

**Rho A Antibody**  
Rabbit mAb  
Catalog # AP90643

## Specification

---

### Rho A Antibody - Product Information

Application	WB, FC, ICC
Primary Accession	<a href="#">P61586</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
RHOA; ARH12; ARHA; RHO12; RHOH12;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	21768 Da

### Rho A Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Rho A
Description	Rho A is a small G protein of the Rho family. Regulates a signal transduction pathway linking plasma membrane receptors to the assembly of focal adhesions and actin stress fibers.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

### Rho A Antibody - Protein Information

**Name** RHOA ([HGNC:667](#))

**Synonyms** ARH12, ARHA, RHO12

#### Function

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 (PubMed:[23871831](http://www.uniprot.org/citations/23871831)). Regulates a signal transduction pathway linking plasma membrane receptors to the assembly of focal adhesions and actin stress fibers (PubMed:[31570889](http://www.uniprot.org/citations/31570889), PubMed:[8910519](http://www.uniprot.org/citations/8910519), PubMed:[9121475](http://www.uniprot.org/citations/9121475)). Involved in a

microtubule-dependent signal that is required for the myosin contractile ring formation during cell cycle cytokinesis (PubMed:<a href="http://www.uniprot.org/citations/12900402" target="\_blank">12900402</a>, PubMed:<a href="http://www.uniprot.org/citations/16236794" target="\_blank">16236794</a>). Plays an essential role in cleavage furrow formation. Required for the apical junction formation of keratinocyte cell-cell adhesion (PubMed:<a href="http://www.uniprot.org/citations/20974804" target="\_blank">20974804</a>, PubMed:<a href="http://www.uniprot.org/citations/23940119" target="\_blank">23940119</a>). Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly (PubMed:<a href="http://www.uniprot.org/citations/19934221" target="\_blank">19934221</a>). 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 (PubMed:<a href="http://www.uniprot.org/citations/20937854" target="\_blank">20937854</a>). Regulates KCNA2 potassium channel activity by reducing its location at the cell surface in response to CHRM1 activation; promotes KCNA2 endocytosis (PubMed:<a href="http://www.uniprot.org/citations/19403695" target="\_blank">19403695</a>, PubMed:<a href="http://www.uniprot.org/citations/9635436" target="\_blank">9635436</a>). Acts as an allosteric activator of guanine nucleotide exchange factor ECT2 by binding in its activated GTP-bound form to the PH domain of ECT2 which stimulates the release of PH inhibition and promotes the binding of substrate RHOA to the ECT2 catalytic center (PubMed:<a href="http://www.uniprot.org/citations/31888991" target="\_blank">31888991</a>). May be an activator of PLCE1 (PubMed:<a href="http://www.uniprot.org/citations/16103226" target="\_blank">16103226</a>). 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). Acts as a regulator of platelet alpha-granule release during activation and aggregation of platelets (By similarity).

#### Cellular Location

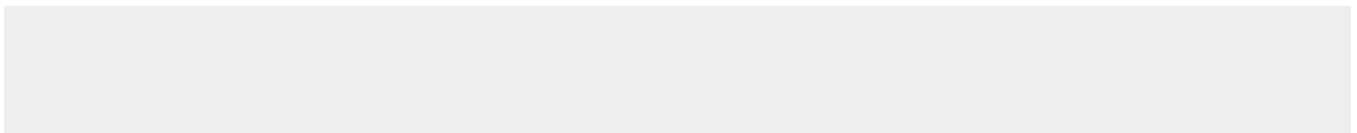
Cell membrane; Lipid-anchor; Cytoplasmic side. Cytoplasm, cytoskeleton. Cleavage furrow. Cytoplasm, cell cortex. Midbody. Cell projection, lamellipodium {ECO:0000250|UniProtKB:Q9QUI0}. Cell projection, dendrite {ECO:0000250|UniProtKB:Q9QUI0}. Nucleus Cytoplasm. Note=Localized to cell-cell contacts in 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. {ECO:0000250|UniProtKB:Q9QUI0}

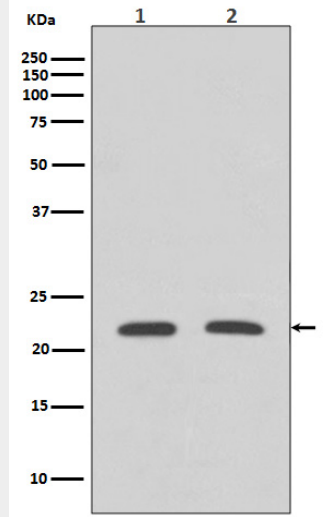
#### Rho A Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Rho A Antibody - Images





Western blot analysis of Rho A expression in (1) HeLa cell lysate; (2) NIH/3T3 cell lysate.