

Product datasheet for **RC213101**

GRB2 (NM_203506) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: GRB2 (NM_203506) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: GRB2
Synonyms: ASH; EGFRBP-GRB2; Grb3-3; MST084; MSTP084; NCKAP2
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC213101 representing NM_203506
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAAGCCATCGCCAAATATGACTTCAAAGCTACTGCAGACGACGAGCTGAGCTTCAAAGGGGGGACA
TCCTCAAGGTTTTGAACGAAGAATGTGATCAGAAGTGGTACAAGGCAGAGCTTAATGGAAAAGACGGCTT
CATTCCCAAGAACTACATAGAAATGAAACCACATCCGTTTGGAAACGATGTGCAGCACTTCAAGGTGCTC
CGAGATGGAGCCGGAAGTACTTCTCTGGGTGGTGAAGTTCAATTCTTTGAATGAGCTGGTGGATTATC
ACAGATCTACATCTGTCTCCAGAAACCAGCAGATATTCTGCGGGACATAGAACAGGTGCCACAGCAGCC
GACATACGTCCAGGCCCTTTGACTTTGATCCCCAGGAGGATGGAGAGCTGGGCTTCCGCCGGGGAGAT
TTTATCCATGTCATGGATAAAGTCAAGCCCAACTGGTGGAAAGGAGCTTGCCACGGGCAGACCGGATGT
TTCCCGCAATTATGTCACCCCGTGAACCGGAACGTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC213101 representing NM_203506
Red=Cloning site Green=Tags(s)
MEAIKYDFKATADDELSFKRGDILKVLNEECDQNWYKAELNGKDFIPKNYIEMKPHPFNDVQHFVKL
RDGAGKYFLWVVKFNSLNELVDYHRSTSFSRNQIFLRDIEQVPQQPTYVQALFDFDPQEDGELGFRRGD
FIHVMDNSDPNWWKGACHGQTGMFPRNYVTPVNRNV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1461_e10.zip

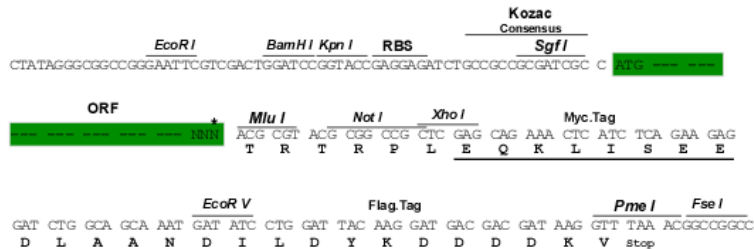
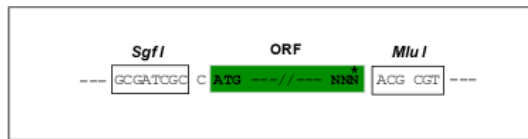


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Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_203506

ORF Size: 528 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.
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_203506.2](#), [NP_987102.1](#)

RefSeq Size: 3139 bp

RefSeq ORF: 531 bp

Locus ID: 2885

UniProt ID: [P62993](#)

Cytogenetics: 17q25.1

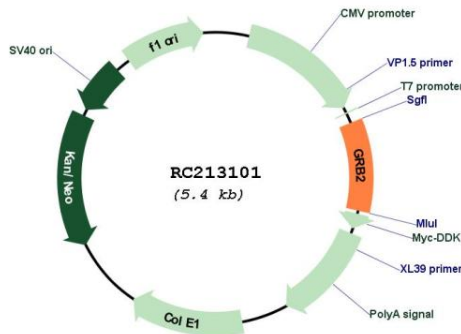
Protein Families: Druggable Genome

Protein Pathways: Acute myeloid leukemia, B cell receptor signaling pathway, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Dorso-ventral axis formation, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Focal adhesion, Gap junction, Glioma, GnRH signaling pathway, Insulin signaling pathway, Jak-STAT signaling pathway, MAPK signaling pathway, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, Non-small cell lung cancer, Pathways in cancer, Prostate cancer, Renal cell carcinoma, T cell receptor signaling pathway

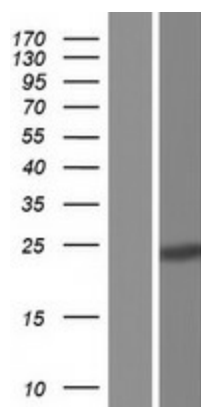
MW: 20.4 kDa

Gene Summary: The protein encoded by this gene binds the epidermal growth factor receptor and contains one SH2 domain and two SH3 domains. Its two SH3 domains direct complex formation with proline-rich regions of other proteins, and its SH2 domain binds tyrosine phosphorylated sequences. This gene is similar to the Sem5 gene of *C.elegans*, which is involved in the signal transduction pathway. Two alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC213101



Western blot validation of overexpression lysate (Cat# [LY404254]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213101 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).