

# Rac1/2/3/CDC42 Rabbit pAb

CatalogNo: YT3954 **Orthogonal Validated** 

## Key Features

### Host Species

- Rabbit

### Reactivity

- Human, Mouse, Rat

### Applications

- WB, IHC, IF, ELISA

### MW

- 26kD (Observed)

### Isotype

- IgG

## Recommended Dilution Ratios

**WB 1:500-1:2000****IHC 1:100-1:300****ELISA 1:20000****IF 1:50-200**

## Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

## Basic Information

**Clonality** Polyclonal

## Immunogen Information

**Immunogen** The antiserum was produced against synthesized peptide derived from human Rac1/CDC42. AA range:38-87**Specificity** Rac1/2/3/CDC42 Polyclonal Antibody detects endogenous levels of Rac1/2/3/CDC42 protein.

## | Target Information

**Gene name** RAC3

**Protein Name** Ras-related C3 botulinum toxin substrate 3

Organism	Gene ID	UniProt ID
Human	<a href="#">5879</a> ; <a href="#">5880</a> ; <a href="#">5881</a> ; <a href="#">998</a> ;	<a href="#">P63000</a> ; <a href="#">P15153</a> ; <a href="#">P60763</a> ; <a href="#">P60953</a> ;
Mouse	<a href="#">19353</a> ; <a href="#">19354</a> ; <a href="#">170758</a> ; <a href="#">12540</a> ;	
Rat	<a href="#">363875</a> ; <a href="#">64465</a> ;	<a href="#">Q6RUV5</a> ; <a href="#">Q8CFN2</a> ;

### Cellular Localization

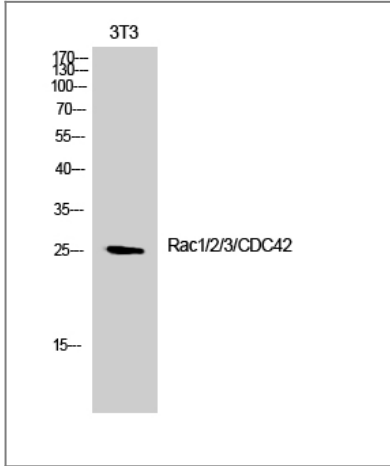
Cell membrane ; Lipid-anchor ; Cytoplasmic side . Melanosome . Cytoplasm . Cell projection, lamellipodium . Cell projection, dendrite . Cell junction, synapse . Nucleus . Inner surface of plasma membrane possibly with attachment requiring prenylation of the C-terminal cysteine (PubMed:1903399). Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065). Found in the ruffled border (a late endosomal-like compartment in the plasma membrane) of bone-resorbing osteoclasts. Localizes to the lamellipodium in a SH3RF1-dependent manner (By similarity). In macrophages, cytoplasmic location increases upon CSF1 stimulation (By similarity). Activation by GTP-binding promotes nuclear localization (PubMed:12551911). .

**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.

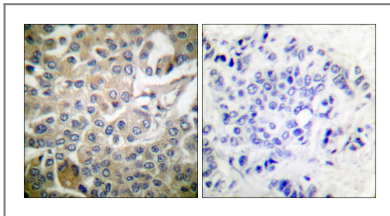
### Function

Domain:The effector region mediates interaction with DEF6.,enzyme regulation:Regulated by guanine nucleotide exchange factors (GEFs) which promote the exchange of bound GDP for free GTP, GTPase activating proteins (GAPs) which increase the GTP hydrolysis activity, and GDP dissociation inhibitors which inhibit the dissociation of the nucleotide from the GTPase.,Function:Isoform B has an accelerated GEF-independent GDP/GTP exchange and an impaired GTP hydrolysis, which is restored partially by GTPase-activating proteins. It is able to bind to the GTPase-binding domain of PAK but not full-length PAK in a GTP-dependent manner, suggesting that the insertion does not completely abolish effector interaction.,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.,similarity:Belongs to the small GTPase superfamily. Rho family.,subcellular location: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.,subunit:Interacts with the GEF proteins PREX1, RASGRF2, 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 PRK CZ), 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. Part of a complex with MAP2K3, MAP3K3, CCM2 and DEF6. Interacts with BAIAP2, BAIAP2L1, CYFIP1/SRA-1 and DEF6. Interacts with Y.pseudotuberculosis YPKA and PLCB2. Interacts with NOXA1. Interacts with ARHGEF2. Interacts with NISCH.,tissue specificity:Isoform B is predominantly identified in skin and epithelial tissues from the intestinal tract. The expression of isoform B is elevated in colorectal tumors at various stages of neoplastic progression, as compared to their respective adjacent tissues.,

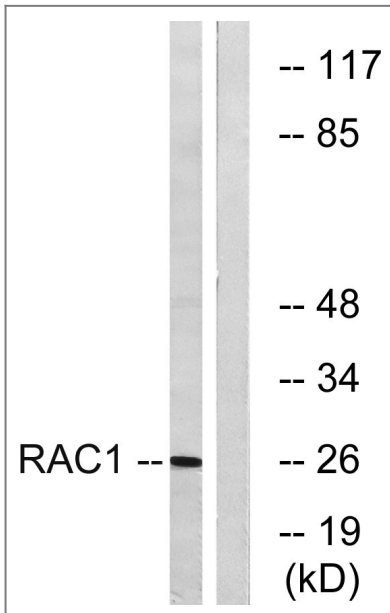
## Validation Data



Western Blot analysis of 3T3 cells using Rac1/2/3/CDC42 Polyclonal Antibody



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using Rac1/CDC42 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from NIH/3T3 cells, treated with EGF 200ng/ml 30', using Rac1/CDC42 Antibody. The lane on the right is blocked with the synthesized peptide.

## Contact information

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Please scan the QR code  
to access additional  
product information:  
**Rac1/2/3/CDC42**  
**Rabbit pAb**

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