Product name:	Rac1/2/3/CDC42 Rabbit Polyclonal Antibody
Cat number:	ABN16822
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human Rac1/CDC42. AA range:38-87
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:10000-1:20000
Molecular Weight:	26kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

The protein encoded by this gene is a GTPase which belongs to the RAS superfamily of small GTP-binding proteins. Members of this superfamily appear to regulate a diverse array of cellular events, including the control of cell growth, cytoskeletal reorganization, and the activation of protein kinases. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009],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 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. 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.,