abcam

Product datasheet

Anti-RhoA antibody [EPR18134] (Phycoerythrin) ab212154

Recombinant RabMAb

2 Images

Overview

Product name	Anti-RhoA antibody [EPR18134] (Phycoerythrin)
Description	Rabbit monoclonal [EPR18134] to RhoA (Phycoerythrin)
Host species	Rabbit
Conjugation	Phycoerythrin. Ex: 488nm, Em: 575nm
Tested applications	**Suitable for:** ICC/IF, Flow Cyt
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide (the amino acid sequence is considered to be commercially sensitive) within Human RhoA aa 150 to the C-terminus. The exact sequence is proprietary. Database link: P61586
Positive control	Flow Cytometry: MCF7 cells. ICC/IF: MCF7 cells.
General notes	Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMab® patents This product is a recombinant rabbit monoclonal antibody.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at 4°C (stable for up to 12 months). Upon delivery aliquot. Store at +4°C. Do Not Freeze. Store In the Dark.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR18134
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab212154** in the following tested applications.

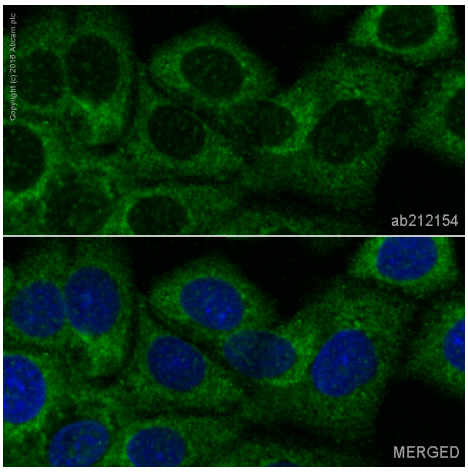
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		1/100. This product gave a positive signal in MCF7 cells fixed with 100% methanol (5 min)
Flow Cyt		1/500.

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.

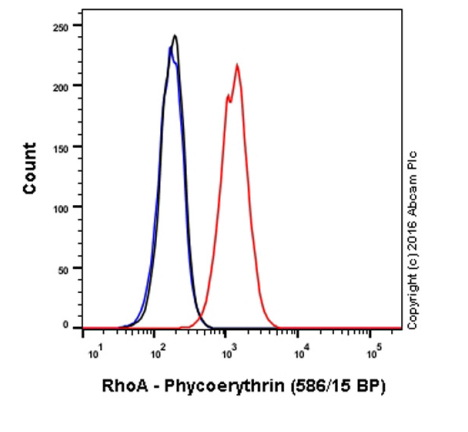
Images



Immunocytochemistry/ Immunofluorescence - Anti-RhoA antibody [EPR18134] (Phycoerythrin) (ab212154)

ab212154 staining RhoA in MCF7 (Human breast adenocarcinoma cell line) cells. The cells were fixed with 100% methanol (5 minutes), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1 hour. The cells were then incubated overnight at +4°C with ab212154 at 1/100 dilution (**pseudocolored in green**). Nuclear DNA was labelled with DAPI (shown in blue).

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



Flow Cytometry - Anti-RhoA antibody [EPR18134] (Phycoerythrin) (ab212154)

Overlay histogram showing MCF7 (Human breast adenocarcinoma cell line) cells stained with ab212154 (red line). The cells were fixed with 4% formaldehyde and then permeabilized with 0.1% PBS-Triton X-100 for 15 minutes. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab212154, 1/500 dilution) for 30 minutes at 22°C.

Isotype control antibody (black line) was rabbit IgG (monoclonal) Phycoerythrin (ab209478) used at the same concentration and conditions as the primary antibody. Unlabeled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50mW Yellow/Green laser (561nm) and 586/15 bandpass filter.

This antibody gave a positive signal in MCF7 cells fixed with 4% formaldehyde, permeabilized with 0.1% PBS-Triton X-100 for 15 minutes used under the same conditions.

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