abcam

Product datasheet

Anti-pan Cadherin antibody ab16505

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Overview

Product name	Anti-pan Cadherin antibody
Description	Rabbit polyclonal to pan Cadherin
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human **Predicted to work with:** Chicken, Cow, Xenopus laevis, Zebrafish
Immunogen	Synthetic peptide corresponding to Human pan Cadherin aa 850 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as **ab17098**)
Positive control	ICC/IF: U2OS; HeLa cells. WB: Mouse Heart; Mouse Muscle; Human Heart; Rat Heart. IHC-P: Human Liver.
General notes	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. 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

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab16505 in the following tested applications.

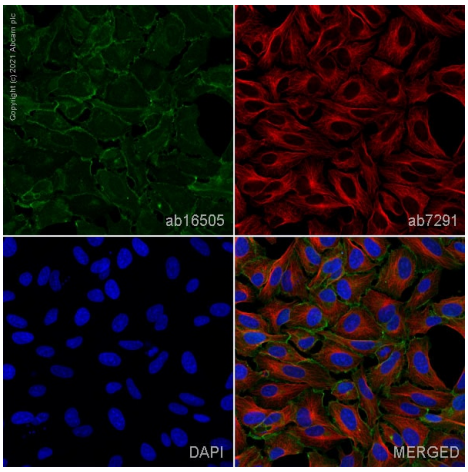
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★ (4)	Use a concentration of 2 µg/ml. A diffuse signal is seen throughout the cells if higher concentrations are used (5-10µg/ml). We have had reports that the antibody works less well in this application in murine (3T3) cells.
WB	★★★★☆ (2)	Use a concentration of 1 µg/ml. Detects a band of approximately 135 kDa (predicted molecular weight: 100 kDa).
IHC-P	★★★★★ (2)	Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

Relevance Cadherins are members of a multigene family of single chain glycoprotein receptors mediating calcium dependent cell-cell adhesion. They play an important role in the growth and development of cells via the mechanisms of control of tissue architecture and the maintenance of tissue integrity. Cadherins are expressed in a tissue specific manner and and are required for assembly of cells into solid tissue. Individual cadherin molecules are known to co-operate with each other to form a linear cell adhesion zipper. In adhesion junctions cadherins are bound to beta and gamma catenins which in turn bind to alpha catenin, an actin binding protein. Cadherins play an important part in tumor invasion and metastasis.

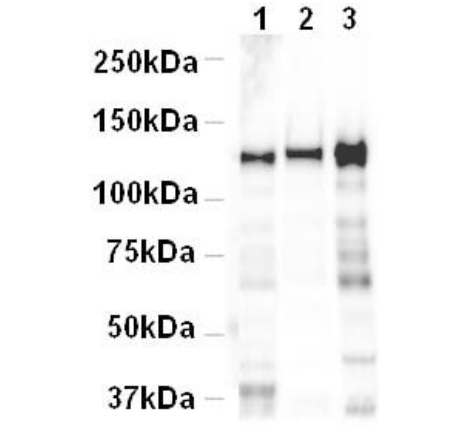
Images



Immunocytochemistry/ Immunofluorescence - Anti-pan Cadherin antibody (ab16505)

ab16505 staining pan Cadherin in U2OS cells. The cells were fixed with 100% methanol (5 min), 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 ab16505 at 1µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.



Western blot - Anti-pan Cadherin antibody (ab16505)

All lanes : Anti-pan Cadherin antibody (ab16505) at 1 µg/ml

Lane 1 : Human heart lysate
Lane 2 : Mouse heart lysate
Lane 3 : Rat heart lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (**ab7090**) at 1/5000 dilution

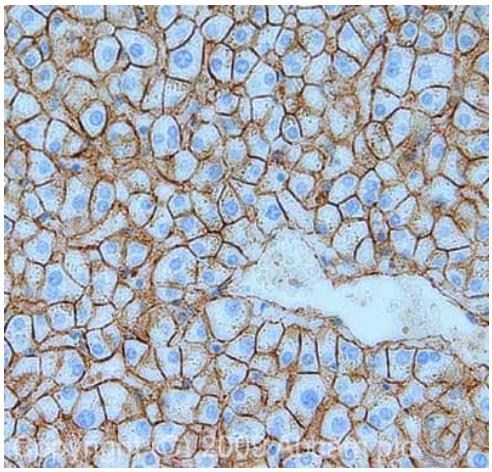
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 100 kDa
Observed band size: 125-140 kDa
Additional bands at: 40 kDa, 65 kDa, 75 kDa, 90 kDa. We are

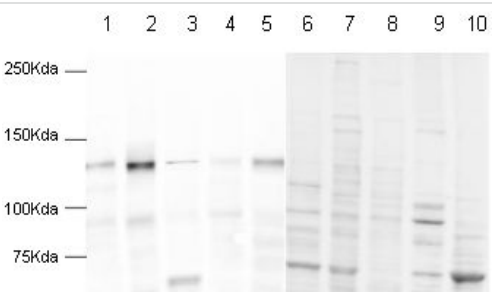
unsure as to the identity of these extra bands.

Exposure time: 1 minute



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-pan Cadherin antibody (ab16505)

IHC image of pan Cadherin staining in human liver FFPE section, performed on a Bond^{TM} 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 20 mins. The section was then incubated with ab16505, 1µg/ml, for 8 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.



Western blot - Anti-pan Cadherin antibody (ab16505)

All lanes : Anti-pan Cadherin antibody (ab16505) at 1 µg/ml

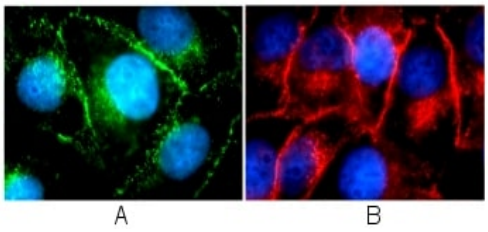
Lane 1 : Mouse heart
Lane 2 : HeLa cell lysate
Lane 3 : 3T3 cell lysate
Lane 4 : Mouse muscle
Lane 5 : Human heart
Lane 6 : Mouse heart with Human pan Cadherin peptide (**ab17098**) at 1 µg/ml
Lane 7 : HeLa cell lysate with Human pan Cadherin peptide (**ab17098**) at 1 µg/ml
Lane 8 : 3T3 cell lysate with Human pan Cadherin peptide (**ab17098**) at 1 µg/ml
Lane 9 : Mouse muscle with Human pan Cadherin peptide (**ab17098**) at 1 µg/ml
Lane 10 : Human heart with Human pan Cadherin peptide (**ab17098**) at 1 µg/ml

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat anti-rabbit conjugated to Alexafluor 680 at 1/10000 dilution

Performed under reducing conditions.

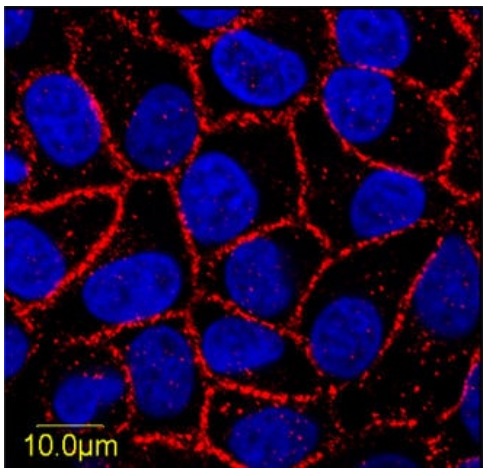
Predicted band size: 100 kDa



Immunocytochemistry/ Immunofluorescence - Anti-pan Cadherin antibody (ab16505)

This image is courtesy of Rosmaria Mangiacasale & Patrizia Lavia, University La Sapienza

HeLa cells fixed in methanol and stained with ab16505 (2µg/ml). The cells were fixed in 100% methanol for 6 minutes at -20°C, then washed once in PBS. The 2 images show the cells stained with different secondary antibodies, Donkey anti Rabbit FITC (image A) and Donkey anti Rabbit Cy3 (image B). In each case ab16505 stains the plasma membrane. In image A ab16505 is stained green and in image B ab16505 is stained red. In both images the DNA is stained with DAPI (blue).



Immunocytochemistry/ Immunofluorescence - Anti-pan Cadherin antibody (ab16505)

Image from Kiss K et al., PLoS One. 2012;7(5):e37378. Epub 2012 May 24. Fig 1.; doi:10.1371/journal.pone.0037378; May 24, 2012, PLoS ONE 7(5): e37378.

Immunofluorescence analysis of HeLa cells, staining pan Cadherin (red) with ab16505.

Cells were fixed with paraformaldehyde, permeabilized in methanol and blocked for 1 hour at room temperature in DPBS containing 2 mg/mL BSA, 1% fish gelatin, 0.1% Triton-X 100 and 5% goat serum. Cells were then incubated for 1 hour at room temperature with the primary antibody diluted in blocking buffer. An AlexaFluor®-conjugated anti-rabbit IgG was used as the secondary antibody. Nuclei were counterstained with DAPI (blue).

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