

Product datasheet for **MR222689**

Grb10 (NM_010345) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Grb10 (NM_010345) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Grb10
Synonyms:	5730571D09Rik; AI325020; Meg1; mKIAA0207
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MR222689 representing NM_010345
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAACAACGATATTAACCTCGTCCGTGGAAAGCCTTAACCTCAGCTTGCAACATGCAGTCTGATACTGATA
 CTGCACCACTTCTTGAGGATGGCCAGCATGCCAGCAACCAGGGAGCAGCATCTAGCTCCCGGGGACAGCC
 ACAGGCGTCCCGGAGGCAGAAAATGCAACGCTCGCAGCCTGTGCACATTCTCAGGCGCCTTCAGGAGGAA
 GACCAGCAGTTAAGAAGTGCATCTCTCCGGCCATCCCCAACCCATTTCCGGAGCTCACTGGTGCGGCCC
 CTGGGAGCCCTCCTTCGGTTGCTCCTAGCTCCTTACCTCCTCCTCGAGCCAGCCACCTGCCAAGCATT
 CCCTCCAGGCTTTCAGCTGTGAAACTCACCCGTCAGGTCTGTGGACAAAGACCACTGCGAGATTTTCA
 AAGAAACAACCTAAGAACCAGTGTCCAACCGACTGTGAATCCAGTGGCACGGATGCCACTTCACAGA
 TGGAGAAGCTGAGGCTCAGAAAGGATGTCAAAGTCTTTAGTGAAGATGGGACCAGCAAAGTGGTGGAGAT
 TCTAACCGACATGACAGCCAGGGACCTGTGCCAGCTGCTGGTTTACAAAAGTCACTGTGTGGATGACAAC
 AGCTGGACTCTGGTGGAAACACCACCACAACCTGGGATTAGAGAGGTGCCTGGAGGACCATGAGATCGTGG
 TCCAAGTGGAGAGTACCATGCCAAGTGAAGCAAAATCTTATTGAAAAGAAATTATGCGAAGTACGAGTT
 CTTAAGAATCCAGTGAACCTTCTCCCGGATCAGATGGTCAATTGGTGGCAGCAGTCCAACGGTGGCCAG
 GCGCAGCTTCTGCAGAAATTTCTGAACACCAGCAGCTGCCCTGAGATCCAGGGGTCTTGCAGGTGAAA
 AGGTAGGACGCAAGTCTTGAAGAAGCTGTATGTGTGCCTGCGCAGATCTGGCCTCTATTACTCCACCA
 GGGACTTCAAAAGAACCAGACACCTGCAGCTGCTGGCTGACCTGGAAGAAAGCAGCATCTTCTACCTG
 ATTGCTGGAAAGAAGCAGTACAACGCGCCGAATGAACATGGGATGTGCATCAAGCCAAACAAGCGAAGA
 CCGAGATGAAGGAGCTTCGTCTGCTGTGCCCGAAGATGAGCAGATCCGTAAGTCTGCTGGATGACTGCCCT
 CAGACTGCTCAAGTACGGAATGCTCCTGTACAAAACATCGCATCCACAGAGGAAGGGTCTGCCCCCT
 CCTTTCAACGCACCTATGCGCAGTGTCTGAGAAATCTCTTGTGGCCATGGATTTTTCTGGACAAATCG
 GAAGAGTATCGATAACCCGGCTGAAGCCAGAGTGTGCCCTGGAAGAGGGCCATGCCTGGCGTAAAGCG
 GAGCACACGGATGAATATCCTAAGCAGCCAAAGCCACTGCATCCTTCTACCCTGAATGCAGTGATTAC
 AGGACTCAGATTGGTTCATGGACGTATCTCCCGGAGGAGTCTCACAGGATCATCAAGCAACAAGGTC
 TCGTGGACGGGCTTTCCTCCTCGTGACGCCAGAGTAATCAAAGGCGTTCGTAAGTACTGACTGTGCCA
 TCACCAGAAGATTAACCACTCCAGATCTTACCTTGCAGGATGATGGGACAGACCTTCTTACTCTGGAT
 GATGGGAACCAAGTTCTCCGATCTGATCCAGCTGGTCGACTTCTACCAGCTCAACAAAGTGTCTGCG
 CCTGCAAGCTGAAACACCCTGCATCCGGTGGCCTTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR222689 representing NM_010345
 Red=Cloning site Green=Tags(s)

MNNDINSSVESLNSACNMQSDTDTAPLLEDGQHASNQGAASSSRGQPQASPRQKMQRSQPVHILRRLQEE
 DQQLRTASLPAIPNPFPELTGAAPGSPSVAPSSLPPPPSOPPAKHFPFGFQLSKLTRPGLWTKTARFS
 KKQPKNQCPDVTNPVARMPTSQMEKLRRLKDKVVFSEDTGSKVVEILTDMTARDLCQLLVYKSHCVDDN
 SWTLVEHHPQLGLERCLDHEIVVQVESTMPSESKFLFRKNYAKYEFKPNVNFPPDQMVNWCQQSNGGQ
 AQLLQNFNTSSCPEIQGFLQVKEVGRKSWKLYVCLRRSGLYYSTKGTSKEPRHLQLLADLEESSIFYL
 IAGKKQYNAPNEHGMCIKPNKAKTEMKELRLLCAEDEQIRTCWMTAFRLLYGMLLYQNYRIPQRKGLPP
 PFNAPMRSVSENSLVAMDFSGQIGRVIDNPAAEQSAALEEGHAWRKRSTRMNILSSQPLHPSTLNAVH
 RTQHWFHGRI SREESHRIKQQLVDGLFLLRDSQSNPKAFVLTLCCHQKIKNFQILPCEDDGTFFTL
 DGNTKFSDLIQLVDFYQLNKGVLPCCLKKHCIRVAL

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

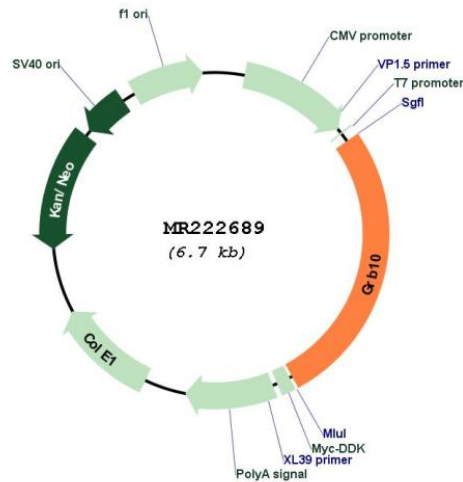
Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_010345

ORF Size: 1788 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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.
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_010345.4](#), [NP_034475.2](#)

RefSeq Size: 5089 bp

RefSeq ORF: 1791 bp

Locus ID: 14783

UniProt ID: [Q60760](#)

Cytogenetics: 11 7.15 cM

MW: 68 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. [UniProtKB/Swiss-Prot Function]