

Anti-RACK1 Picoband Antibody

Catalog # ABO11934

Product Information

Application	WB
Primary Accession	P63244
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Receptor of activated protein C kinase 1(RACK1) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	10399
Other Names	Receptor of activated protein C kinase 1, Cell proliferation-inducing gene 21 protein, Guanine nucleotide-binding protein subunit beta-2-like 1, Guanine nucleotide-binding protein subunit beta-like protein 12.3, Human lung cancer oncogene 7 protein, HLC-7, Receptor for activated C kinase, Receptor of activated protein C kinase 1, N-terminally processed, Guanine nucleotide-binding protein subunit beta-2-like 1, N-terminally processed, RACK1 (HGNC:4399), GNB2L1
Calculated MW	35077
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
Subcellular Localization	Cell membrane; Peripheral membrane protein. Cytoplasm. Cytoplasm, perinuclear region. Cytoplasm, cytoskeleton. Nucleus. Perikaryon . Cell projection, dendrite . Cell projection, phagocytic cup. Recruited to the plasma membrane through interaction with KRT1 which binds to membrane-bound ITGB1. Also associated with the membrane in oncogene-transformed cells. PKC activation induces translocation from the perinuclear region to the cell periphery. In the brain, detected mainly in cell bodies and dendrites with little expression in axonal fibers or nuclei. Localized to phagocytic cups following infection by Y.pestis.
Tissue Specificity	In the liver, expressed at higher levels in activated hepatic stellate cells than in hepatocytes or Kupffer cells. Up-regulated in hepatocellular carcinomas and in the adjacent non-tumor liver tissue. .
Source	Eukaryota

Protein Name	Receptor of activated protein C kinase 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	E.coli-derived human RACK1 recombinant protein (Position: T2-R317). Human RACK1 shares 100% amino acid (aa) sequence identity with both mouse and rat RACK1.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20 °C for one year. After r ° Constitution, at 4 °C for one month. It ° Can also be aliquotted and stored frozen at -20 °C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the WD repeat G protein beta family.

Protein Information

Name	RACK1 (HGNC:4399)
Synonyms	GNB2L1
Function	Scaffolding protein involved in the recruitment, assembly and/or regulation of a variety of signaling molecules. Interacts with a wide variety of proteins and plays a role in many cellular processes. Component of the 40S ribosomal subunit involved in translational repression (PubMed:23636399). Involved in the initiation of the ribosome quality control (RQC), a pathway that takes place when a ribosome has stalled during translation, by promoting ubiquitination of a subset of 40S ribosomal subunits (PubMed:28132843). Binds to and stabilizes activated protein kinase C (PKC), increasing PKC-mediated phosphorylation. May recruit activated PKC to the ribosome, leading to phosphorylation of EIF6. Inhibits the activity of SRC kinases including SRC, LCK and YES1. Inhibits cell growth by prolonging the G0/G1 phase of the cell cycle. Enhances phosphorylation of BMAL1 by PRKCA and inhibits transcriptional activity of the BMAL1-CLOCK heterodimer. Facilitates ligand-independent nuclear translocation of AR following PKC activation, represses AR transactivation activity and is required for phosphorylation of AR by SRC. Modulates IGF1R-dependent integrin signaling and promotes cell spreading and contact with the extracellular matrix. Involved in PKC-dependent translocation of ADAM12 to the cell membrane. Promotes the ubiquitination and proteasome- mediated degradation of proteins such as CLEC1B and HIF1A. Required for VANGL2 membrane localization, inhibits Wnt signaling, and regulates cellular polarization and oriented cell division during gastrulation. Required for PTK2/FAK1 phosphorylation and dephosphorylation. Regulates internalization of the muscarinic receptor CHRM2. Promotes apoptosis by increasing oligomerization of BAX and disrupting the interaction of BAX with the anti-apoptotic factor BCL2L. Inhibits TRPM6 channel activity. Regulates cell surface expression of some GPCRs such as TBXA2R. Plays a role in regulation of FLT1-mediated cell migration. Involved in the transport of ABCB4 from the Golgi to the apical bile canalicular membrane (PubMed:19674157). Promotes migration of breast carcinoma cells by binding to and activating RHOA (PubMed:20499158). Acts as an adapter for the dephosphorylation and inactivation of AKT1 by promoting recruitment of PP2A phosphatase to AKT1 (By similarity).
Cellular Location	Cell membrane; Peripheral membrane protein. Cytoplasm. Cytoplasm, perinuclear region. Nucleus. Perikaryon {ECO:0000250 UniProtKB:P68040}.

Cell projection, dendrite {ECO:0000250|UniProtKB:P68040}. Cell projection, phagocytic cup. Note=Recruited to the plasma membrane through interaction with KRT1 which binds to membrane-bound ITGB1 (PubMed:17956333). Also associated with the membrane in oncogene- transformed cells (PubMed:11884618). PKC activation induces translocation from the perinuclear region to the cell periphery (PubMed:11279199). In the brain, detected mainly in cell bodies and dendrites with little expression in axonal fibers or nuclei (By similarity). Localized to phagocytic cups following infection by Y.pestis (PubMed:21347310). {ECO:0000250|UniProtKB:P68040, ECO:0000269|PubMed:11279199, ECO:0000269|PubMed:11884618, ECO:0000269|PubMed:17956333, ECO:0000269|PubMed:21347310}

Tissue Location

In the liver, expressed at higher levels in activated hepatic stellate cells than in hepatocytes or Kupffer cells Up-regulated in hepatocellular carcinomas and in the adjacent non-tumor liver tissue.

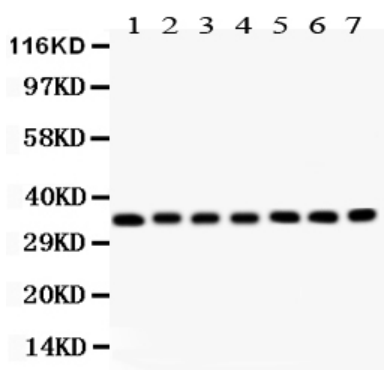
Background

Guanine nucleotide-binding protein subunit beta-2-like 1, also known as RACK1 is a 32kDa protein that in humans is encoded by the GNB2L1 gene. It is mapped to 5q35.3. GNB2L1 is a major component of translating ribosomes, which harbor significant amounts of PKC. This gene can provide a physical and functional link between PKC signaling and ribosome activation. GNB2L1 is also a mediator of agonist-induced Ca(2+) release. What Ca^{2+} more, GNB2L1 is an essential component of an oxygen-independent mechanism for regulating HIF1A stability. Overexpression of GNB2L1 and PKC-alpha suppressed CLOCK-BMAL1 transcriptional activity, and GNB2L1 stimulated phosphorylation of BMAL1 by PKC-alpha in vitro.

Images



Anti- RACK1 antibody, ABO11934, Western blotting
lanes: Anti RACK1 (ABO11934) at 0.5ug/ml
WB: Recombinant Human RACK1 Protein 0.5ng
Predicted bind size: 35KD
Observed bind size: 35KD



Anti- RACK1 antibody, ABO11934, Western blotting
lanes: Anti RACK1 (ABO11934) at 0.5ug/ml
Lane 1: Mouse Liver Tissue Lysate at 50ug
Lane 2: Rat Spleen Tissue Lysate at 50ug
Lane 3: Mouse Spleen Tissue Lysate at 50ug
Lane 4: SMMC Whole Cell Lysate at 40ug
Lane 5: HEPG2 Whole Cell Lysate at 40ug
Lane 6: HEPA Whole Cell Lysate at 40ug
Lane 7: RH35 Whole Cell Lysate at 40ug
Predicted bind size: 35KD
Observed bind size: 35KD