

Rabbit Rac1/2/3/CDC42 Polyclonal Antibody | anti-RAC1 antibody

Rac1/2/3/CDC42 Antibody

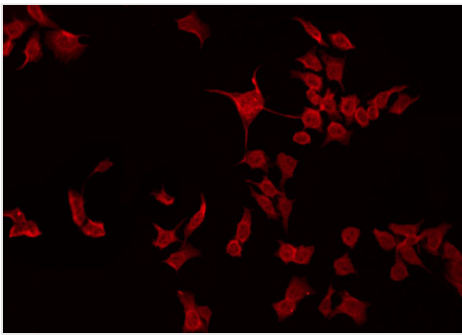
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA322608	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

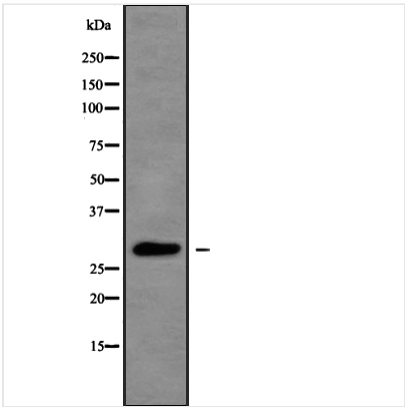
Rac1/2/3/CDC42; Polyclonal Antibody; Rac1/2/3/CDC42 Antibody; Cell migration inducing gene 5 protein; Cell migration-inducing gene 5 protein; MGC111543; MIG5; Migration inducing gene 5; Migration inducing protein 5; p21 Rac1; p21-Rac1; Rac 1; RAC1; RAC1_HUMAN; Ras like protein TC25; Ras related C3 botulinum toxin substrate 1 (rho family; small GTP binding protein Rac1); Ras-like protein TC25; Ras-related C3 botulinum toxin substrate 1; Rho family small GTP binding protein Rac1; TC 25; TC25; EN 7; EN-7; EN7; GX; HSPC 022; HSPC022; p21 Rac 2; p21 Rac2; p21-Rac2; p21Rac2; RAC 2; Rac2; RAC2_HUMAN; Ras related C3 botulinum toxin substrate 2 (rho family; small GTP binding protein Rac2); Ras related C3 botulinum toxin substrate 2; Ras related C3 botulinum toxin substrate 3 (rho family; small GTP binding protein Rac2); Ras related C3 botulinum toxin substrate 3; Ras-related C3 botulinum toxin substrate 2; Rho family small GTP binding protein Rac 2; Rho family small GTP binding protein Rac2; Small G protein; OTTMUSP00000004488; p21 Rac3; p21-Rac3; Rac1B; RAC3; RAC3_HUMAN; RAS related C3 botulinum substrate 3; Ras related C3 botulinum toxin substrate 3 (rho family small GTP binding protein Rac3); small GTP binding protein Rac3); Ras-related C3 botulinum toxin substrate 3; Rho family small GTP binding protein Rac3; RP23-84C12.18; CDC42; CDC42_HUMAN; CDC42Hs; Cell division control protein 42 homolog; Cell division cycle 42 (GTP binding protein 25kDa); Cell division cycle 42; dJ224A6.1.1 (cell division cycle 42 (GTP-binding protein; 25kD)); dJ224A6.1.2 (cell division cycle 42 (GTP-binding protein; G25K; G25K GTP-binding protein; Growth regulating protein; GTP binding protein 25kDa; Small GTP binding protein CDC42; TKS; anti-RAC1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Rac1/2/3/CDC42 antibody detects endogenous levels of total Rac1/2/3/CDC42
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	192
Applicable Applications for anti-RAC1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Rac1/2/3/CDC42
Subcellular Location	Cell Membrane. Melanosome. Inner surface of plasma membrane possibly with attachment requiring prenylation of the C-terminal cysteine (By similarity). Identified by mass spectrometry in melanosome fractions from stage I to stage IV.
Tissue Specificity	Isoform B is predominantly identified in skin and epithelial tissues from the intestinal tract. Its expression is elevated in colorectal tumors at various stages of neoplastic progression, as compared to their respective adjacent tissues.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IF (Immunofluorescence)
AAA322608 staining NIH-3T3 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of Rac1/2/3/CDC42 using HepG2 whole cell lysates

ADDITIONAL INFORMATION

Related Product Information for anti-RAC1 antibody	Function: Plasma membrane-associated small GTPase which cycles between active GTP-bound and inactive GDP-bound states. In its active state, binds to a variety of effector proteins to regulate cellular responses such as secretory processes, phagocytosis of apoptotic cells, epithelial cell polarization and growth-factor induced formation of membrane ruffles. Rac1 p21/rho GDI heterodimer is the active component of the cytosolic factor sigma 1, which is involved in stimulation of the NADPH oxidase activity in macrophages. Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly. Stimulates PKN2 kinase activity. In concert with RAB7A, plays a role in regulating the formation of RBs (ruffled borders) in osteoclasts. In glioma cells, promotes cell migration and invasion. In podocytes, promotes nuclear shuttling of NR3C2; this modulation is required for a proper kidney functioning. Required for atypical chemokine receptor ACKR2-induced LIMK1-PAK1-dependent phosphorylation of cofilin (CFL1) and for up-regulation of ACKR2 from endosomal compartment to cell membrane, increasing its efficiency in chemokine uptake and degradation. In synapses, seems to mediate the regulation of F-actin cluster formation performed by SHANK3. Subunit Structure: Interacts with NISCH. Interacts with PIP5K1A. Interacts with the GTP-bound form of RAB7A. Interacts with SRGAP2. Interacts with CYFIP1/SRA-1. Interacts with PLXNB3. Interacts with ARHGDIA; the interaction is induced by SEMA5A, mediated through PLXNB3 and inactivates and stabilizes RAC1. Interacts (GTP-bound form preferentially) with PKN2 (via the REM repeats); the interaction stimulates autophosphorylation and phosphorylation of PKN2. Interacts with the GEF proteins PREX1, RASGRF2, FARP1, FARP2, DOCK1, DOCK2 and DOCK7, which promote the exchange between GDP and GTP, and therefore activate it. Interacts with PARD6A, PARD6B and PARD6G in a GTP-dependent manner. Part of a quaternary complex containing PARD3, some PARD6 protein (PARD6A, PARD6B or PARD6G) and some atypical PKC protein (PRKCI or PRKCZ), which plays a central role in epithelial cell polarization. Found in a trimeric complex composed of DOCK1 and ELMO1, which plays a central role in phagocytosis of apoptotic cells. Interacts with RALBP1 via its effector domain. Interacts with PLXNB1. Probably found in a ternary complex composed of DSCAM, PAK1 and RAC1. Interacts with DSCAM; the interaction requires PAK1. Part of a complex with MAP2K3, MAP3K3, CCM2 and DEF6. Interacts with BAIAP2, BAIAP2L1 and DEF6. Interacts with Y.pseudotuberculosis YPKA and PLCB2. Interacts with NOXA1. Interacts with ARHGEF2. Interacts with TBC1D2. Interacts with UNKL. Interacts with USP6. Interacts with SPATA13. Interacts with ARHGEF16; mediates activation of RAC1 by EPHA2. Interacts with ITGB4. Interacts with S100A8 and calprotectin (S100A8/9). Interacts with PACSIN2. Interacts with ITGB1BP1. Interacts (when active) with PPP5C (via TPR repeats); activates PPP5C phosphatase activity and translocates PPP5C to the cell membrane. Interacts with RAPH1 (via Ras associating and PH domains) (PubMed:18499456). Interacts with MTSS1L (via IMD domain); this interaction may be important to potentiate PDGF-induced RAC1 activation (PubMed:20875796). Post-translational Modifications: (Microbial infection) AMPylation at Tyr-32 and Thr-35 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.GTP-bound active form is ubiquitinated by HACE1, leading to its degradation by the proteasome. (Microbial infection) Glycosylated at Tyr-32 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 Rac and leads to actin disassembly. Similarity: The effector region mediates interaction with DEF6. Belongs to the small GTPase superfamily. Rho family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	9845511
NCBI GeneID	5879
NCBI Accession #	NP_008839.2
NCBI GenBank Nucleotide #	NM_006908.4
UniProt Accession #	P63000; O95501; P15154; Q3Y4D3; Q5JAA8; Q9BTB4
Molecular Weight	Observed: 28 kDa Predicted: 22 kDa
NCBI Official Full Name	ras-related C3 botulinum toxin substrate 1 isoform Rac1
NCBI Official Synonym Full Names	Rac family small GTPase 1
NCBI Official Symbol	RAC1

NCBI Official Synonym Symbols	MIG5; MRD48; Rac-1; TC-25; p21-Rac1
NCBI Protein Information	ras-related C3 botulinum toxin substrate 1
UniProt Protein Name	Ras-related C3 botulinum toxin substrate 1
UniProt Gene Name	RAC1
UniProt Synonym Gene Names	TC25

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://www.aaabiotech.com/polyclonal/rac1-2-3-cdc42-antibody-immunocytochemistry-immunofluorescence-western-blot-elisa/322608>