 dilution (1 µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.
Negative control: NIH/3T3 (PMID:23264216).

Gated on viable cells.



Immunoprecipitation - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

EpCAM was immunoprecipitated from 0.35 mg 4T1 (Mouse mammary gland carcinoma epithelial cell) whole cell lysate 10 µg with ab282457 at 1/30 dilution (2 µg in 0.35 mg lysates). Western blot was performed on the immunoprecipitate using ab282457 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.
Lane 1: 4T1 whole cell lysate 10 µg

Lane 2: ab282457 IP in 4T1 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab282457 in 4T1 whole cell lysate

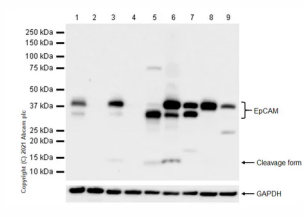
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 8 seconds.

The MW observed is consistent with the literature: PMID 19136966; PMID 23618806. The band between 12-15kDa has been documented in literature as the cleaved form of EpCAM (PMID: 23409978).

All lanes:
Immunoprecipitation - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

Predicted band size: 35 kDa



Western blot - Anti-EpCAM/CD326 antibody [RM1016] (ab282457)

EpCAM/CD326 Western blot staining using rabbit Anti-EpCAM/CD326 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
Negative control: HeLa (PMID: 31806375), NIH/3T3 (PMID: 23264216).

The MW observed is consistent with the literature: PMID 19136966; PMID 23618806. The band between 12-15kDa has been documented in literature as the cleaved form of EpCAM (PMID: 23409978).

Exposure time: 8 seconds.

All lanes:
Western blot - Anti-EpCAM/CD326 antibody [RM1016] (ab282457) at 1/1000 dilution

Lane 1:
HCT 116 (Human colorectal carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
4T1 (Mouse mammary gland carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4:
NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 5:
Human colon lysate at 20 µg

Lane 6:
Mouse colon lysate at 20 µg

Lane 7:
Rat colon lysate at 20 µg

Lane 8:
Mouse kidney lysate at 20 µg

Lane 9:
Rat kidney lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 35 kDa

Observed band size: 12 kDa, 36 kDa, 40 kDa

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