abcam

ab184919

Anti-gamma Catenin antibody [EPR17310]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR17310
Purification technique	Affinity purification Protein A
Concentration	1.015 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat

Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

Species	Dog
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	-

Species	Dog
Dilution info	1/250
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/1000
Notes	-

Expected

Species	Mouse, Rat, Dog
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/4000
Notes	-

Species	Rat
Dilution info	1/4000
Notes	-

Species	Human
Dilution info	1/4000
Notes	-

Expected

Species	Dog
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information JUP

Function

Common junctional plaque protein. The membrane-associated plaques are architectural elements in an important strategic position to influence the arrangement and function of both the cytoskeleton and the cells within the tissue. The presence of plakoglobin in both the desmosomes and in the intermediate junctions suggests that it plays a central role in the structure and function of submembranous plaques. Acts as a substrate for VE-PTP and is required by it to stimulate VE-cadherin function in endothelial cells. Can replace beta-catenin in E-

cadherin/catenin adhesion complexes which are proposed to couple cadherins to the actin cytoskeleton (By similarity). May promote axon outgrowth and motor fiber repair via DSP-mediated recruitment to outgrowth tips (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Gamma Catenin also known as Junction Plakoglobin (JUP) is a protein with a molecular mass of approximately 82 kDa. It plays an important role in cell adhesion mechanisms. This protein is expressed widely in various tissue types prominently in epithelial tissues. Gamma Catenin contributes significantly to the structure of adherens junctions and desmosomes physically connecting cells to one another and stabilizing those connections within tissues.

Biological function summary	Gamma Catenin is an integral component of the armadillo family of proteins and part of desmosomal and adherens junction complexes. It plays an essential role in maintaining the integrity and mechanical strength of tissues. Through interacting with other proteins in these complexes gamma Catenin facilitates cell signaling and communication. It associates with cadherins and catenins including plakophilin and β-catenin to ensure proper cell-cell adhesion and signaling across the cell membrane.
Pathways	Gamma Catenin is involved in the Wnt signaling pathway an important route governing cellular processes such as proliferation differentiation and migration. Gamma Catenin interacts with β-catenin in this pathway influencing transcriptional regulation in the nucleus. It also plays roles in the cadherin-mediated cell adhesion pathway working alongside other proteins like E-cadherin to modulate cell behavior. These pathways highlight its importance in cellular architecture and signaling.
Associated diseases and disorders	Alterations in gamma Catenin expression or function relate to conditions such as heart diseases specifically arrhythmogenic right ventricular cardiomyopathy and cancer particularly affecting epithelial tissues. In these conditions abnormal gamma Catenin interactions with other junction proteins like desmoplakin and plakophilin contribute to disease progression. These disruptions suggest its potential as a therapeutic target providing insight into disease mechanisms and opportunities for intervention.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

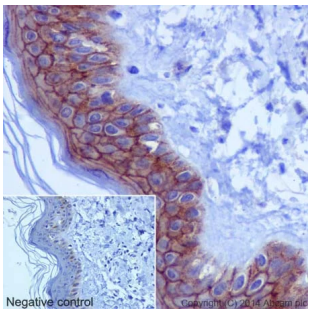
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

14 product images

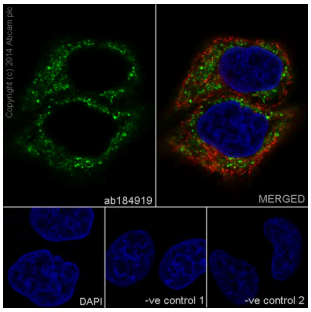


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Gamma Catenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-gamma Catenin antibody

Immunohistochemical analysis of paraffin-embedded Human skin tissue labeling gamma Catenin with ab184919 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Cytoplasmic and membrane staining on epithelial cells of Human skin is observed. Counterstained with Hematoxylin.
Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

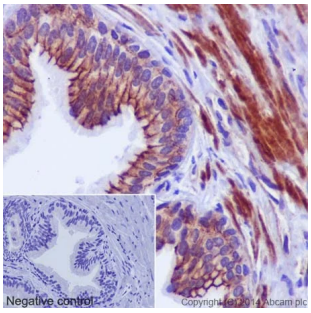
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Gamma Catenin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-gamma Catenin antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling gamma Catenin with ab184919 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green). Confocal image showing cytoplasmic staining on HeLa cells. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows:
-ve control 1: ab184919 at 1/250 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.

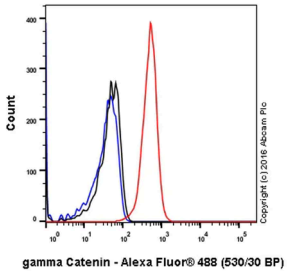


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Gamma Catenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-gamma Catenin antibody

Immunohistochemical analysis of paraffin-embedded Human prostatic hyperplasia tissue labeling gamma Catenin with ab184919 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Cytoplasmic and membrane staining on epithelial cells of Human prostate is observed; and smooth muscle cells are also positively stained. Counterstained with Hematoxylin.
Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

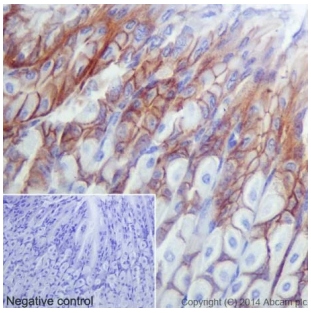
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Gamma Catenin Flow Cytometry (Intracellular) staining using rabbit Anti-gamma Catenin antibody

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) labelling gamma Catenin with purified ab184919 at 1/1000 (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Alexa Fluor® 488 goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.

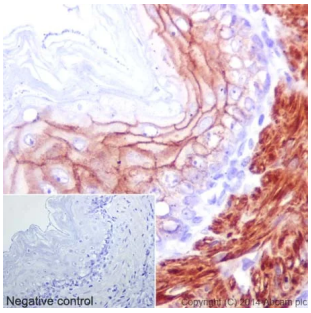


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Gamma Catenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-gamma Catenin antibody

Immunohistochemical analysis of paraffin-embedded mouse stomach tissue labeling gamma Catenin with ab184919 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Cytoplasmic and membrane staining on epithelial cells of mouse stomach is observed. Counterstained with Hematoxylin.
Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

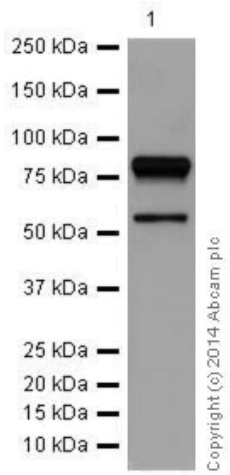


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Gamma Catenin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-gamma Catenin antibody

Immunohistochemical analysis of paraffin-embedded rat skin tissue labeling gamma Catenin with ab184919 at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) secondary antibody at 1/500 dilution. Membrane and cytoplasmic staining on the epithelial cells of rat skin is observed; and smooth muscle cells are also positively stained. Counterstained with Hematoxylin.
Negative control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919)

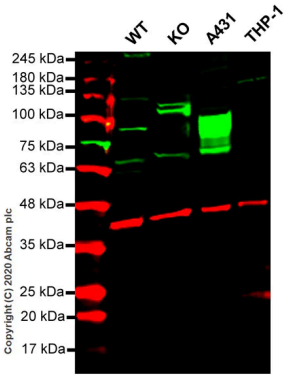
Blocking and diluting buffer and concentration = 5% NFDM/TBST
Exposure time = 3 minutes

All lanes:
Anti-cardiac Troponin I antibody (ab1000) at 1/1000 dilution

All lanes:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysates at 20 µg

Predicted band size: 82 kDa

Observed band size: 82 kDa



Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Gamma Catenin Western blot staining using rabbit Anti-gamma Catenin antibody

Lanes 1-4: Merged signal (red and green). Green - ab184919 observed at 82 kDa. Red - loading control, ab8245 observed at 37 kDa.
ab184919 Anti-gamma Catenin antibody [EPR17310] was shown to specifically react with gamma Catenin in wild-type HEK293T cells. Loss of signal was observed when knockout cell line ab266272 (knockout cell lysate ab257269) was used. Wild-type and gamma Catenin knockout samples were subjected to SDS-PAGE. ab184919 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 10000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919) at 1/1000 dilution

Lane 1:
Wild-type HEK-293T cell lysate at 20 µg

Lane 2:
JUZ knockout HEK-293T cell lysate at 20 µg

Lane 2:
Western blot - Human JUP (gamma Catenin) knockout HEK-293T cell line (ab266272)

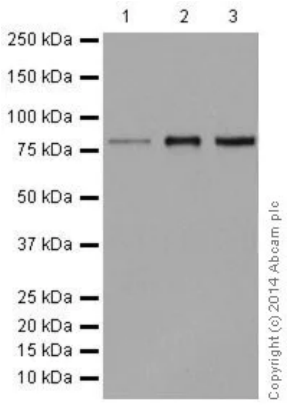
Lane 3:
A431 cell lysate at 20 µg

Lane 4:
THP-1 cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 82 kDa

Observed band size: 82 kDa



Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time = 5 seconds

All lanes:
Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919) at 1/1000 dilution

Lane 1:
Hela (Human epithelial cells from cervix adenocarcinoma) whole cell lysates at 20 µg

Lane 2:
Mouse skin lysates at 20 µg

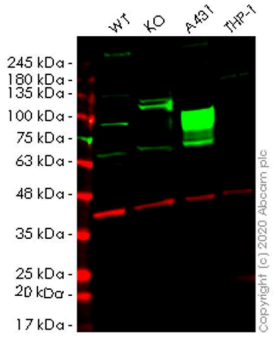
Lane 3:
Rat skin lysates at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

Predicted band size: 82 kDa

Observed band size: 82 kDa



Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Gamma Catenin Western blot staining using rabbit Anti-gamma Catenin antibody

Lanes 1-4: Merged signal (red and green). Green - ab184919 observed at 82 kDa. Red - loading control, ab8245 observed at 37 kDa.
ab184919 Anti-gamma Catenin antibody [EPR17310] was shown to specifically react with gamma Catenin in wild-type HEK293T cells. Loss of signal was observed when knockout cell line ab266272 (knockout cell lysate ab257269) was used. Wild-type and gamma Catenin knockout samples were subjected to SDS-PAGE. ab184919 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated overnight at 4°C at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 10000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919) at 1/1000 dilution

Lane 1:
Wild-type HEK293T cell lysate at 20 µg

Lane 2:
JUP knockout HEK293T cell lysate at 20 µg

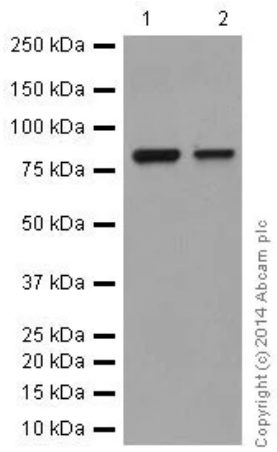
Lane 3:
A431 cell lysate at 20 µg

Lane 4:
THP-1 cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 82 kDa

Observed band size: 82 kDa



Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time = 15 seconds

All lanes:
Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919) at 1/1000 dilution

Lane 1:
Human fetal heart lysates at 10 µg

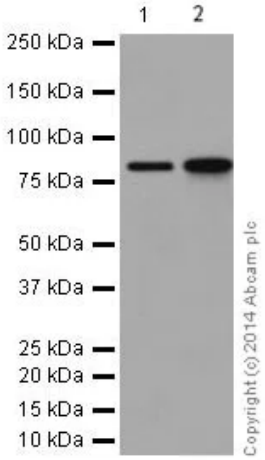
Lane 2:
Human fetal kidney lysates at 10 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 82 kDa, 89 kDa

Observed band size: 82 kDa, 97 kDa



Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time = 3 seconds

All lanes:
Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919) at 1/10000 dilution

Lane 1:
Human fetal skin lysates at 10 µg

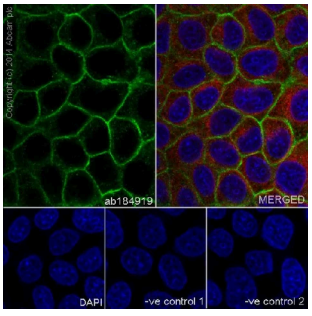
Lane 2:
A431 (Human epidermoid carcinoma) whole cell lysates at 10 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 27 kDa, 82 kDa

Observed band size: 30 kDa, 82 kDa

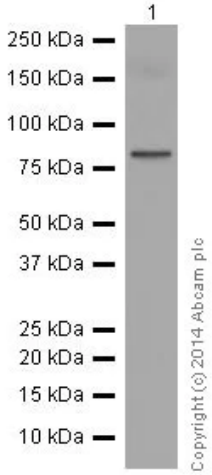


Immunocytochemistry/ Immunofluorescence - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Gamma Catenin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-gamma Catenin antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized MDCK (Canine kidney cell line) cells labeling gamma Catenin with ab184919 at 1/250 dilution,

followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/500 dilution (green). Confocal image showing membranous staining on MDCK cells. The nuclear counter stain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).
The negative controls are as follows:
-ve control 1: ab184919 at 1/250 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/500 dilution.



Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919)

Blocking and Diluting buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-gamma Catenin antibody [EPR17310] (ab184919) at 1/100000 dilution

All lanes:
MDCK (Canine kidney cell line) whole cell lysate at 10 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 82 kDa

Observed band size: 82 kDa

Exposure time: 1min

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.