**OriGene Technologies, Inc.**
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

# Product datasheet for RR203255

## Grb10 (NM_001109093) Rat Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Grb10 (NM_001109093) Rat Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | Grb10 |
| **Synonyms:** | RGD1566234 |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |
| **Cell Selection:** | Neomycin |
| **ORF Nucleotide Sequence:** | >RR203255 representing NM_001109093<br>Red=Cloning site Blue=ORF Green=Tags(s)<br><br>TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC<br>GCCGCGATCGCC<br><br>ATGGAGAAGCTGAGGCTCAGAAAGGATGTCAAAGTCTTTAGTGAAGATGGGACAAGCAAAGTGGTGGAGA<br>TTCTAACCGACATGACTGCCAGGGACCTGTGCCAGCTGCTGGTTTACAAAAGTCACTGTGTGGATGACAA<br>CAGCTGGACTCTGGTGGAGCACCACCCACAACTGGGACTAGAGAGGTGCCTGGAGGACCATGAGATCGTG<br>GTCCAAGTGGAGAGCACCATGCCAAGTGAGAGTAAATTCTTATTCAGAAAGAACTATGCCAAGTACGAGT<br>TCTTTAAGAACCCTGTGAACTTCTTTCCGGATCAGATGGTCACCTGGTGCCAGCAGTCCAACGGTGGCCA<br>GGCCCAGCTTCTGCAGAATTTCCTGAACTCCAGCAGCTGCCCTGAGATCCAGGGGTTCTTGCAGGTGAAG<br>GAGGTGGGACGCAAGTCTTGGAAGAAGCTGTATGTGTGCCTGCGCAGATCTGGCCTTTATTACTCCACCA<br>AGGGGACTTCAAAGGAACCCAGACACCTGCAGCTGCTGGCTGACCTCGAAGAAAGCAGCATCTTCTACCT<br>GATTGCCGGAAAGAAGCAGTACAACGCACCCAATGAACACGGGATGTGCATCAAGCCAAACAAAGCGAAG<br>ATCGAGATGAAGGAGCTGCGTCTGCTCTGTGCCGAAGATGAGCAGATCCGTACTTGCTGGATGACAGCCT<br>TCAGACTGCTCAAGTATGGAATGCTCCTGTACCAAAACTATCGCATCCCGCAGCAGAGAAAGGGTTTGGC<br>TCCTCCTTTCAACGCGCCTATGCGCAGTGTTTCTGAGAATTCTCTTGTGGCCATGGATTTTTCTGGACAA<br>ATTGGAAGAGTGATTGATAACCCGGCTGAAGCCCAGAGTGCTGCCCTGGAAGAGGGCCATGCCTGGCGGA<br>AGCGAAGCACAAGGATGAATATCCTAAGCAGCCAAAGTCCCCTTCATCCTTCGACCCTGAATTCGGTGAT<br>TCACAGGACTCAGCATTGGTTCCATGGACGTATCTCTCGCGAGGAATCTCACAGGATCATCAAGCAACAA<br>GGTCTCGTGGACGGGCTGTTCCTCCTCCGTGACAGTCAGAGCAATCCAAAGGCTTTCGTGCTGACGCTGT<br>GTCACCAGCAGAAGATTAGAAACTTCCAGATCTTACCCTGCGAGGATGATGGGCAAACCTTCTTCACTCT<br>GGATGATGGGAACACCAAGTTCTCGGATCTGATTCAGCTGGTCGACTTCTACCAGCTCAACAAAGGCGTC<br>CTGCCCTGCAAGCTGAAGCACCACTGCATCCGCGTGGCCTTA<br><br>ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT<br>ACAAGGATGACGACGATAAGGTTTAA |



View online »

**Protein Sequence:**

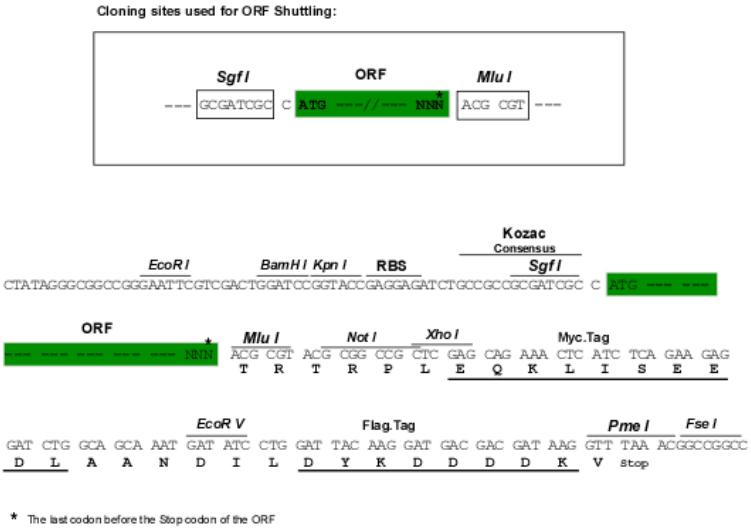
>RR203255 representing NM_001109093
Red=Cloning site Green=Tags(s)

MEKLRLRKDVKVFSEDGTSKVVEILTDMTARDLCQLLVYKSHCVDDNSWTLVEHHPQLGLERCLEDHEIV
VQVESTMPSESKFLFRKNYAKYEFFKNPVNFFPDQMVTWCQQSNGGQAQLLQNFLNSSSCPEIQGFLQVK
EVGRKSWKKLYVCLRRSGLYYSTKGTSKEPRHLQLLADLEESSIFYLIAGKKQYNAPNEHGMCIKPNKAK
IEMKELRLLCAEDEQIRTCWMTAFRLLKYGMLLYQNYRIPQQRKGLAPPFNAPMRSVSENSLVAMDFSGQ
IGRVIDNPAEAQSAALEEGHAWRKRSTRMNILSSQSPLHPSTLNSVIHRTQHWFHGRISREESHRIIKQQ
GLVDGLFLLRDSQSNPKAFVLTLCHQQKIRNFQILPCEDDGQTFFTLDDGNTKFSDLIQLVDFYQLNKGV
LPCKLKHHCIRVAL

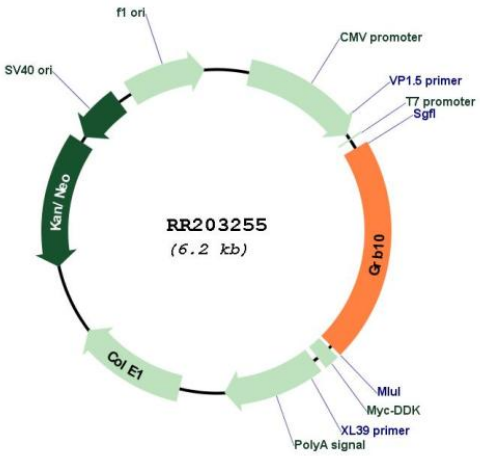
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**Plasmid Map:**




**ACCN:** NM_001109093

| | |
|---|---|
| **ORF Size:** | 1302 bp |
| **OTI Disclaimer:** | The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info |
| **OTI Annotation:** | This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene. |
| **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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_001109093.1, NP_001102563.1 |
| **RefSeq Size:** | 4996 bp |
| **RefSeq ORF:** | 1305 bp |
| **Locus ID:** | 498416 |
| **Cytogenetics:** | 14q21 |
| **MW:** | 50.2 kDa |
| **Gene Summary:** | Adapter protein which modulates coupling of a number of cell surface receptor kinases with specific signaling pathways. Binds to, and suppress signals from, activated receptors tyrosine kinases, including the insulin (INSR) and insulin-like growth factor (IGF1R) receptors. The inhibitory effect can be achieved by 2 mechanisms: interference with the signaling pathway and increased receptor degradation. Delays and reduces AKT1 phosphorylation in response to insulin stimulation. Blocks association between INSR and IRS1 and IRS2 and prevents insulin-stimulated IRS1 and IRS2 tyrosine phosphorylation. Recruits NEDD4 to IGF1R, leading to IGF1R ubiquitination, increased internalization and degradation by both the proteasomal and lysosomal pathways. A similar role in the mediation of ubiquitination has also been suggested with INSR. Negatively regulates Wnt signaling by interacting with LRP6 intracellular portion and interfering with the binding of AXIN1 to LRP6. Positive regulator of the KDR/VEGFR-2 signaling pathway. May inhibit NEDD4-mediated degradation of KDR/VEGFR-2 (By similarity).[UniProtKB/Swiss-Prot Function] |