

Rabbit RhoA Polyclonal Antibody | anti-RhoA antibody

Phospho-RhoA (Ser188) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31383	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Sheep (100%), Dog (100%)	Western Blot, Immunohistochemistry, ELISA

PRODUCT SYNONYMS

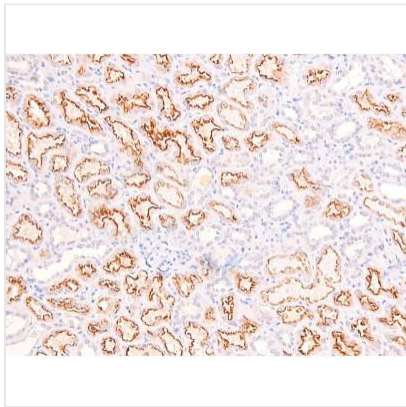
RhoA; Polyclonal Antibody; Phospho-RhoA (Ser188) Antibody; Aplysia ras related homolog 12; ARH12; ARHA; H 12; H12; Oncogene RHO H12; Ras homolog family member A; Ras homolog gene family member A; Rho A; Rho cDNA clone 12; RHO H12; RHO12; RHOA; RHOA_HUMAN; RHOH12; Small GTP binding protein Rho A; Transforming protein Rho A; Transforming protein RhoA; anti-RhoA antibody

PRODUCT SPECIFICATIONS

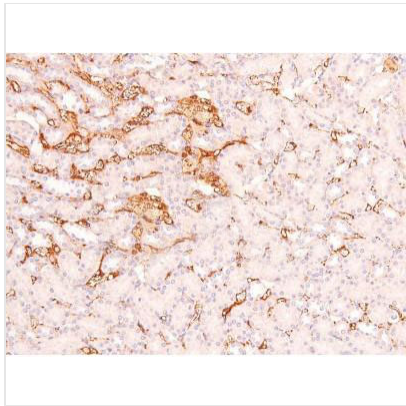
Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Sheep (100%), Dog (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-RhoA (Ser188) Antibody detects endogenous levels of RhoA only when phosphorylated at Ser188.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-RhoA antibody	WB (Western Blot), IHC (Immunohistochemistry), ELISA (Peptide ELISA)
Application Notes	WB: 1:1000-3000 IHC: 1:50-1:200 Peptide ELISA: 1:20,000-1:40,000
Immunogen	A synthesized peptide derived from human RhoA around the phosphorylation site of Ser188.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	(Microbial infection) Substrate for botulinum ADP-ribosyltransferase. (Microbial infection) 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. (Microbial infection) 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. (Microbial infection) Glycosylated at Tyr-34 by Phototribus asymbiotica toxin PAU_02230. Mono-O-GlcNAcylation by PAU_02230 inhibits downstream signaling by an impaired interaction with diverse regulator and effector proteins of Rho and leads to actin disassembly. Phosphorylation by PRKG1 at Ser-188 inactivates RHOA signaling. Phosphorylation by SLK at Ser-188 in response to AGTR2 activation (By similarity). Ubiquitinated by the BCR (KCTD13) and BCR (TNFAIP1) E3 ubiquitin ligase complexes, leading to its degradation by the proteasome, thereby regulating the actin cytoskeleton and synaptic transmission in neurons.

Subunit Structure	Interacts with ARHGEF28 (By similarity). Interacts (via GTP-bound form) with RIPOR1 (via N-terminus); this interaction links RHOA to STK24 and STK26 kinases. Interacts with RIPOR2 (via active GTP- or inactive GDP-bound forms) isoform 1 and isoform 2; these interactions are direct, block the loading of GTP to RHOA and decrease upon chemokine CCL19 stimulation in primary T lymphocytes. Binds PRKCL1, ROCK1 and ROCK2. Interacts with ARHGEF2, ARHGEF3, NET1 and RTKN. Interacts with PLCE1 and AKAP13. Interacts with DIAPH1. Interacts (in the constitutively activated, GTP-bound form) with DGKQ. Interacts with RACK1; enhances RHOA activation. Interacts with PKP4; the interaction is detected at the midbody. Interacts (GTP-bound form preferentially) with PKN2; the interaction stimulates autophosphorylation and phosphorylation of PKN2. Interacts with ARHGDIA; this interaction inactivates and stabilizes RHOA. Interacts with ARHGDIB. Interacts (GTP-bound form) with KCNA2 (via cytoplasmic N-terminal domain). (Microbial infection) Interacts with yopT from Yersinia pestis. (Microbial infection) Interacts with human respiratory syncytial virus (HRSV) protein F; this interaction facilitates virus-induced syncytium formation.
Similarity	The basic-rich region is essential for yopT recognition and cleavage.Belongs to the small GTPase superfamily. Rho family.
Subcellular Location	Cell membrane>Lipid-anchor>Cytoplasmic side. Cytoplasm>Cytoskeleton. Cleavage furrow. Cytoplasm>Cell cortex. Midbody. Cell projection>Lamellipodium. Cell projection>Dendrite. Note: 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 an activated form and in a myosin- and actin-independent manner.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

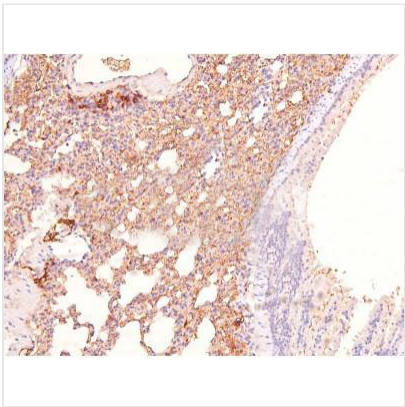
IMAGES



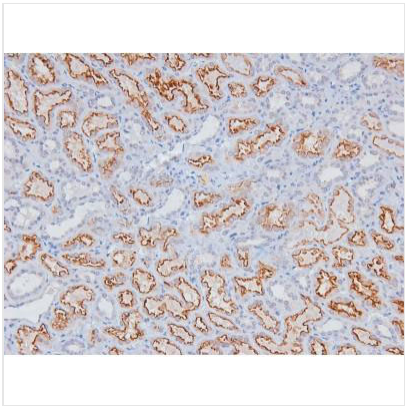
IHC (Immunohistochemistry)
At 1/200 staining Human kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



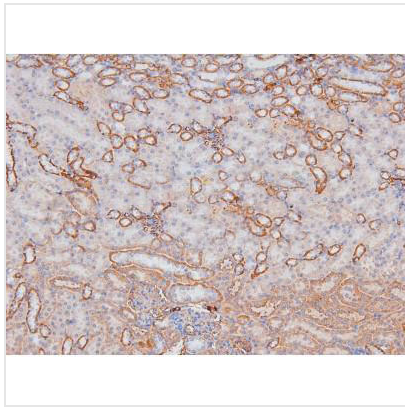
IHC (Immunohistochemistry)
At 1/200 staining Rat kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)
At 1/200 staining Mouse lung tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.

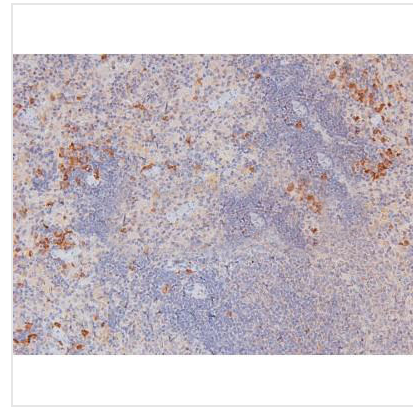


IHC (Immunohistochemistry)
At 1/200 staining Human kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/200 staining Mouse kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

Staining Rat spleen tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-RhoA antibody

Small GTPase which cycles between an active GTP-bound and an inactive GDP-bound state. Mainly associated with cytoskeleton organization, in active state binds to a variety of effector proteins to regulate cellular responses such as cytoskeletal dynamics, cell migration and cell cycle. 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. 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. Regulates KCNA2 potassium channel activity by reducing its location at the cell surface in response to CHRM1 activation; promotes KCNA2 endocytosis. May be an activator of PLCE1. In neurons, involved in the inhibition of the initial spine growth. Upon activation by CaMKII, modulates dendritic spine structural plasticity by relaying CaMKII transient activation to synapse-specific, long-term signaling (By similarity). (Microbial infection) Serves as a target for the yopT cysteine peptidase from *Yersinia pestis*, vector of the plague.

NCBI AND UNIPROT INFORMATION

NCBI GI #	47606458
NCBI GeneID	387
UniProt Accession #	P61586 ; P06749 ; Q53HM4 ; Q5U024 ; Q9UDJ0 ; Q9UEJ4
Molecular Weight	193
NCBI Official Full Name	Transforming protein RhoA
NCBI Official Synonym Full Names	ras homolog family member A
NCBI Official Symbol	RHOA
NCBI Official Synonym Symbols	ARHA; ARH12; RHO12; RHOH12
NCBI Protein Information	transforming protein RhoA; h12; oncogene RHO H12; rho cDNA clone 12; Aplysia ras-related homolog 12; small GTP binding protein RhoA; ras homolog gene family, member A
UniProt Protein Name	Transforming protein RhoA
UniProt Gene Name	RHOA
UniProt Synonym Gene Names	ARH12; ARHA; RHO12; h12

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/polyclonal/rhoa-antibody-western-blot-immunohistochemistry-peptide-elisa-elisa/31383>