abcam

## Product datasheet

# Anti-E Cadherin antibody [DECMA-1] ab11512

18 Abreviews 54 References 5 Images

### Overview

| | |
|---|---|
| **Product name** | Anti-E Cadherin antibody [DECMA-1] |
| **Description** | Rat monoclonal [DECMA-1] to E Cadherin |
| **Host species** | Rat |
| **Specificity** | Some of our customers have had good results using ab11512 in human samples, particularly in ICC. In our hands however this product does not work in human samples. Please contact Scientific Support for further information or queries. |
| **Tested applications** | **Suitable for:** ICC/IF, Flow Cyt, WB, IHC-Fr |
| **Species reactivity** | **Reacts with:** Mouse, Dog<br>**Predicted to work with:** Cow |
| **Immunogen** | Mouse embryonal carcinoma cell line PCC4 Aza RI. |
| **General notes** | This antibody clone is manufactured by Abcam.<br>If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact orders@abcam.com or you can find further information here. |

### Properties

| | |
|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle. |
| **Storage buffer** | pH: 7.40<br>Preservative: 0.02% Sodium azide<br>Constituents: PBS, 6.97% L-Arginine |
| **Purity** | Immunogen affinity purified |
| **Clonality** | Monoclonal |
| **Clone number** | DECMA-1 |
| **Isotype** | IgG1 |

### Applications

Our Abpromise guarantee covers the use of **ab11512** 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 |
|---|---|---|
| ICC/IF | ★★★★★ | Use a concentration of 5 - 10 µg/ml. |
| Flow Cyt | | Use at an assay dependent concentration. PubMed: 20521328<br>ab18407 - Rat monoclonal IgG1, is suitable for use as an isotype control with this antibody. |
| WB | ★★★★☆ | Use at an assay dependent concentration. PubMed: 19586906 |
| IHC-Fr | ★★★★★ | Use at an assay dependent concentration. |

## 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**

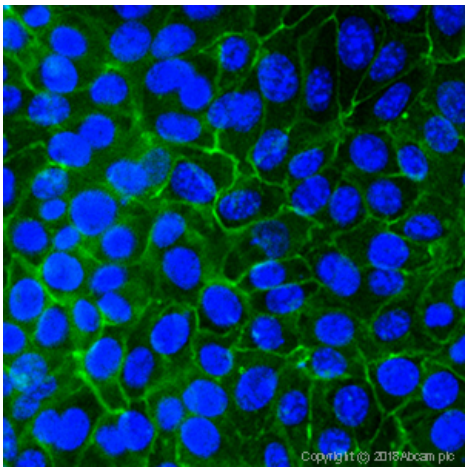
During apoptosis or with calcium influx, cleaved by a membrane-bound metalloproteinase (ADAM10), PS1/gamma-secretase and caspase-3 to produce fragments of about 38 kDa (E-CAD/CTF1), 33 kDa (E-CAD/CTF2) and 29 kDa (E-CAD/CTF3), respectively. Processing by the metalloproteinase, induced by calcium influx, 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

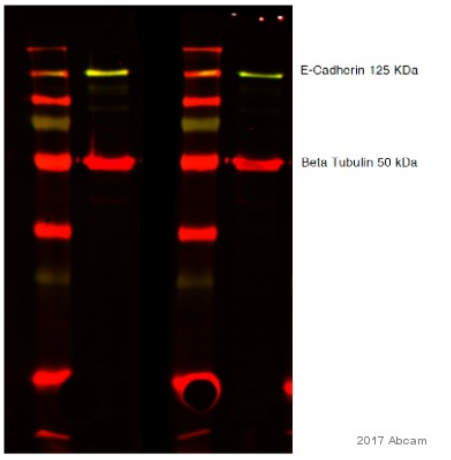
through association with alpha-, beta- and gamma-catenin. Sequential proteolysis induced by apoptosis or calcium influx, results in translocation from sites of cell-cell contact to the cytoplasm. Colocalizes with RAB11A endosomes during its transport from the Golgi apparatus to the plasma membrane.

## Images




Immunocytochemistry/ Immunofluorescence - Anti-E Cadherin antibody [DECMA-1] (ab11512)

ab11512 stained in M158 cells. Cells were fixed with 100% methanol (5 min) at room temperature and incubated with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 1h at room temperature to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab11512 at 10 µg/ml overnight at +4°C. The secondary antibody was ab150165 (colored green) used at 1 µg/ml for 1 hour at room temperature. DAPI was used to stain the cell nuclei (colored blue) at a concentration of 1.43 µM for 1hour at room temperature.



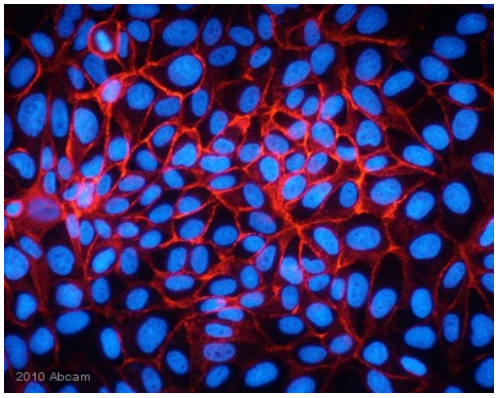

Western blot - Anti-E Cadherin antibody [DECMA-1] (ab11512)

Verified customer

**Sample:** Murine derived breast cancer whole cell lysate, 30 µg.

ab11512 used at a 1/5000 dilution for 16 hours at 4°C.

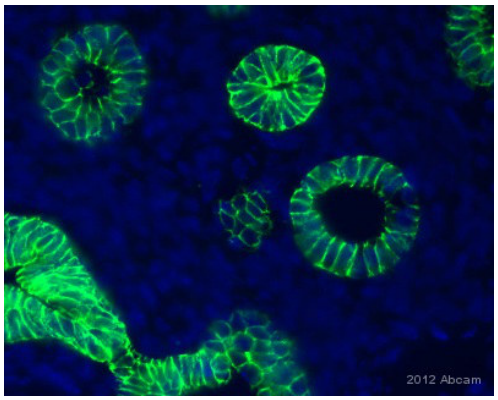
Goat polyclonal IRDye 800CW used as the secondary antibody at a 1/10,000 dilution.




Immunocytochemistry/ Immunofluorescence - Anti-E Cadherin antibody [DECMA-1] (ab11512)

This image is courtesy of an anonymous Abreview

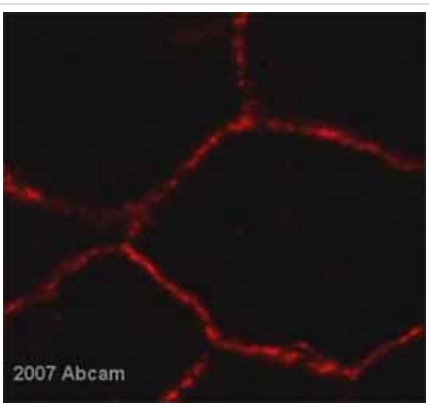
ab11512 E Cadherin staining canine kidney (MDCK) cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.5% Triton X-100 and blocked with 5% serum for 20 minutes at 37°C. Samples were incubated with primary antibody, 1/100, in blocking buffer for 1 hour at 37°C. An undiluted Cy3®-conjugated Donkey polyclonal to rat IgG was used as secondary antibody.




Immunohistochemistry (Frozen sections) - Anti-E Cadherin antibody [DECMA-1] (ab11512)

This image is courtesy of an anonymous Abreview

ab11512 staining E Cadherin in Mouse embryonic (E14.5) lung tissue sections by Immunohistochemistry (IHC-Fr - frozen sections). Tissue was fixed with paraformaldehyde and blocked with 1% serum for 3 hours at 4°C. Samples were incubated with primary antibody (1/500 in blocking buffer) for 14 hours at 4°C. An Alexa Fluor®488-conjugated Donkey anti-rat IgG polyclonal (1/200) was used as the secondary antibody.




Immunocytochemistry/ Immunofluorescence - Anti-E Cadherin antibody [DECMA-1] (ab11512)

This image is courtesy of an anonymous Abreview

ab11512 at 1/500 staining dog kidney cells by ICC/IF. The cells were methanol fixed and blocked with BSA before incubation with the antibody for 18 hours at 4°C. An Alexa Fluor ® 555 conjugated goat anti-rat IgG was used as the secondary.



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