

RACK1 Antibody

Rabbit mAb

Catalog # AP91978

Product Information

Application	WB, IHC, FC
Primary Accession	P63244
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	H12.3; HLC-7; PIG21; RACK1; Gnb2-rs1;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	35077

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200 FC 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human RACK1
Description	Seems to bind protein kinase C acting as an intracellular receptor to anchor the activated PKC to the cytoskeleton. May be involved in up-regulation of the activity of kinases such as PKC via binding to KRT1.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

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).

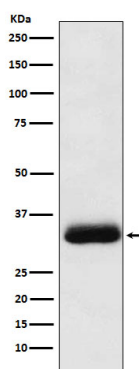
Cellular Location

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.

Images



Western blot analysis of RACK1 expression in HeLa cell lysate.

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