Product datasheet

Anti-E Cadherin antibody ab53033

4 ★ ★ ★ ★ 40 Abreviews | 18 References | 7 Images

Overview

Product name | Anti-E Cadherin antibody
Description | Rabbit polyclonal to E Cadherin
Specificity | This antibody detects endogenous levels of total E Cadherin protein.
Tested applications | Suitable for: IP, IHC-P, IHC-Fr, ICC/IF, WB, ELISA, Flow Cyt
Species reactivity | Reacts with: Mouse, Rat, Cow, Dog, Human, Zebrafish, African Green Monkey
Immunogen | Synthetic peptide derived from human E Cadherin
Positive control | NIH/3T3 cell extract

Properties

Form | Liquid
Storage instructions | Store at -20°C. Stable for 12 months at -20°C
Storage buffer | Preservative: 0.02% Sodium Azide
| Constituents: 50% Glycerol, PBS (without Mg²⁺ and Ca²⁺), 150mM Sodium chloride, pH 7.4
Purity | Immunogen affinity purified
Purification notes | Affinity purified from rabbit antiserum by affinity chromatography using epitope specific immunogen
Clonality | Polyclonal
Isotype | IgG

Applications

Our Abpromise guarantee covers the use of ab53033 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>IP</td>
<td>★★★★★</td>
<td>Use at 1 µg/mg of lysate.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>★★★★★</td>
<td>Use at an assay dependent dilution.</td>
</tr>
<tr>
<td>IHC-Fr</td>
<td>★★★★★</td>
<td>Use at an assay dependent dilution.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>★★★★★</td>
<td>1/100.</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

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<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>★★★★★</td>
<td>1/500 - 1/1000. Detects a band of approximately 97 kDa (predicted molecular weight: 97 kDa).</td>
</tr>
<tr>
<td>ELISA</td>
<td>★</td>
<td>1/20000.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>★★★★☆☆☆☆</td>
<td>1/50.</td>
</tr>
</tbody>
</table>

Target
**Anti-E Cadherin antibody images**

**Western blot - E Cadherin antibody (ab53033)**

All lanes: Anti-E Cadherin antibody (ab53033) at 1/500 dilution

Lane 1: NIH/3T3 cell extract

Lane 2: NIH/3T3 cell extract with peptide

Predicted band size: 97 kDa

Observed band size: 97 kDa

Additional bands at: 105 kDa. We are unsure as to the identity of these extra bands.

**Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - E Cadherin antibody (ab53033)**

Mouse E6 - E6.5 embryos were sectioned and then fixed in paraformaldehyde. Antigen retrieval was performed using citric acid and the sections permeabлизed and blocked for 1 hour in serum. Embryos were stained with ab53033 (1/2500) 14 hours at 4°C. They were then washed and stained with a goat anti-rabbit biotin conjugated antibody (1/2500). After using a biotinylated secondary, ABC and then DAB was used for color development.

ab53033 staining E Cadherin in mouse colon tissue section by

Immunohistochemistry(Formalin/PFA-fixed paraffin-embedded sections). Tissue underwent fixation in formaldehyde, heat mediated antigen retrieval in Citrate buffer and blocking in 10% serum for 30 minutes at 20°C. The primary antibody was diluted, 1/300 in PBS and incubated with sample for 45 minutes at 21°C. A Biotinylated goat polyclonal to rabbit IgG diluted, 1/200 was used as secondary. The standard ABC and DAB system was used for detection, followed by haematoxylin counterstain.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - E Cadherin antibody (ab53033)

This image is courtesy of an anonymous Abreview.

ab53033 staining E Cadherin in mouse kidney tissue by immunohistochemistry (formalin/PFA-fixed paraffin-embedded sections). Sections were formaldehyde fixed prior to blocking in 10% BSA for 30 minutes at 20°C and then incubated with ab53033 for 2 hours at 20°C. A HRP conjugated pig polyclonal to rabbit Ig, diluted 1/1, was used as the secondary antibody.

Immunocytochemistry/ Immunofluorescence - E Cadherin antibody (ab53033)

This image is courtesy of an anonymous Abreview.

ab53033 staining E Cadherin in rat hepatocyte cells by Immunocytochemistry/Immunofluorescence. The cells were paraformaldehyde fixed, permeabilised in Triton and then blocked using 10% serum. Samples were then incubated with primary antibody at 1/100 for 24 hours at 4°C. The secondary antibody used was a goat anti-rabbit IgG conjugated to Alexa Fluor® 488 (green) used at a 1/500 dilution.
All lanes: Anti-E Cadherin antibody 
(ab53033) at 1/100 dilution

Lane 1: Whole cell lysate prepared from 
human glioblastoma cell line U373MG
Lane 2: Whole cell lysate prepared from 
human glioblastoma cell line U251

Lysates/proteins at 100 µg per lane.

Secondary

HRP conjugated monoclonal anti-rabbit 
immunoglobulins at 1/7500 dilution

Predicted band size: 97 kDa
Observed band size: 100 kDa

Image courtesy of an anonymous Abview

Immunoprecipitation - Anti-E Cadherin antibody 
(ab53033)

E Cadherin immunoprecipitation from Human 
HEK293F cells using ab53033. 2000 µg of 
cell lysate was incubated with primary 
antibody (1 µg/mg cell lysate) and matrix 
(protein G) and incubated for 2 hours at 4°C.

Secondary Antibody: HRP-conjugated goat 
anti-rabbit polyclonal (1/5000)

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