

Product datasheet

Anti-ROCK2 + ROCK1 antibody [EP786Y] ab45171

Recombinant RabMAb

★★★★☆ 7 Abreviews 81 References 10 Images

Overview

| | |
|----------------------------|--|
| Product name | Anti-ROCK2 + ROCK1 antibody [EP786Y] |
| Description | Rabbit monoclonal [EP786Y] to ROCK2 + ROCK1 |
| Host species | Rabbit |
| Specificity | This antibody recognizes both the cleaved C-terminus of ROCK 1 (30 kDa) and full length protein (158 kDa). The immunogen used for this product shares 83% homology with ROCK2 and has been shown to bind recombinant human ROCK2, please see western blot images below. |
| Tested applications | Suitable for: WB, IHC-P, ICC/IF, IP, Flow Cyt |
| Species reactivity | Reacts with: Mouse, Rat, Human Predicted to work with: Cow |
| Immunogen | Synthetic peptide within Human ROCK1 aa 1100-1200 (C terminal). The exact sequence is proprietary. Database link: Q13464 |
| Positive control | WB: Untreated, Calyculin A treated and Camptothecin treated HeLa whole cell lysate (ab150035). Jurkat, Ramos, PC-12 and RAW264.7 cell lysates. IHC-P: Human adenocarcinoma of the colon and thyroid gland carcinoma tissues. ICC/IF: HeLa cells. Flow Cyt: HeLa cells. IP: HeLa whole cell lysate (ab150035). |
| General notes | This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> - 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 . We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team. Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough. |

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

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, as well as 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. Avoid freeze / thaw cycle. |
| Storage buffer | pH: 7.20 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA |
| Purity | Protein A purified |
| Clonality | Monoclonal |
| Clone number | EP786Y |
| Isotype | IgG |

Applications

Our [Abpromise guarantee](#) covers the use of **ab45171** 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 | ★★★★☆ | 1/2000 - 1/10000. Predicted molecular weight: 158 kDa. For unpurified use at 1/500. |
| IHC-P | ★★★★★ | 1/50 - 1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See IHC antigen retrieval protocols . |

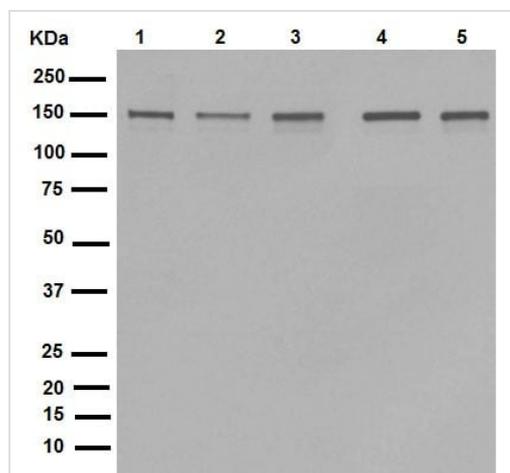
| Application | Abreviews | Notes |
|-------------|-----------|--|
| ICC/IF | ★☆☆☆☆ | 1/50 - 1/500. |
| IP | | 1/40 - 1/50. |
| Flow Cyt | | 1/1000. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

Target

Cellular localization

ROCK2: Cytoplasm. Cell membrane. Cytoplasmic, and associated with actin microfilaments and the plasma membrane. ROCK1: Cytoplasm. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome, centriole. Golgi apparatus membrane. Cell projection, bleb. Cytoplasm, cytoskeleton. Cell membrane. Cell projection, lamellipodium. Cell projection, ruffle. Associated with the mother centriole and an intercentriolar linker. Colocalizes with ITGB1BP1 and ITGB1 at the cell membrane predominantly in lamellipodia and membrane ruffles, but also in retraction fibers. Localizes at the cell membrane in an ITGB1BP1-dependent manner (By similarity). A small proportion is associated with Golgi membranes.

Images



Western blot - Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171)

All lanes : Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171) at 1/5000 dilution (purified)

Lane 1 : HeLa cell lysate - treated with Calyculin A

Lane 2 : HeLa cell lysate - treated with Camptothecin

Lane 3 : HeLa cell lysate

Lane 4 : Jurkat cell lysate

Lane 5 : Ramos cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

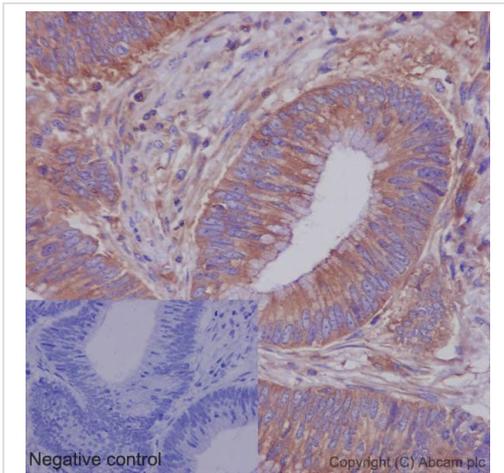
All lanes : Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 158 kDa

Observed band size: 158 kDa

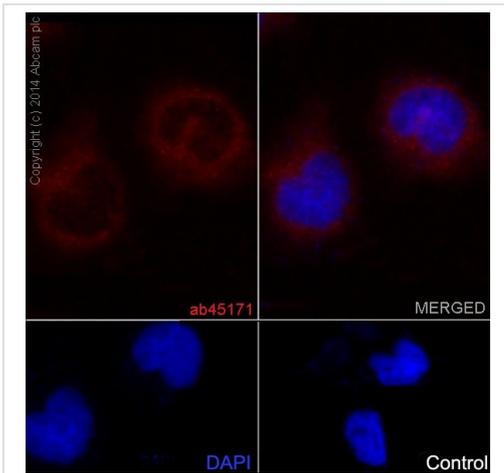
Blocking buffer and concentration: 5% NFD/MTBST.

Diluting buffer and concentration: 5% NFD/MTBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human adenocarcinoma of the colon tissue labelling ROCK2 + ROCK1 with purified ab45171 at 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

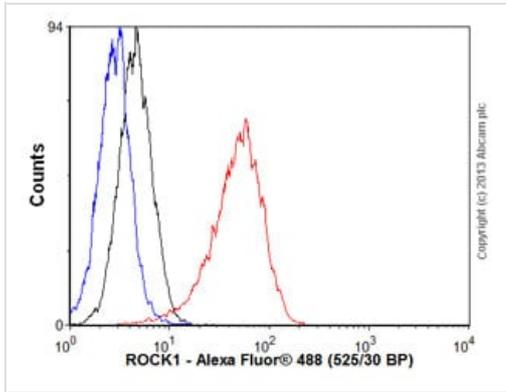
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171)



Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling ROCK2 + ROCK1 with purified ab45171 at 1/50. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150078, an Alexa Fluor[®] 555-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.

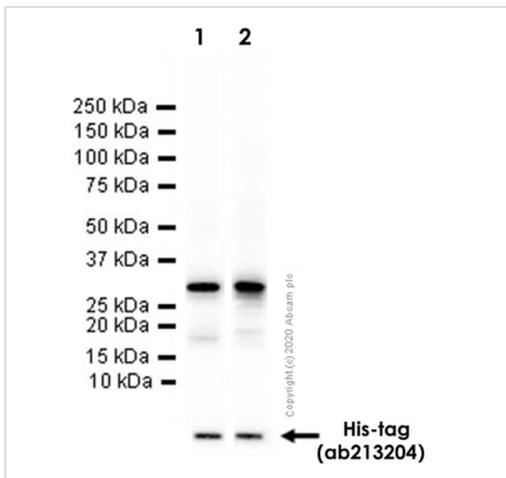
Control: primary antibody (1/50) and secondary antibody, ab150113, an Alexa Fluor[®] 488-conjugated goat anti-mouse IgG (1/500).

Immunocytochemistry/ Immunofluorescence - Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171)



Flow Cytometry - Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171)

Overlay histogram showing HeLa cells stained with unpurified ab45171 (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 (ab45171, 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10⁶ cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Western blot - Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171)

All lanes : Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171) at 1/1000 dilution

Lane 1 : Recombinant Human ROCK1 protein (aa 1114 to 1354) (30 kDa)

Lane 2 : Recombinant Human ROCK2 protein (aa 1132 to 1388) (30 kDa)

Secondary

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

Predicted band size: 158 kDa

Observed band size: 30 kDa

[why is the actual band size different from the predicted?](#)

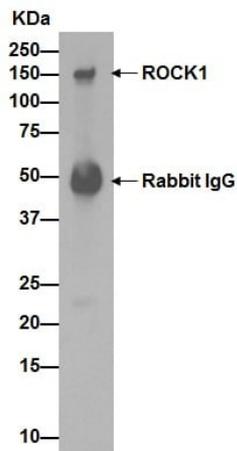
Loading control: Anti-6X His tag® antibody [EPR20547] (ab213204)

Blocking buffer and concentration: 5% NFDM/TBST

Exposure Times:

Lane 1: 3 seconds

Lane 2: 7 seconds

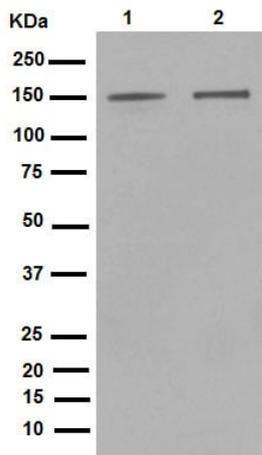


Immunoprecipitation - Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171)

ab45171 (purified) at 1/40 immunoprecipitating ROCK2 + ROCK1 in HeLa cell lysate. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000).

Blocking buffer and concentration: 5% NFDm/TBST.

Diluting buffer and concentration: 5% NFDm /TBST.



Western blot - Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171)

All lanes : Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171) at 1/5000 dilution (purified)

Lane 1 : PC-12 cell lysate

Lane 2 : RAW264.7 cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

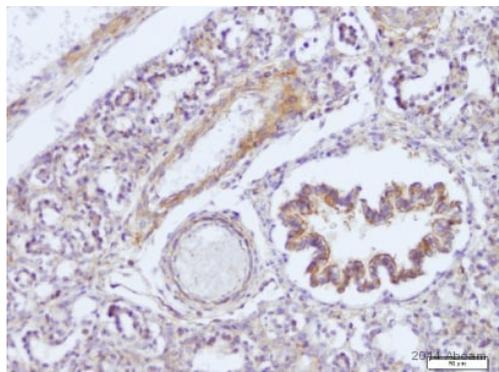
All lanes : Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 158 kDa

Observed band size: 158 kDa

Blocking buffer and concentration: 5% NFDm/TBST.

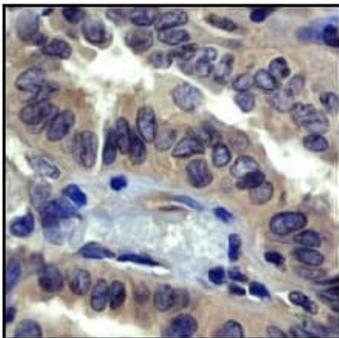
Diluting buffer and concentration: 5% NFDm /TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171)

This image is courtesy of an anonymous Abreview

Unpurified ab45171 staining ROCK2 + ROCK1 in mouse embryo 18dpc tissue sections by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 1% FBS/BSA for 2 hours at room temperature; antigen retrieval was by heat mediation in Tris pH 9. Samples were incubated with primary antibody (1/100 in 1% BSA + 1% FBS in TBS) for 16 hours. An undiluted HRP-conjugated goat anti-rabbit IgG polyclonal was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ROCK2 + ROCK1 antibody [EP786Y] (ab45171)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human thyroid gland carcinoma tissue labelling ROCK2 + ROCK1 with unpurified ab45171.

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

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-ROCK2 + ROCK1 antibody [EP786Y]
(ab45171)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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