


Anti-gamma Catenin antibody [15F11] ab12083

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Overview

| | |
|----------------------------|---|
| Product name | Anti-gamma Catenin antibody [15F11] |
| Description | Mouse monoclonal [15F11] to gamma Catenin |
| Host species | Mouse |
| Tested applications | Suitable for: ICC/IF, IHC-P, WB, Flow Cyt (Intra) |
| Species reactivity | Reacts with: Mouse, Human Predicted to work with: Rat  |
| Immunogen | Recombinant full length protein. This information is proprietary to Abcam and/or its suppliers. |
| Positive control | IHC-P: FFPE normal human skin tissue sections. ICC/IF: A431 cells. Flow Cyt (Intra): HeLa cells. WB: HeLa, A431 cells |
| General notes | <p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p> |

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: 0.02% Sodium azide Constituent: PBS |
| Purity | Protein G purified |
| Clonality | Monoclonal |
| Clone number | 15F11 |
| Isotype | IgG1 |

Light chain type

kappa

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab12083 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 |
|------------------|-----------|--|
| ICC/IF | | Use a concentration of 5 µg/ml. |
| IHC-P | | Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |
| WB | | Use a concentration of 1 µg/ml. Predicted molecular weight: 81.5 kDa. |
| Flow Cyt (Intra) | | Use 1-2µg for 10 ⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |

Target

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.

Involvement in disease

Defects in JUP are the cause of Naxos disease (NXD) [MIM:601214]. NXD is an autosomal recessive disorder combining diffuse non-epidermolytic palmoplantar keratoderma with arrhythmogenic right ventricular dysplasia/cardiomyopathy and woolly hair. Defects in JUP are the cause of familial arrhythmogenic right ventricular dysplasia type 12 (ARVD12) [MIM:611528]; also called arrhythmogenic right ventricular cardiomyopathy 12 (ARVC12). ARVD is an autosomal dominant disease characterized by partial degeneration of the myocardium of the right ventricle, electrical instability, and sudden death. It is clinically defined by electrocardiographic and angiographic criteria; pathologic findings, replacement of ventricular myocardium with fatty and fibrous elements, preferentially involve the right ventricular free wall.

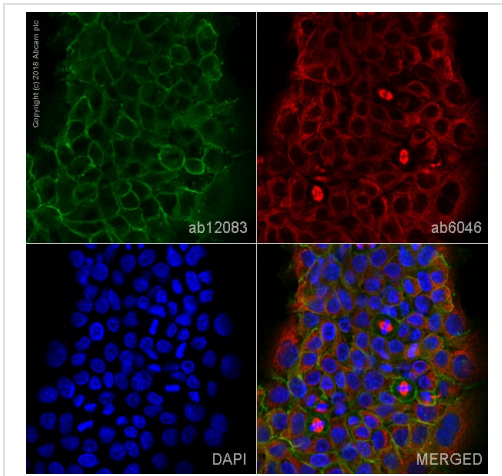
Sequence similarities

Belongs to the beta-catenin family.
Contains 9 ARM repeats.

Cellular localization

Cell junction > adherens junction. Cell junction > desmosome. Cytoplasm > cytoskeleton. Membrane. Cytoplasmic in a soluble and membrane-associated form.

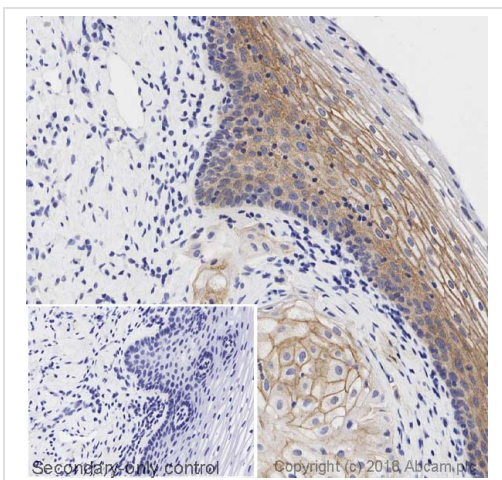
Images



Immunocytochemistry/ Immunofluorescence - Anti-gamma Catenin antibody [15F11] (ab12083)

ab12083 staining gamma Catenin in A431 cells. The cells were fixed with 100% methanol (5min), permeabilized with 0.1%PBS-Tween for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab12083 at 5µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control, at 1/1000 dilution. Cells were then incubated with **ab150117**, Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (shown in green) and **ab150084**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolor red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

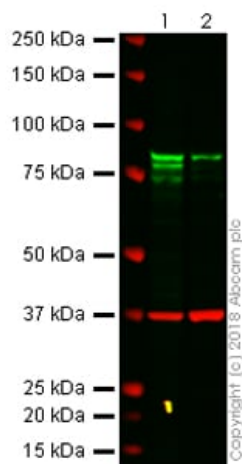


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-gamma Catenin antibody [15F11] (ab12083)

IHC image of gamma Catenin staining in a section of formalin-fixed paraffin-embedded normal human skin* performed on a Leica BOND™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab12083, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

**Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre*



Western blot - Anti-gamma Catenin antibody
[15F11] (ab12083)

All lanes :

Lane 1 : A431 whole cell lysate

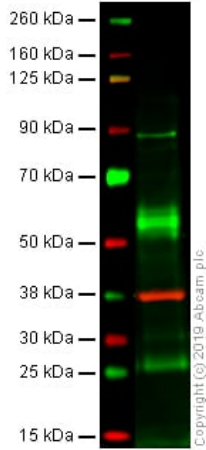
Lane 2 : HeLa whole cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 81.5 kDa

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 40 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% milk before ab12083 and **ab181602** (Rabbit anti-GAPDH loading control) were incubated overnight at 4°C at a 1ug/ml concentration and 1/10000 dilution respectively. Antibody binding was detected using Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-gamma Catenin antibody [15F11] (ab12083)

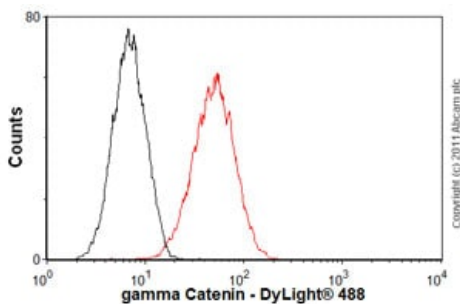
Anti-gamma Catenin antibody [15F11] (ab12083) at 1 $\mu\text{g/ml}$ +
 Mouse Liver Tissue Lysate at 20 μg

Performed under reducing conditions.

Predicted band size: 81.5 kDa

Additional bands at: 25 kDa (possible IgG), 55 kDa (possible IgG)

This blot was produced using a 4-12% Bis-tris under the MOPS buffer system. The gel was run at 200V for 55 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was blocked for an hour using 3% milk before ab12083 and **ab181602** (Rabbit anti-GAPDH loading control) were incubated overnight at 4°C at 1 $\mu\text{g/ml}$ and a 1/20000 dilution respectively. Antibody binding was detected using Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Flow Cytometry (Intracellular) - Anti-gamma Catenin antibody [15F11] (ab12083)

Overlay histogram showing HeLa cells stained with ab12083 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab12083, 1 $\mu\text{g}/1 \times 10^6$ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [CIGG1] (**ab91353**, 2 $\mu\text{g}/1 \times 10^6$ cells) used under the same conditions. Acquisition of >5,000 events was performed.

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