abcam

Product datasheet

Anti-RhoA antibody [1B12] ab54835

16 Abreviews 77 References 6 Images

Overview

Product name	Anti-RhoA antibody [1B12]
Description	Mouse monoclonal [1B12] to RhoA
Host species	Mouse
Tested applications	**Suitable for:** WB, IHC-P, Flow Cyt, ICC/IF
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant full length protein corresponding to Human RhoA aa 1-193. Database link: **P61586**
Positive control	WB: 293T, HL-60, lysate ICC/IF: HeLa cells. Flow cyt: HeLa cells. IHC-P: Human lymphoma tissue.
General notes	This product was changed from ascites to tissue culture supernatant on 15 May 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team. 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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Constituent: 100% PBS
Purity	Tissue culture supernatant
Purification notes	Purified from TCS.
Clonality	Monoclonal

Clone number	1B12
Isotype	IgG1
Light chain type	lambda

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab54835 in the following tested applications.

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

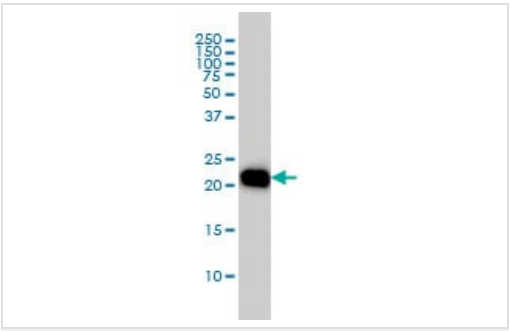
Application	Abreviews	Notes
WB	★★★★☆ (11)	Use at an assay dependent concentration. Predicted molecular weight: 22 kDa.
IHC-P	★★★★☆ (1)	Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC/IF	★★★★★ (2)	Use at an assay dependent concentration.

Target

Function	Regulates a signal transduction pathway linking plasma membrane receptors to the assembly of focal adhesions and actin stress fibers. Serves as a target for the yopT cysteine peptidase from Yersinia pestis, vector of the plague, and Yersinia pseudotuberculosis, which causes gastrointestinal disorders. May be an activator of PLCE1. Activated by ARHGEF2, which promotes the exchange of GDP for GTP.
Sequence similarities	Belongs to the small GTPase superfamily. Rho family.
Domain	The basic-rich region is essential for yopT recognition and cleavage.
Post-translational modifications	Substrate for botulinum ADP-ribosyltransferase. Cleaved by yopT protease when the cell is infected by some Yersinia pathogens. This removes the lipid attachment, and leads to its displacement from plasma membrane and to subsequent cytoskeleton cleavage. AMPylation at Tyr-34 and Thr-37 are mediated by bacterial enzymes in case of infection by H.somnus and V.parahaemolyticus, respectively. AMPylation occurs in the effector region and leads to inactivation of the GTPase activity by preventing the interaction with downstream effectors, thereby inhibiting actin assembly in infected cells. It is unclear whether some human enzyme mediates AMPylation; FICD has such ability in vitro but additional experiments remain to be done to confirm results in vivo. Ubiquitinated by the BCR(BACURD1) and BCR(BACURD2) E3 ubiquitin ligase complexes, leading to its degradation by the proteasome, thereby regulating the actin cytoskeleton and cell migration.
Cellular localization	Cell membrane. Cytoplasm > cytoskeleton.

Images

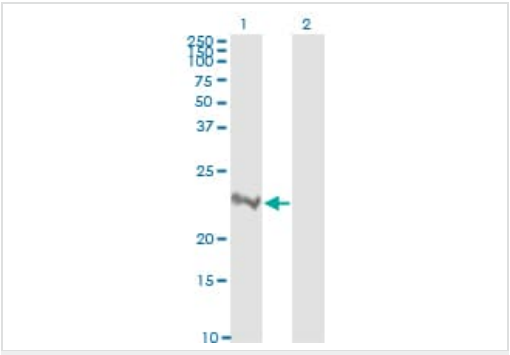
Images



Western blot - Anti-RhoA antibody [1B12] (ab54835)

RhoA antibody (ab54835) at 1ug/lane + HL-60 cell lysate (**ab7914**) at 25ug/lane.

This image was generated using the ascites version of the product.



Western blot - Anti-RhoA antibody [1B12] (ab54835)

All lanes : Anti-RhoA antibody [1B12] (ab54835) at 1 µg

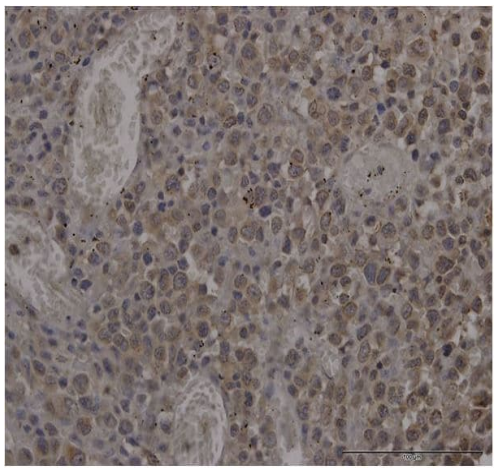
Lane 1 : RHOA transfected 293T lysate
Lane 2 : Non-transfected lysate

Lysates/proteins at 25 µg per lane.

Secondary
All lanes : Goat anti-mouse IgG

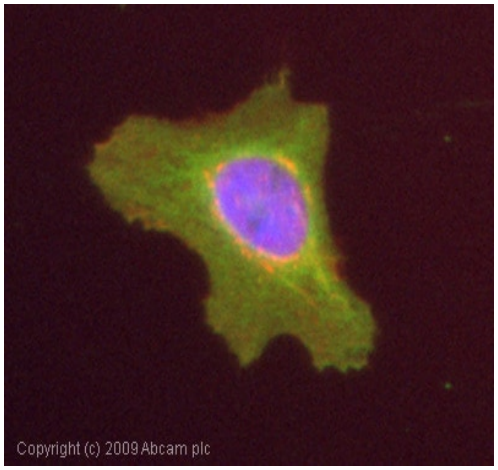
Predicted band size: 22 kDa

This image was generated using the ascites version of the product.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RhoA antibody [1B12] (ab54835)

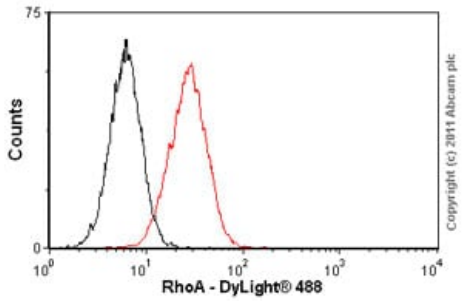
Paraffin embedded human lymphoma tissue stained for RhoA using ab54835 at 5 µg/ml in immunohistochemical analysis.



Immunocytochemistry/ Immunofluorescence - Anti-RhoA antibody [1B12] (ab54835)

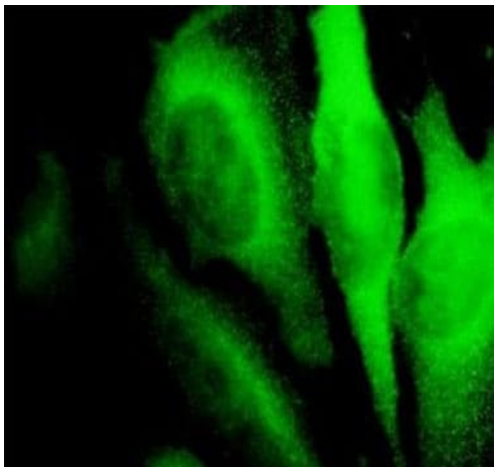
ICC/IF image of ab54835 stained HeLa cells (**ab150035**). The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab54835, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

This image was generated using the ascites version of the product.



Flow Cytometry - Anti-RhoA antibody [1B12] (ab54835)

Overlay histogram showing HeLa cells (**ab150035**) stained with ab54835 (red line). The cells were fixed with 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 (ab54835, 1µg/1x10^6 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 [ICIGG1] (**ab91353**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a decreased signal in HeLa cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Tween used under the same conditions.
This image was generated using the ascites version of the product.



Immunocytochemistry/ Immunofluorescence - Anti-RhoA antibody [1B12] (ab54835)

ab54835 at 10 ug/ml staining RhoA in human Hela cells (**ab150035**) by Immunocytochemistry / Immunofluorescence.

This image was generated using the ascites version of the product.

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