

**RACK1 Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV10513****Specification**

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**RACK1 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P63244</a>
Reactivity	Human, Mouse, Rat, Pig, Chicken, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	35077

**RACK1 Antibody - Additional Information****Gene ID** 10399

Application & Usage	Western blotting (0.5-4 µg/ml). However, the optimal concentrations should be determined individually. The antibody detects 32-36 kDa RACK1
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**Other Names**

RACK 1 , Receptor for activated C kinase , PIG21 , HLC7, Gnb2rs1 , Gnb2rs1

**Target/Specificity**

RACK1

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

100 µg (0.5 mg/ml) affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 0.5% BSA, and 0.01% thimerosal.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

RACK1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## RACK1 Antibody - 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:<a href="http://www.uniprot.org/citations/23636399" target="\_blank">23636399</a>). 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:<a href="http://www.uniprot.org/citations/28132843" target="\_blank">28132843</a>). 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:<a href="http://www.uniprot.org/citations/19674157" target="\_blank">19674157</a>). Promotes migration of breast carcinoma cells by binding to and activating RHOA (PubMed:<a href="http://www.uniprot.org/citations/20499158" target="\_blank">20499158</a>). 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.

## **RACK1 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## **RACK1 Antibody - Images**

## **RACK1 Antibody - Background**

RACK1 (receptor for activated C kinase 1) was identified through its binding to various PKC isoforms. Its main function is to recruit PKC and various other proteins to specific location to form multiprotein complexes, mediating various signal pathways.