


## Product datasheet

### Anti-Rho antibody [Y486] ab32046

Recombinant RabMAb

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#### Overview

Product name	Anti-Rho antibody [Y486]
Description	Rabbit monoclonal [Y486] to Rho
Host species	Rabbit
Specificity	The antibody is predicted to detect RhoA, RhoB and RhoC based on sequence analysis.
Tested applications	<b>Suitable for:</b> WB, IHC-P <b>Unsuitable for:</b> Flow Cyt or IP
Species reactivity	<b>Reacts with:</b> Rat, Human <b>Predicted to work with:</b> Mouse 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	PC12 cell lysate and hepatocellular carcinoma.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> For more information <a href="#">see here</a> . Our RabMAb <sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a> .

#### Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 49% PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	Y486

Isotype

IgG

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab32046 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		1/1000 - 1/10000. Detects a band of approximately 22 kDa (predicted molecular weight: 21 kDa).
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

### Application notes

Is unsuitable for Flow Cyt or IP.

## Target

### Function

Regulates a signal transduction pathway linking plasma membrane receptors to the assembly of focal adhesions and actin stress fibers. Involved in a microtubule-dependent signal that is required for the myosin contractile ring formation during cell cycle cytokinesis. Plays an essential role in cleavage furrow formation. Required for the apical junction formation of keratinocyte cell-cell adhesion. Serves as a target for the yopT cysteine peptidase from *Yersinia pestis*, vector of the plague, and *Yersinia pseudotuberculosis*, which causes gastrointestinal disorders. Stimulates PKN2 kinase activity. May be an activator of PLCE1. Activated by ARHGEF2, which promotes the exchange of GDP for GTP. Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly. The MEMO1-RHOA-DIAPH1 signaling pathway plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex. It controls the localization of APC and CLASP2 to the cell membrane, via the regulation of GSK3B activity. In turn, membrane-bound APC allows the localization of the MACF1 to the cell membrane, which is required for microtubule capture and stabilization.

### 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.

Phosphorylation by PRKG1 at Ser-188 inactivates RHOA signaling.

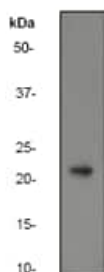
Ubiquitinated by the BCR(BACURD1) and BCR(BACURD2) E3 ubiquitin ligase complexes, leading to its degradation by the proteasome, thereby regulating the actin cytoskeleton and cell migration.

### Cellular localization

Cell membrane. Cytoplasm > cytoskeleton. Cleavage furrow. Cytoplasm > cell cortex. Midbody.

Localized to cell-cell contacts in calcium-treated keratinocytes (By similarity). Translocates to the equatorial region before furrow formation in a ECT2-dependent manner. Localizes to the equatorial cell cortex (at the site of the presumptive furrow) in early anaphase in a activated form and in a myosin- and actin-independent manner.

## Images

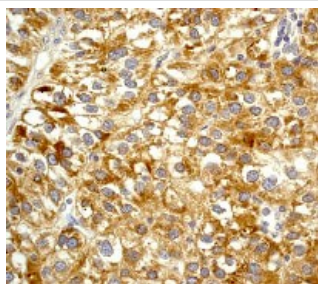


Western blot - Anti-Rho antibody [Y486] (ab32046)

Anti-Rho antibody [Y486] (ab32046) at 1/2000 dilution + PC12 cell lysate

**Predicted band size:** 21 kDa

**Observed band size:** 22 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Rho antibody [Y486] (ab32046)

Immunohistochemical analysis of paraffin-embedded human hepatocellular carcinoma using ab32046 at 1/100 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 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-Rho antibody [Y486] (ab32046)

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

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