

RHOA Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP7757b**Specification**

RHOA Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [P61586](#)**RHOA Antibody (C-term) Blocking Peptide - Additional Information****Gene ID** 387**Other Names**

Transforming protein RhoA, Rho cDNA clone 12, h12, RHOA, ARH12, ARHA, RHO12

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP7757b](/products/AP7757b) was selected from the C-term region of human RHOA. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

RHOA Antibody (C-term) Blocking Peptide - 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: [8910519](http://www.uniprot.org/citations/8910519), PubMed: [9121475](http://www.uniprot.org/citations/9121475), PubMed: [31570889](http://www.uniprot.org/citations/31570889)). Involved in a microtubule-dependent signal that is required for the myosin contractile ring formation during cell

cycle cytokinesis (PubMed:16236794, PubMed:12900402). Plays an essential role in cleavage furrow formation. Required for the apical junction formation of keratinocyte cell-cell adhesion (PubMed:20974804, PubMed:23940119). Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly (PubMed:19934221). 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:20937854). Regulates KCNA2 potassium channel activity by reducing its location at the cell surface in response to CHRM1 activation; promotes KCNA2 endocytosis (PubMed:9635436, PubMed:19403695). 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:31888991). May be an activator of PLCE1 (PubMed:16103226). 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}

RHOA Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

RHOA Antibody (C-term) Blocking Peptide - Images

RHOA Antibody (C-term) Blocking Peptide - Background

RHOA 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.

RHOA Antibody (C-term) Blocking Peptide - References

Sims,S.M., J. Pharmacol. Exp. Ther. 327 (1), 178-186 (2008)Pu,Y.S., Anticancer Res. 28 (4B),

2039-2043 (2008) Bellizzi, A., Int. J. Mol. Med. 22 (1), 25-31 (2008)