

Product datasheet

Anti-E Cadherin antibody [M168] - C-terminal ab76055

★★★★★ [17 Abreviews](#) [370 References](#) [5 Images](#)

Overview

Product name	Anti-E Cadherin antibody [M168] - C-terminal
Description	Mouse monoclonal [M168] to E Cadherin - C-terminal
Host species	Mouse
Specificity	ab76055 does not cross react with VE Cadherin or N Cadherin.
Tested applications	Suitable for: IHC-P, Flow Cyt (Intra), ICC, WB
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment corresponding to Mouse E Cadherin (C terminal).
Positive control	WB: Human A431 cell lysate; IHC-P: Human colon tissue; ICC: A431 cells. Flow Cyt (intra): A431 cells
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 50% Glycerol, PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	M168
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab76055 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★★ (8)	Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
Flow Cyt (Intra)		1/100. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC		Use at an assay dependent concentration.
WB	★★★★★ (4)	1/100 - 1/1000. Predicted molecular weight: 97 kDa.

Target

Function

Cadherins are calcium-dependent cell adhesion proteins. 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. 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.

Tissue specificity

Non-neural epithelial tissues.

Involvement in disease

Defects in CDH1 are the cause of hereditary diffuse gastric cancer (HDGC) [MIM:137215]. An autosomal dominant cancer predisposition syndrome with increased susceptibility to diffuse gastric cancer. Diffuse gastric cancer is a malignant disease characterized by poorly differentiated infiltrating lesions resulting in thickening of the stomach. Malignant tumors start in the stomach, can spread to the esophagus or the small intestine, and can extend through the stomach wall to nearby lymph nodes and organs. It also can metastasize to other parts of the body. Note=Heterozygous germline mutations CDH1 are responsible for familial cases of diffuse gastric cancer. Somatic mutations in the has also been found in patients with sporadic diffuse gastric cancer and lobular breast cancer.
Defects in CDH1 are a cause of susceptibility to endometrial cancer (ENDMC) [MIM:608089].
Defects in CDH1 are a cause of susceptibility to ovarian cancer (OC) [MIM:167000]. Ovarian cancer common malignancy originating from ovarian tissue. Although many histologic types of ovarian neoplasms have been described, epithelial ovarian carcinoma is the most common form. Ovarian cancers are often asymptomatic and the recognized signs and symptoms, even of late-stage disease, are vague. Consequently, most patients are diagnosed with advanced disease.

Sequence similarities

Contains 5 cadherin domains.

Post-translational modifications

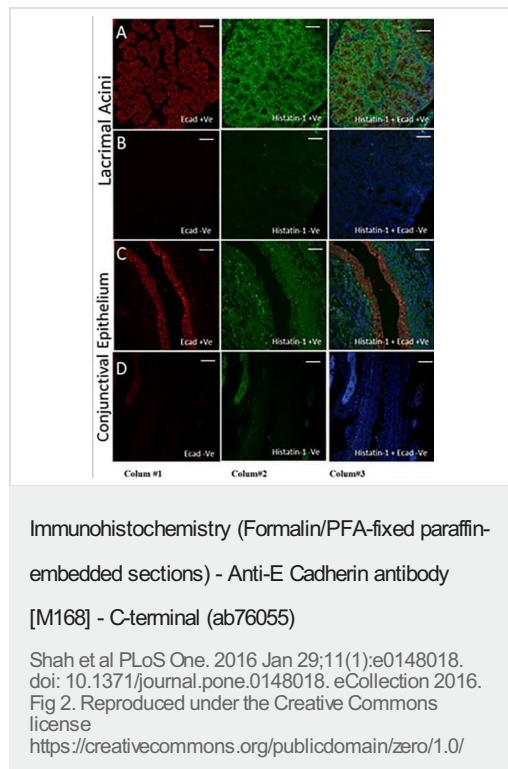
During apoptosis or with calcium influx, cleaved by a membrane-bound metalloproteinase (ADAM10), PS1/gamma-secretase and caspase-3 to produce fragments of about 38 kDa (E-CAD/CTF1), 33 kDa (E-CAD/CTF2) and 29 kDa (E-CAD/CTF3), respectively. Processing by the metalloproteinase, induced by calcium influx, causes disruption of cell-cell adhesion and the subsequent release of beta-catenin into the cytoplasm. The residual membrane-tethered

cleavage product is rapidly degraded via an intracellular proteolytic pathway. Cleavage by caspase-3 releases the cytoplasmic tail resulting in disintegration of the actin microfilament system. The gamma-secretase-mediated cleavage promotes disassembly of adherens junctions.

Cellular localization

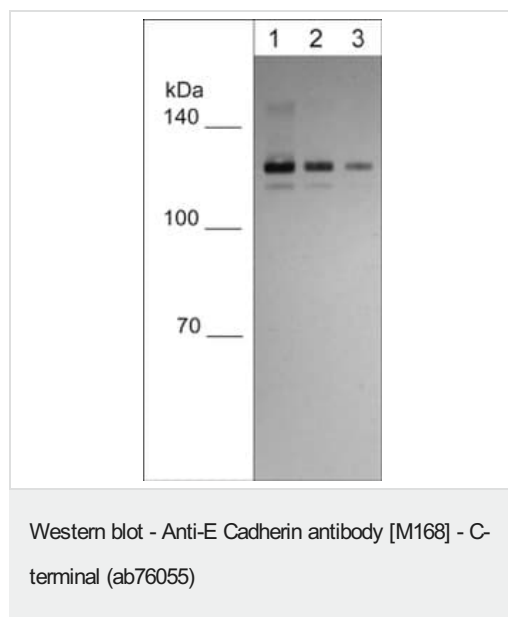
Cell junction. Cell membrane. Endosome. Golgi apparatus > trans-Golgi network. Colocalizes with DLGAP5 at sites of cell-cell contact in intestinal epithelial cells. Anchored to actin microfilaments through association with alpha-, beta- and gamma-catenin. Sequential proteolysis induced by apoptosis or calcium influx, results in translocation from sites of cell-cell contact to the cytoplasm. Colocalizes with RAB11A endosomes during its transport from the Golgi apparatus to the plasma membrane.

Images



Immunohistochemistry staining of E Cadherin in human MMCR (Muller's muscle conjunctival resection) tissue.

Xylene and rehydration with serial ethanol dilutions were used for deparaffinization. Slides were washed twice for 5 minutes in 0.25% Triton X-100 for permeabilization and blocked for 2 hours at room temperature with 2% BSA and 10% normal donkey serum in PBS. Slides were incubated overnight at 4°C with ab76055. The next day, the slides were washed twice for 5 minutes in PBS and incubated for 1–2 hours with respective secondary antibodies diluted in blocking solution (1:200–800). Vecta shield mounting medium with 4',6-diamidino-2-phenylindole (DAPI) was placed over the slides and covered with a glass coverslip. Slides were analyzed using the Zeiss LSM 710 Confocal Microscope.



Lane 1 : Anti-E Cadherin antibody [M168] - C-terminal (ab76055) at 1/1000 dilution

Lane 2 : Anti-E Cadherin antibody [M168] - C-terminal (ab76055) at 1/2000 dilution

Lane 3 : Anti-E Cadherin antibody [M168] - C-terminal (ab76055) at 1/4000 dilution

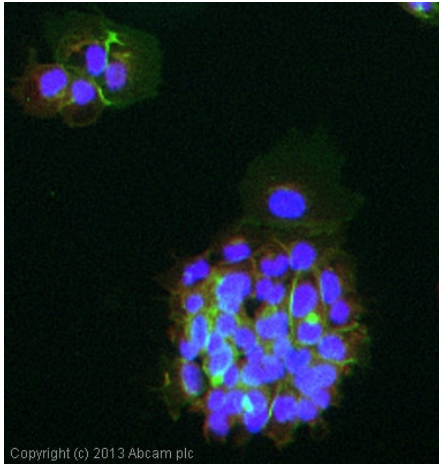
All lanes : A431 (Human epidermoid carcinoma cell line) denatured whole cell lysate

Lysates/proteins at 10 µg per lane.

Predicted band size: 97 kDa

Exposure time: 2 minutes

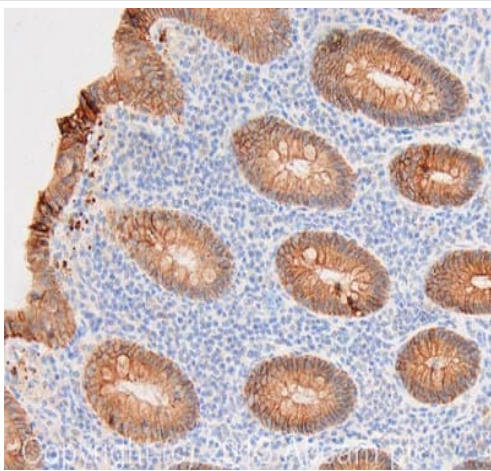
Blocked and probed in the presence of 5% milk, and the image was captured using chemiluminescence and film.



Immunocytochemistry - Anti-E Cadherin antibody
[M168] - C-terminal (ab76055)

ICC/IF image of ab76055 stained A431 (Human epidermoid carcinoma cell line) cells.

The cells were 4% formaldehyde fixed (10 minutes) and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1 hour to permeabilize the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab76055, 1/100 dilution) overnight at +4°C. The secondary antibody (green) was **ab96879**, DyLight® 488 goat anti-mouse IgG (H+L) used at a 1/250 dilution for 1 hour. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1 hour. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43 µM.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-E Cadherin antibody
[M168] - C-terminal (ab76055)

IHC image of E Cadherin staining in human colon formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer pH 6, for 20 minutes. The section was then incubated with ab76055, 5 µg/ml, for 15 minutes at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

Flow Cytometry (Intracellular) - Anti-E Cadherin antibody [M168] - C-terminal (ab76055)

Overlay histogram showing A431 (Human epidermoid carcinoma cell line) cells stained with ab76055 (red line).

The cells were fixed with 4% paraformaldehyde (10 minutes) and then permeabilized with 0.1% PBS-Tween for 20 minutes. 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 (ab76055, 1/100 dilution) for 30 minutes at 22°C. The secondary antibody used was a DyLight® 488 goat anti-mouse IgG (H+L) **ab96879** at 1/500 dilution for 30 minutes at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2 µg/1x10⁶ cells) used under the same conditions.

Acquisition of >5,000 events was performed.

This antibody gave a positive signal in A431 cells fixed with 80% methanol (5 minutes)/permeabilized with 0.1% PBS-Tween for 20 minutes used under the same conditions.

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