Product datasheet

Anti-E Cadherin antibody ab15148

Overview

Product name: Anti-E Cadherin antibody
Description: Rabbit polyclonal to E Cadherin
Host species: Rabbit
Tested applications: Suitable for: WB, ICC/IF, IHC-P, IHC-Fr
Species reactivity: Reacts with: Human, Pig
Immunogen: Recombinant fragment within Human E Cadherin aa 600-750. The exact sequence is proprietary.
Positive control: Skin

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer: pH: 7.6
Preservative: 0.1% Sodium azide
Constituents: PBS, 1% BSA
Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab15148 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>🟢🟢🟢🟢Reddit 1/500. Detects a band of approximately 120 kDa.</td>
<td></td>
</tr>
<tr>
<td>ICC/IF</td>
<td>🟢🟢🟢🟢Reddit</td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHC-P</td>
<td>1/30. for 10 min at RT. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0 for 10 min followed by cooling at RT for 20 min.</td>
<td></td>
</tr>
<tr>
<td>IHC-Fr</td>
<td>1/50.</td>
<td></td>
</tr>
</tbody>
</table>
**Western blot** - Anti-E Cadherin antibody (ab15148) This image is courtesy of an anonymous Abreview

All lanes: Anti-E Cadherin antibody (ab15148) at 1/500 dilution (for 16 hours at 4°C)

All lanes: Human OE33 cell - whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes: Goat Anti-Rabbit IgG H&L (HRP) (ab6721) at 1/1000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Observed band size:** 120 kDa

**why is the actual band size different from the predicted?**

**Exposure time:** 1 minute

**Blocking Step:** 5% BSA fro 1 hour at 23°C

ab15148 staining E Cadherin in Human breast cancer MDA-MB-231 cells by ICC/IF (Immunocytochemistry/Immunofluorescence). Cells were treated with ethanol (vehicle) as control or Origanum majorana extract for 24 hours. Cells were fixed with 4% paraformaldehyde, permeabilized with 0.1% Triton X-100 in PBS and blocked with 5% milk for 30 minutes at room temperature. Samples were incubated with primary antibody overnight at 4°C. An Alexa Fluor 488-conjugated Goat anti-rabbit IgG (H+L) polyclonal (1/200) was used as the secondary antibody.
Immunocytochemistry/ Immunofluorescence - Anti-E Cadherin antibody (ab15148)
This image is courtesy of an Abreview submitted by Dr Mauricio Pinto.

ab15148 staining human MCF10A cells by ICC/IF. Cells were fixed with paraformaldehyde and blocked using 10% serum for 30 minutes at 25 °C. The primary antibody was diluted 1/25 in TBST and incubated for 1 hour at 25 °C. An Alexa Fluor® 555 goat anti-rabbit was used as the secondary antibody.

Immunohistochemistry (Frozen sections) - Anti-E Cadherin antibody (ab15148)
This image is courtesy of an anonymous Abreview.

ab15148 staining E Cadherin in Human AGS Gastric Carcinoma tissue sections by Immunohistochemistry (Frozen sections). The sections were acetone fixed and blocked in 5% serum for 1 hour at 23°C. The primary antibody was diluted 1/50 in blocking buffer and incubated with the sample for 1 hour at 23°C. An HRP-conjugated Goat polyclonal to Rabbit IgG, diluted 1/200, was used as the secondary.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-E Cadherin antibody (ab15148)
This image is courtesy of an anonymous Abreview.

ab15148 staining E Cadherin in Pig Cervix uteri tissue sections by IHC-P (Formaldehyde-fixed, Paraffin-embedded sections). Tissue samples were fixed with formaldehyde and blocked with 10% goat serum for 1 hour at 37°C; antigen retrieval was by heat mediation in 10mM citrate at pH 6 for 2 minutes. The sample was incubated with primary antibody (1/50) at 4°C for 12 hours. An HRP-conjugated goat polyclonal to rabbit IgG (undiluted) was used as secondary antibody.
Immunohistochemical staining of formalin fixed paraffin embedded human skin using ab15148.

ab15148 staining E Cadherin in human stomach tissue section by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue underwent formaldehyde fixation before heat mediated antigen retrieval in Citrate pH 6.0 and then blocking with 5% serum for 1 hour at 23°C was performed. The primary antibody was used diluted 1/50 and incubated with sample for 1 hour at 23°C. A HRP conjugated goat polyclonal to rabbit IgG was used undiluted as secondary antibody.

ab15148 staining E Cadherin in Human AGS Gastric carcinoma cultured cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with formaldehyde, permeabilized with 0.025% Trton X-100 in TBS and blocked with 5% serum for 1 hour at 23°C. Samples were incubated with primary antibody (1/50 in blocking buffer) for 1 hour at 23°C. An undiluted HRP-conjugated goat anti-rabbit IgG polyclonal was used as the secondary antibody.

Please note: All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES”

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
• Response to your inquiry within 24 hours
• We provide support in Chinese, English, French, German, Japanese and Spanish
• Extensive multi-media technical resources to help you
• We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

• Guarantee only valid for products bought direct from Abcam or one of our authorized distributors