abcam

ab185013

Alexa Fluor® 488 Anti-E-Cadherin/CD324 antibody [EP700Y] - Intercellular Junction Marker

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP700Y
Purification technique	Affinity purification Protein A
Dissociation constant	2.8 x 10^{-11} M
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	ab199091 - Rabbit monoclonal IgG (Alexa Fluor® 488), is suitable for use as an isotype control with this antibody.

Flow Cyt

Expected

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

ICC/IF

Expected

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

Target data

See full target information E-Cadherin/CD324

Function	Cadherins are calcium-dependent cell adhesion proteins (PubMed:11976333). They preferentially interact with themselves in a homophilic manner in connecting cells; cadherins may thus contribute to the sorting of heterogeneous cell types. CDH1 is involved in mechanisms regulating cell-cell adhesions, mobility and proliferation of epithelial cells (PubMed:11976333). Promotes organization of radial actin fiber structure and cellular response to contractile forces, via its interaction with

AMOTL2 which facilitates anchoring of radial actin fibers to CDH1 junction complexes at the cell membrane (By similarity). Plays a role in the early stages of desmosome cell-cell junction formation via facilitating the recruitment of DSG2 and DSP to desmosome plaques (PubMed:29999492). Has a potent invasive suppressor role. It is a ligand for integrin alpha-E/beta-7. E-Cad/CTF2 promotes non-amyloidogenic degradation of Abeta precursors. Has a strong inhibitory effect on APP C99 and C83 production. (Microbial infection) Serves as a receptor for Listeria monocytogenes; internalin A (InlA) binds to this protein and promotes uptake of the bacteria.

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, Store in the dark

Notes

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.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	E-Cadherin sometimes called CDH1 or Cadherin-1 is a protein that plays a role in cell-to-cell adhesion. This transmembrane protein has a molecular weight of approximately 120 kDa. E-Cadherin is mainly expressed in epithelial tissues of various organs including the skin and gut. Its adhesive function is made possible by its extracellular domain that facilitates homophilic binding between cells contributing to the maintenance of tissue architecture and cellular integrity.
Biological function summary	E-Cadherin participates in establishing and maintaining adherens junctions which are vital for tissue structure. E-Cadherin operates as a core component of the cadherin-catenin complex which links the protein to the actin cytoskeleton. Through this linkage E-Cadherin plays an important role in signaling pathways that influence cellular growth and differentiation. The protein's ability to mediate intercellular connections also regulates cellular motility and supports basic aspects of cell behavior in epithelial tissues.
Pathways	E-Cadherin influences both the Wnt signaling pathway and the epithelial-to-mesenchymal transition (EMT). Within the Wnt signaling pathway E-Cadherin partners with β-catenin a significant player in transcription regulation and cell signaling. Disruption in E-Cadherin's adhesive functionality can lead to increased β-catenin availability affecting downstream transcriptional control. In the EMT process E-Cadherin loss characterizes an important step in which cells gain migratory and invasive properties typically seen during metastasis in cancer progression.
Associated diseases and disorders	E-Cadherin's role is prominent in cancer particularly in the context of gastric and breast cancers. Mutations or altered expression of E-Cadherin lead to diminished cell adhesion promoting tumorigenesis and metastatic spread. In gastric cancer for instance mutated E-Cadherin often associates with loss of epithelial function facilitating cancer cell dissemination. Additionally its loss or dysfunction may correlate with proteins such as β-catenin further impacting cancer progression and pathology.

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

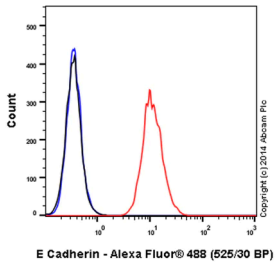
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images

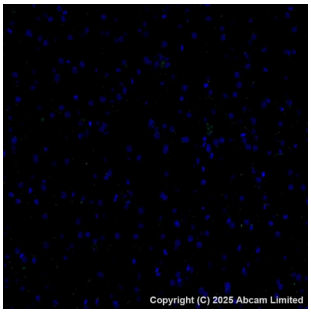


Flow Cytometry (Intracellular) - Alexa Fluor® 488 Anti-E-Cadherin/CD324 antibody [EP700Y] - Intercellular Junction Marker (ab185013)

E-Cadherin/CD324 Flow Cytometry (Intracellular) staining using rabbit Anti-E-Cadherin/CD324 antibody

Overlay histogram showing A431 cells stained with ab185013 (red line). The cells were fixed with 80% methanol (5 min). The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab185013, 1/500 dilution) for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) Alexa Fluor® 488 used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.
Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.

This antibody gave a positive signal in A431 fixed with 4% formaldehyde (10 min) used under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-E-Cadherin/CD324 antibody [EP700Y] - Intercellular Junction Marker (ab185013)

E-Cadherin/CD324 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human cerebrum using rabbit Anti-E-Cadherin/CD324 antibody

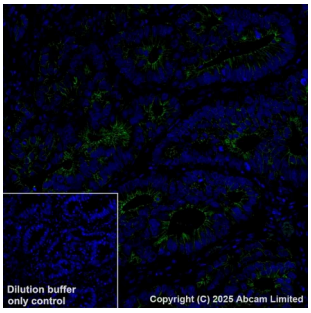
Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling E Cadherin with ab185013 at 1/50 dilution.
Negative control: no staining on human cerebrum.

The primary antibody was incubated for 60 mins at room temperature (shown in green). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

The immunostaining was performed on a Leica Biosystems BOND RX instrument.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-E-Cadherin/CD324 antibody [EP700Y] - Intercellular Junction Marker (ab185013)

E-Cadherin/CD324 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human colon cancer using rabbit Anti-E-Cadherin/CD324 antibody

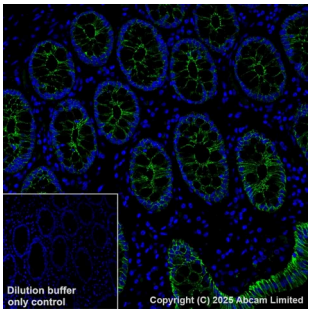
Immunohistochemical analysis of paraffin-embedded Human colon cancer tissue labeling E Cadherin with ab185013 at 1/50 dilution.
Positive staining on human colon cancer.

The primary antibody was incubated for 60 mins at room temperature (shown in green). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

The immunostaining was performed on a Leica Biosystems BOND RX instrument.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 488 Anti-E-Cadherin/CD324 antibody [EP700Y] - Intercellular Junction Marker (ab185013)

E-Cadherin/CD324 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human colon using rabbit Anti-E-Cadherin/CD324 antibody

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling E Cadherin with ab185013 at 1/50 dilution.
Positive staining on human colon.

The primary antibody was incubated for 60 mins at room temperature (shown in green). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

The immunostaining was performed on a Leica Biosystems BOND RX instrument.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins.

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