abcam

Product datasheet

Anti-CTNNA1 antibody [EP1793Y] ab51032

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-CTNNA1 antibody [EP1793Y]
Description	Rabbit monoclonal [EP1793Y] to CTNNA1
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, IP **Unsuitable for:** Flow Cyt or ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Mouse heart and kidney lysate. Rat brain and kidney lysate. HeLa, A431 and HUVEC whole cell lysate. IHC-P: Rat and human stomach tissue and mouse liver tissue IP: HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate
General notes	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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), 0.05% BSA, 59% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP1793Y
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab51032 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	★★★★★ (4)	1/10000. Detects a band of approximately 100 kDa (predicted molecular weight: 100 kDa).
IHC-P		1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IP		1/100.

Application notes Is unsuitable for Flow Cyt or ICC/IF.

Target

Function Associates with the cytoplasmic domain of a variety of cadherins. The association of catenins to cadherins produces a complex which is linked to the actin filament network, and which seems to be of primary importance for cadherins cell-adhesion properties. Can associate with both E- and N-cadherins. Originally believed to be a stable component of E-cadherin/catenin adhesion complexes and to mediate the linkage of cadherins to the actin cytoskeleton at adherens junctions. In contrast, cortical actin was found to be much more dynamic than E-cadherin/catenin complexes and CTNNA1 was shown not to bind to F-actin when assembled in the complex suggesting a different linkage between actin and adherens junctions components. The homodimeric form may regulate actin filament assembly and inhibit actin branching by competing with the Arp2/3 complex for binding to actin filaments. May play a crucial role in cell differentiation.

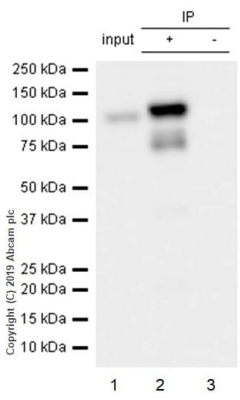
Tissue specificity Expressed ubiquitously in normal tissues.

Sequence similarities Belongs to the vinculin/alpha-catenin family.

Post-translational modifications Sumoylated.

Cellular localization Cell membrane and Cytoplasm > cytoskeleton. Cell junction > adherens junction. Cell membrane. Cell junction. Found at cell-cell boundaries and probably at cell-matrix boundaries.

Images



Immunoprecipitation - Anti-CTNNA1 antibody [EP1793Y] (ab51032)

ab190685 at 1/100 dilution immunoprecipitating CTNNA1 in Jurkat HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysates

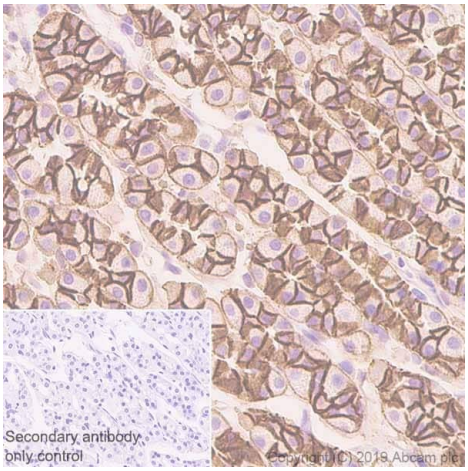
Lane 1 (input): HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg

Lane 2 (+): HeLa whole cell lysate

Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab51032 in HeLa whole cell lysate

For western blotting, ab51032 at 1/500 dilution and VeriBlot for IP Detection Reagent (HRP)(**ab131366**) at 1/1000 dilution were used.

Blocking and diluting buffer: 5% NFDM /TBST.



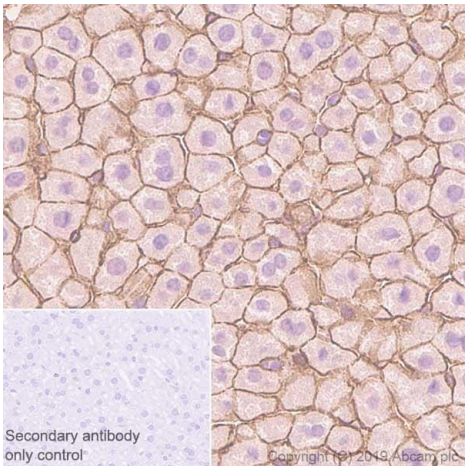
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CTNNA1 antibody [EP1793Y] (ab51032)

Paraffin-embedded rat stomach tissue stained for CTNNA1 with ab51032 at a 1/100 dilution in immunohistochemical analysis. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as a secondary antibody and Hematoxylin used as a counterstain. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) was performed for 20 minutes.

Positive staining was seen on rat stomach.

The section was incubated with ab51032 for 30 minutes at room temperature.

The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument.



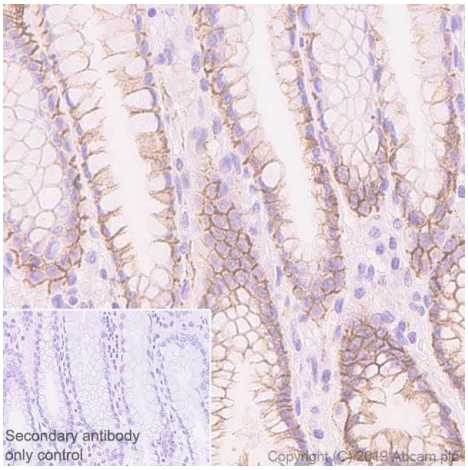
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CTNNA1 antibody [EP1793Y] (ab51032)

Paraffin-embedded mouse liver tissue stained for CTNNA1 with ab51032 at a 1/100 dilution in immunohistochemical analysis. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as a secondary antibody and Hematoxylin used as a counterstain. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) was performed for 20 minutes.

Positive staining was seen on mouse liver.

The section was incubated with ab51032 for 30 minutes at room temperature.

The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument.



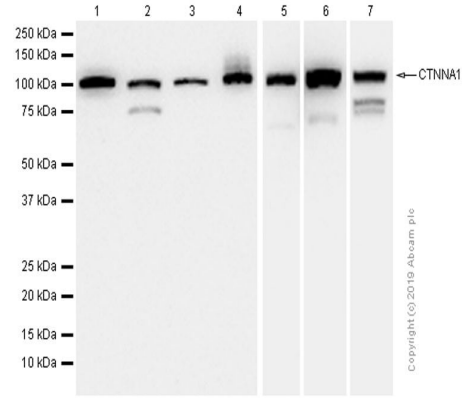
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CTNNA1 antibody [EP1793Y] (ab51032)

Paraffin-embedded human stomach tissue stained for CTNNA1 with ab51032 at a 1/100 dilution in immunohistochemical analysis. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as a secondary antibody and Hematoxylin used as a counterstain. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) was performed for 20 minutes.

Positive staining was seen on human stomach.

The section was incubated with ab51032 for 30 minutes at room temperature.

The immunostaining staining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-CTNNA1 antibody [EP1793Y] (ab51032)

All lanes : Anti-CTNNA1 antibody [EP1793Y] (ab51032) at 1/10000 dilution

Lane 1 : Mouse heart lysate
Lane 2 : Mouse kidney lysate
Lane 3 : Rat brain lysate
Lane 4 : Rat kidney lysate
Lane 5 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate
Lane 6 : A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate
Lane 7 : HUVEC (Human umbilical vein endothelial cell) whole cell lysate

Lysates/proteins at 20 µg per lane.

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

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

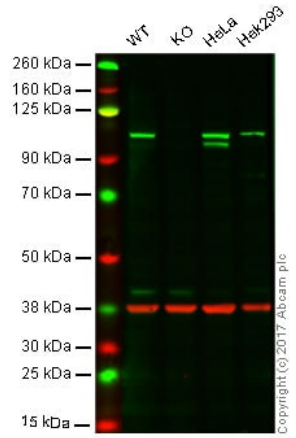
Expsure time

Lane 1-4: 180 seconds

Lane 5,7: 40 seconds

Lane 6: 5 seconds

Blocking/diluting buffer and concentration: 5% NFDM/TBST



Western blot - Anti-CTNNA1 antibody [EP1793Y] (ab51032)

Lane 1: Wild-type HAP1 whole cell lysate (20 µg)
Lane 2: CTNNA1 HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: HEK293 whole cell lysate (20 µg)

Lanes 1 - 4: Merged signal (red and green). Green - ab51032 observed at 100 kDa. Red - loading control, **ab9484**, observed at 37 kDa.

ab51032 was shown to recognize CTNNA1 in wild-type cells as signal was lost at the expected MW in CTNNA1 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and CTNNA1 knockout samples were subjected to SDS-PAGE. Ab51032 and **ab9484** (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/50000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

Anti-CTNNA1 antibody [EP1793Y] (ab51032)

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