

RHOA Antibody (C-term) Blocking Peptide

Synthetic peptide Catalog # BP7757b

Specification

RHOA Antibody (C-term) Blocking Peptide - Product Information

Primary Accession <u>P61586</u>

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 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

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)



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. Regulates a signal transduction pathway linking plasma membrane receptors to the assembly of focal adhesions and actin stress fibers (PubMed:<a href="http://www.uniprot.org/c itations/8910519"

target="_blank">8910519,

PubMed: <a href="http://www.uniprot.org/ci tations/9121475"

target="_blank">9121475,

PubMed:<a href="http://www.uniprot.org/ci tations/31570889"

target="_blank">31570889). 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/c itations/16236794"

target=" blank">16236794,

PubMed: <a href="http://www.uniprot.org/ci tations/12900402"

target="_blank">12900402). Plays an essential role in cleavage furrow formation. Required for the apical junction formation of keratinocyte cell-cell adhesion (PubMed:20974804, PubMed:<a href="http://www.uniprot.org/citations/23940119"

target=" blank">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 ERBB2dependent 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/c

target="_blank">20937854).

itations/20937854"

Regulates KCNA2 potassium channel



activity by reducing its location at the cell surface in response to CHRM1 activation; promotes KCNA2 endocytosis (PubMed:<a h ref="http://www.uniprot.org/citations/9635436" target="_blank">9635436, PubMed:<a href="http://www.uniprot.org/citations/19403695"

target="_blank">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:<a href="http://www.uniprot.org/citations/31888991"

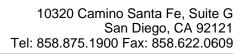
target="_blank">31888991). May be an activator of PLCE1 (PubMed:16103226). In neurons, involved in the inhibiton of the initial spine growth. Upon activation by CaMKII, modulates dendritic spine structural plasticity by relaying CaMKII transient activation to synapse-specific, long-term signaling (By 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}. 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