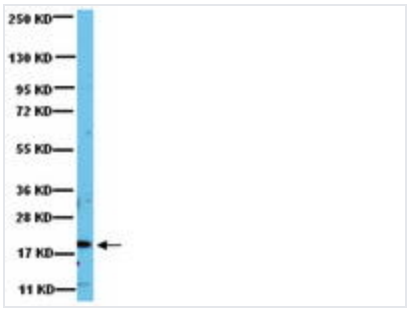
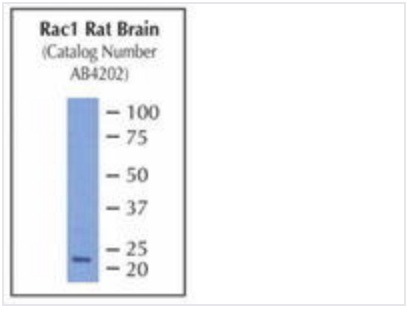
RAC1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Rac1, Polyclonal Antibody
Full Product Name	Rac1 (Ras-related C3 Botulinum Toxin Substrate 1 (Rho Family, Small GTP binding protein Rac1), Cell migration-inducing gene 5 protein, MGC111543, MIG5, p21-Rac1, Ras-like Protein TC25, Ras-related C3 Botulinum Toxin Substrate 1, TC-25) (MaxLight 490)
Product Gene Name	anti-Rac1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight490.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human Rac1. Does not cross-react with Cdc42. Species Crossreactivity: mouse, rat.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight490 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	192
OMIM	602048
3D Structure	ModBase 3D Structure for P63000
Immunogen	Synthetic peptide corresponding to aa130-141 of human Rac1 (KEKKLTPITYPQ-C). Cellular Localization: Cell membrane; Lipid-anchor; Cytoplasmic side.
Conjugate	MaxLight490
Note	Preservative Free
Product Categories/Family for anti-Rac1 antibody	Antibodies; GTPase; Rab; Ras; Rho Proteins
Applications Tested/Suitable for anti-Rac1 antibody	Western Blot (WB)
Application Notes for anti-Rac1 antibody	WB: 1:500-1:1000 Applications are based on unconjugated antibody.
Related Product Information for anti-Rac1 antibody	MBS6496414 is an antibody targeting Rac1. Also known as Rac1 (Ras-related C3 Botulinum Toxin Substrate 1 (Rho Family, Small GTP binding protein Rac1), Cell migration-inducing gene 5 protein, MGC111543, MIG5, p21-Rac1, Ras-like Protein TC25, Ras-related C3 Botulinum Toxin Substrate 1, TC-25) (MaxLight 490). Reactive in Human, Mouse, Rat. Host: Rabbit.
Other Notes	Small volumes of anti-Rac1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-Rac1 antibody
Western Blot Analysis: L6 lysate was resolved by electrophoresis, transferred to PVDF membrane and probed with anti-RAC1 (1:500 dilution of this lot). Proteins were visualized using a donkey anti-rabbit secondary antibody conjugated to HRP and a chemiluminescence detection system. Arrow indicates protein RAC1 (~21kD).



Western Blot (WB) of anti-Rac1 antibody
Western Blot Analysis: Rat brain lysate with a previous lot of rabbit anti-Rac1. Rac1 has a molecular weight of ~21kD.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Rac1. It may not necessarily be applicable to this product.

NCBI GI #	51702787
NCBI GeneID	5879
NCBI Accession #	P63000.1
UniProt Primary Accession #	P63000
UniProt Secondary Accession #	O95501; P15154; Q3Y4D3; Q5JAA8; Q9BTB4
UniProt Related Accession #	P63000; AAB22206
GenBank Nucleotide #	NM_006908.4
NCBI Official Full Name	Ras-related C3 botulinum toxin substrate 1
NCBI Official Synonym Full Names	ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)
NCBI Official Symbol	RAC1
NCBI Official Synonym Symbols	MIG5; Rac-1; TC-25; p21-Rac1
UniProt Protein Name	Ras-related C3 botulinum toxin substrate 1
UniProt Synonym Protein Names	Cell migration-inducing gene 5 protein; Ras-like protein TC25; p21-Rac1
Protein Family	Rac-like GTP-binding protein
UniProt Gene Name	RAC1
UniProt Synonym Gene Names	TC25
UniProt Entry Name	RAC1_HUMAN
NCBI Protein Information	ras-related C3 botulinum toxin substrate 1; ras-like protein TC25; cell migration-inducing gene 5 protein
NCBI Summary for Rac1	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]

UniProt Comments for Rac1	RAC1: a plasma membrane-associated member of the Rho-GTPase family. Plays a key role in cytoskeletal reorganization, membrane trafficking, transcriptional regulation and cell growth and development. GTP binding stimulates its activity. Phosphorylation by Akt may inhibit GTP binding of Rac1, therefore attenuating the downstream signal transduction pathway. Found in a trimeric complex composed of DOCK1 and ELMO1, which plays a central role in phagocytosis of apoptotic cells. Two alternatively spliced isoforms have been described. Protein type: Motility/polarity/chemotaxis; G protein; G protein, monomeric, Rho; G protein, monomeric Chromosomal Location of Human Ortholog: 7p22 Cellular Component: extrinsic to plasma membrane; Golgi membrane; focal adhesion; membrane; lamellipodium; cytoplasm; plasma membrane; melanosome; actin filament; trans-Golgi network; cytosol; phagocytic cup Molecular Function: GTPase activity; protein binding; enzyme binding; GTP binding; GTP-dependent protein binding; Rho GDP-dissociation inhibitor binding; thioesterase binding; protein kinase binding; Rab GTPase binding Biological Process: viral reproduction; nerve growth factor receptor signaling pathway; metabolic process; positive regulation of apoptosis; cell motility involved in cell locomotion; regulation of cell migration; small GTPase mediated signal transduction; positive regulation of stress fiber formation; cell adhesion; bone resorption; platelet activation; anatomical structure morphogenesis; mast cell chemotaxis; dendrite morphogenesis; positive regulation of Rho protein signal transduction; regulation of defense response to virus by virus; negative regulation of interleukin-23 production; T cell costimulation; cerebral cortex radially oriented cell migration; actin cytoskeleton organization and biogenesis; axon guidance; cell-matrix adhesion; localization within membrane; positive regulation of focal adhesion formation; actin filament polymerization; response to wounding; ephrin receptor signaling pathway; inflammatory response; regulation of hydrogen peroxide metabolic process; lamellipodium biogenesis; embryonic olfactory bulb interneuron precursor migration; intercellular junction assembly and maintenance; Wnt receptor signaling pathway, planar cell polarity pathway; positive regulation of phosphoinositide 3-kinase activity; engulfment of apoptotic cell; cell proliferation; G-protein coupled receptor protein signaling pathway; hyperosmotic response; positive regulation of actin filament polymerization; organization of an anatomical structure; auditory receptor cell morphogenesis; ruffle organization and biogenesis; innate immune response; negative regulation of receptor-mediated endocytosis; positive regulation of protein amino acid phosphorylation; vascular endothelial growth factor receptor signaling pathway; blood coagulation; cell motility; positive regulation of DNA replication
Research Articles on Rac1	**1.** Invasion of host cells, which occurs at a low frequency, does not seem linked to Rac1 activation by Vibrio parahaemolyticus VopC, but instead appears to require CDC42.
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