abcam

Product datasheet

Anti-E Cadherin antibody [EPR16845-108] ab181296

Recombinant RabMAb

3 Images

Overview

Product name	Anti-E Cadherin antibody [EPR16845-108]
Description	Rabbit monoclonal [EPR16845-108] to E Cadherin
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP
Species reactivity	**Reacts with:** Mouse, Rat
Immunogen	Recombinant fragment within Mouse E Cadherin aa 250-500. The exact sequence is proprietary. Database link: P09803
Positive control	WB: His-tagged mouse E-Cadherin active protein (aa1-709); Rat spleen lysate; Mouse plasma and serum; Mouse brain lysate. IP: Mouse serum.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information see here. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 40% Glycerol, PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR16845-108
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab181296** 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
WB		1/1000. Detects a band of approximately 120, 84 kDa (predicted molecular weight: 97 kDa).
IP		1/30.

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

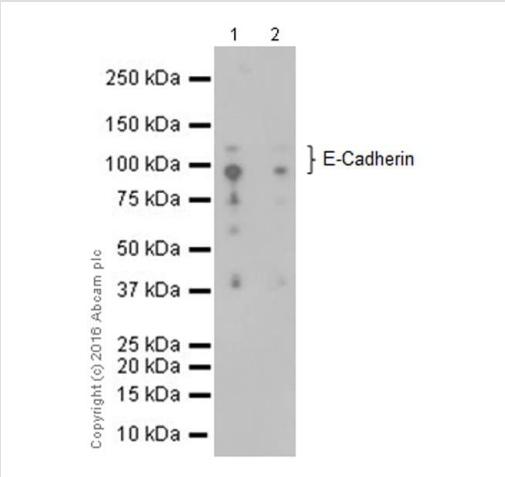
During apoptosis or with calcium influx, cleaved by a membrane-bound metalloproteinase (ADAM10), PS1/gamma-secretase and caspase-3 to produce fragments of about 38 kDa (E-CAD/CTF1), 33 kDa (E-CAD/CTF2) and 29 kDa (E-CAD/CTF3), respectively. Processing by the metalloproteinase, induced by calcium influx,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



Western blot - Anti-E Cadherin antibody [EPR16845-108] (ab181296)

Lane 1 : Anti-E Cadherin antibody [EPR16845-108] (ab181296) at 1/20000 dilution
Lane 2 : Anti-E Cadherin antibody [EPR16845-108] (ab181296) at 1/100000 dilution

All lanes : His-tagged mouse E-Cadherin active protein (aa1-709)

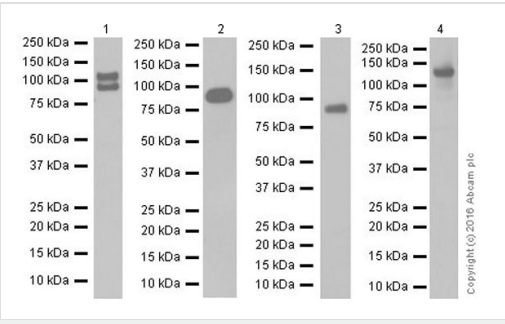
Lysates/proteins at 0.01 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Developed using the ECL technique.

Predicted band size: 97 kDa
Observed band size: 120,84 kDa
why is the actual band size different from the predicted?

Exposure time: 10 seconds



Western blot - Anti-E Cadherin antibody [EPR16845-108] (ab181296)

All lanes : Anti-E Cadherin antibody [EPR16845-108] (ab181296) at 1/1000 dilution

Lane 1 : Rat spleen lysate
Lane 2 : Mouse plasma
Lane 3 : Mouse serum
Lane 4 : Mouse brain lysate

Lysates/proteins at 10 µg per lane.

Secondary
Lanes 1 & 4 : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution
Lanes 2-3 : Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

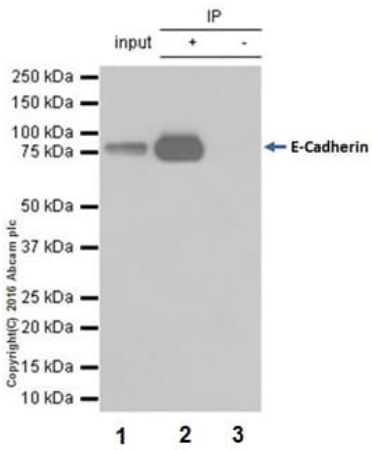
Developed using the ECL technique.

Predicted band size: 97 kDa
Observed band size: 120,84 kDa why is the actual band size different from the predicted?

Exposure time : Lanes 1-2: 30 seconds; Lanes 3-4: 15 seconds.

Blocking/Dilution buffer: 5% NFDM/TBST.

The expression profile observed is consistent with what has been described in the literature (PMID: 11076937; PMID: 11953314).



Immunoprecipitation - Anti-E Cadherin antibody [EPR16845-108] (ab181296)

E Cadherin was immunoprecipitated from 1 mg of mouse serum with ab181296 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab181296 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.

Lane 1: Mouse serum 10 µg (Input).

Lane 2: ab181296 IP in mouse serum.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab181296 in mouse serum.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 1 second.

Terms and conditions

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