Best Tools for immunology Research

Rac1/2/3/CDC42 Polyclonal Antibody

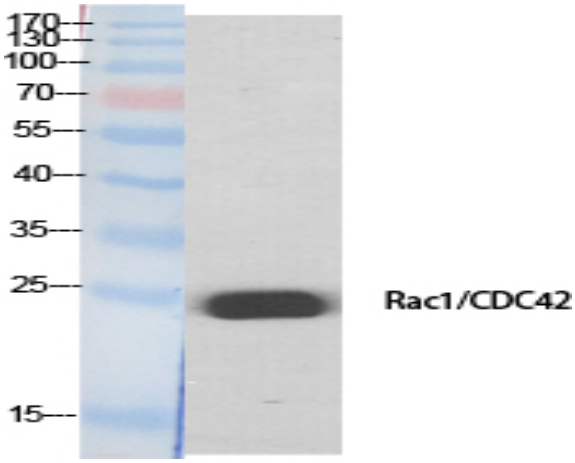
Catalog No :	YT3954
Reactivity :	Human;Mouse;Rat
Applications :	WB;IHC;IF;ELISA
Target :	Rac1/2/3/CDC42
Fields :	>>MAPK signaling pathway;>>Ras signaling pathway;>>Rap1 signaling pathway;>>cAMP signaling pathway;>>Chemokine signaling pathway;>>Sphingolipid signaling pathway;>>Phagosome;>>PI3K-Akt signaling pathway;>>Wnt signaling pathway;>>Axon guidance;>>VEGF signaling pathway;>>Osteoclast differentiation;>>Focal adhesion;>>Adherens junction;>>Tight junction;>>Neutrophil extracellular trap formation;>>Toll-like receptor signaling pathway;>>Natural killer cell mediated cytotoxicity;>>B cell receptor signaling pathway;>>Fc epsilon RI signaling pathway;>>Fc gamma R-mediated phagocytosis;>>Leukocyte transendothelial migration;>>Neurotrophin signaling pathway;>>Regulation of actin cytoskeleton;>>Non-alcoholic fatty liver disease;>>AGE-RAGE signaling pathway in diabetic complications;>>Pancreatic secretion;>>Amyotrophic lateral sclerosis;>>Prion disease;>>Pathways of neurodegeneration - multiple diseases;>>Bacterial invasion of epithelial cells;>>Epithelial cell signaling in Helicobacter pylori infect
Gene Name :	RAC3
Protein Name :	Ras-related C3 botulinum toxin substrate 3
Human Gene Id :	5879/5880/5881/998
Human Swiss Prot No :	P63000/P15153/P60763/P60953
Mouse Gene Id :	19353/19354/170758/12540
Rat Gene Id :	363875/64465
Rat Swiss Prot No :	Q6RUV5/Q8CFN2
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.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:20000.. IF 1:50-200
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	26kD
Cell Pathway :	MAPK_ERK_Growth;MAPK_G_Protein;Chemokine;WNT;WNT-T CELLAxon guidance;VEGF;Focal adhesion;Adherens_Junction;Toll_Like;Natural killer cell mediated cytotoxicity;B_Cell_Antigen;Fc epsilon RI;Fc gamma R-m
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],
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 regulat
Subcellular Location :	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

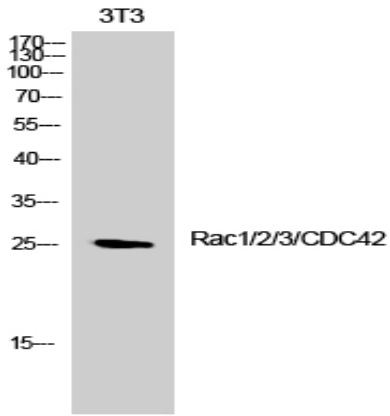
prenylation of the C-terminal cysteine (PubMed:1903399). Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065). Found in the ruffled border (a late endosomal-like compartment in the plasma membrane) of bone-resorbing osteoclasts. Localizes to the lamellipodium 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). .

Expression : 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.

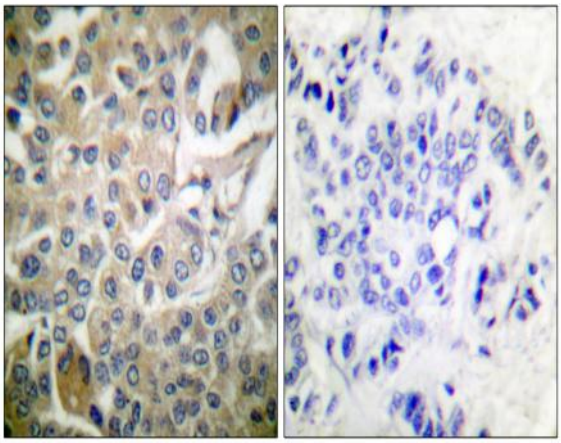
Products Images



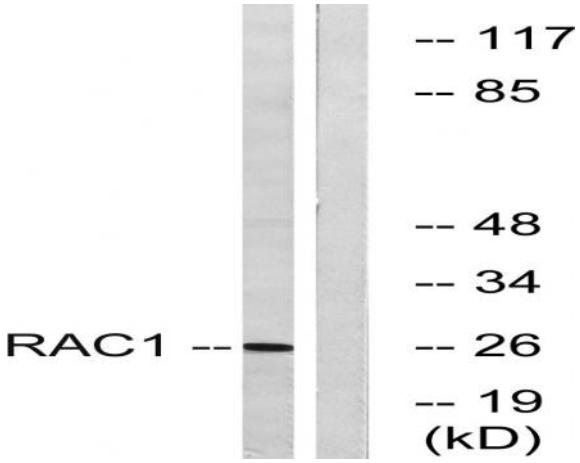
Western Blot analysis of various cells using Rac1/2/3/CDC42 Polyclonal Antibody



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.