

Product datasheet for **SC116322**

RACK1 (NM_006098) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: RACK1 (NM_006098) Human Untagged Clone
Tag: Tag Free
Symbol: RACK1
Synonyms: Gnb2-rs1; GNB2L1; H12.3; HLC-7; PIG21
Mammalian Cell Selection: None
Vector: [pCMV6-XL5](#)
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene ORF sequence for NM_006098 edited
 GAATTCGGCACGAGGGCAAGGCGGCGGCAGGAGAGGTTGTGGTGTAGTTTCTCTAAGCC
 ATCCAGTGCCATCCTCGTCGCTGCAGCGACACACGCTCTCGCCGCCCATGACTGAGCA
 GATGACCCTTCGTGGCACCTCAAGGGCCACAACGGCTGGGTAACCCAGATCGCTACTAC
 CCCGCAGTTCGCGACATGATCCTCTCCGCTCTCGAGATAAGACCATCATCATGTGGAA
 ACTGACCAGGGATGAGACCAACTATGGAATCCACAGCGTGTCTGCGGGGTCACTCCCA
 CTTTGTAGTGATGTGGTTATCTCCTCAGATGGCCAGTTTGCCCTCTCAGGCTCCTGGGA
 TGGAACCTGCGCTCTGGGATCTCACAACGGGACCACCACGAGGGGATTTGTGGGCCA
 TACCAAGGATGTGCTGAGTGTGGCCTTCTCCTCTGACAACGGCAGATTGTCTTGGATC
 TCGAGATAAAACCATCAAGCTATGGAATACCCTGGGTGTGTGCAAATACACTGTCCAGGA
 TGAGAGCCACTCAGAGTGGGTGTCTTGTGTCCGCTTCTCGCCCAACAGCAGCAACCCTAT
 CATCGTCTCCTGTGGCTGGGACAAGCTGGTCAAGGTATGGAACCTGGCTAACTGCAAGCT
 GAAGACCAACCACATTGGCCACACAGGCTATCTGAACACGGTGACTGTCTCTCCAGATGG
 ATCCCTCTGTGCTTCTGGAGGCAAGGATGGCCAGGCCATGTTATGGGATCTCAACGAAGG
 CAAACACCTTTACACGCTAGATGGTGGGACATCATCAACGCCCTGTGCTTACGCCCTAA
 CCGCTACTGGCTGTGTGCTGCCACAGGCCCCAGCATCAAGATATGGGATTTAGAGGGAAA
 GATCATTGTAGATGAACTGAAGCAAGAAGTTATCAGTACCAGCAGCAAGGCAGAACCCACC
 CCAGTGCACCTCCCTGGCCTGGTCTGCTGATGGCCAGACTCTGTTTGTGCTACACGGA
 CAACCTGGTGCAGTGTGGCAGGTGACCATTTGGCACACGCTAGAAGTTTATGGCAGAGCT
 TTACAAATAAAAAAAAAAACTGGCAAAAAAAAAAAAAAAAAAACTCGAC



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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_006098 unedited CTGGGGCCCGTTGCCGCATTGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGT GTCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGCGAAT TCGGCACGAGGGCAAGGCGGCGGCAGGAGAGGTTGTGGTCTAGTTTCTCTAAGCCATCC AGTGCCATCCTCGTCGTCGACGACACACGCTCTCGCCGCCCATGACTGAGCAGATG ACCTTTCGTGGCACCCCTCAAGGGCCACAACGGCTGGGTAACCCAGATCGCTACTACCCCG CAGTTCGGGACATGATCCTCTCCGCCTCTCGAGATAAGACCATCATCATGTGGAACCTG ACCAGGGATGAGACCAACTATGGAATTCCACAGGTGCTCTGCGGGTCACTCCCACTTT GTTAGTGATGTGGTTATCTCCTCAGATGGCCAGTTTGCCCTCTCAGGCTCCTGGGATGGA ACCCTGCGCCTCTGGGATCTCACAACGGGCACCACCACGAGGCGATTTGTGGCCATAACC AAGGATGTGCTGAGTGTGGCCTTCTCCTCTGACAACCCGAGATTGTCTTTGGATCTCGA TATAAACCATCAAGCTATGGTATACCCCTGGGTGTGTGCAAATACACTGTTCAAGTATG AGAGCCCCTCAGAGTGGGGTGTCTTTTGTCCGCTTCTTGCCCAACAGCAGCAACCTTA TTATCGTCTTCTGGGGTGGGACCAGGCTGGTCAAGGGATTGAAACCTGGCTTACTTGA AAGCTTAAGAACCACCCCTTTGGGCACTCAGGCTATTTGAAATCGGGGACTGGCTCTTC AAATGGATCCCTTTTGGGCTTTTGGAGCAAGGATGGCCAGGCCTGTTTATGGTACTTT ACCGAAGGCAACACCTTACCCGCCAATTGGGGGGACACTCATCAACGCTTGGGTTCT CTGCTCT</p>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_006098 unedited GCACTGGAGGAAGGGGCTCACAGTGGCACTGCCACTCCGGGTATCTGTTGCAGGAAAACA GCTATGACCGCGCCGAATCTAAAGTCGAGTTTTTTTTTTTTTTTTTTTGGCAGTTTTTT TTTTATTTGTAAGCTCTGCCATAAACTTCTAGCGTGTGCCAATGGTCACTGCCACACT CGCACCATGTTGTCCGTGTAGCCAGCAAACAGAGTCTGGCCATCAGCAGACCAGGCCAGG GAGGTGCACTGGGGTGGTTCTGCCTTGCTGCTGGTACTGATAACTTCTTGCTTCAGTTCA TCTACAATGATCTTTCCCTCTAAATCCCATATCTTGATGCTGGGGCTGTGGCAGCACAC AGCCAGTAGCGGTTAGGGCTGAAGCACAGGGCGTTGATGATGTCCCCACCATCTAGCGTG TAAAGGTGTTGCCTTCGTTGAGATCCCATAACATGGCCTGGCCATCCTTGCTCCAGAA GCACAGAGGGATCCATCTGGAGAGACAGTACCCGTTTCCATAGCCTGTGTGGCCAATG TGGTTGGTCTTCAGCTTGCAGTTAGCCAGTTCCATACCTTGACCAGCTTGTCCCAGCCA CAGGAGACAATGATAGGGTTGCTGCTGTTGGGCGAGAAGCGGACACAAGACACCCACTCT GAGTGGCTCTCATCCTGGACAGTGTATTTGCACACACCCAGGGTATTCCATAGCTTGATG GTTTTATCTCGAGATCCAGAGACAATCTGCCGGTTGTCAGAAGAAAAAGCCACACTCAAC ACATCCTTGGTATGGCCACAAATCGCCTCGTGGTGGTGGCCGTTGTGAGATCCCAGAGC GCCAGGTTCCATC</p>
Restriction Sites:	NotI-NotI
ACCN:	NM_006098
Insert Size:	1200 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_006098.3](#), [NP_006089.1](#)

RefSeq Size: 1075 bp

RefSeq ORF: 954 bp

Locus ID: 10399

UniProt ID: [P63244](#)

Cytogenetics: 5q35.3

Domains: WD40

Protein Families: Druggable Genome

Gene Summary: 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).[UniProtKB/Swiss-Prot Function]