

Product datasheet for **MG209055**

Igf2bp1 (NM_009951) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Igf2bp1 (NM_009951) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Igf2bp1
Synonyms:	AL024068; AW549074; CRD-BP; Crdbp; D030026A21Rik; D11Moh40e; D11Moh45; IMP-1; IMP1; mir-3063
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG209055 representing NM_009951
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAACAAGCTTTACATCGGCAACCTCAACGAGAGTGTGACCCCGCAGACTTGGAGAAAGTATTCGCGG
 AGCACAAGATCTCTACAGCGGCCAGTTCTTGGTCAAATCCGGCTACGCCTTCGTGGATTGCCCCGACGA
 GCACTGGGCGATGAAGGCCATCGAACTTTCTCGGGGAAAGTAGAACTGCAAGGAAAACTCTAGAGATT
 GAACACTCAGTCCCCAAAAACAAGGAGTCGAAAAATACAGATCCGCAATATCCACCTCAGCTCCGAT
 GGGAAAGTCTAGATAGCCTGCTGGCTCAGTACGGTACAGTGGAGAAGTGTGAGCAAGTGAACACTGAAAG
 TGAGACAGCTGTGGTCAACGTCACCTACTCTAACCAGGAGCAGACCAGGCAAGCTATCATGAAGCTAAAT
 GGCCATCAACTGGAGAACCATGCCCTGAAGGTCTCTACATACCTGATGAGCAGATAACGCAAGGTCTG
 AGAATGGGCGTCTGGAGGCTTTGGGTCTCGGGCCAGCCCCGGCAAGGGTGCCTCGGAGCAGGGGC
 TCCAGCCAAGCAGCAGCCAGTGGACATCCCTCTCCGGCTCTGGTGCCTACGCAGTATGTAGGCGCTATC
 ATTTGGCAAGGAGGGTGCACCATCCGAAACATCAGAAAACAGACGCAAGTCCAAAAAGACGTCATAGGA
 AGGAGAATGCGGGCGCTCGGAGAAAGGCCATCAGCGTGCATTCAACCCCTGAAGGCTGCTCTCCGCGTG
 CAAGATGATCTTGGAGATTATGCACAAGGAGGCAAGGACACAAAACGGCAGATGGAGTTCCTCTGAAG
 ATCCTGGCTCATAACAATTCGTCGGGCGACTCATTGGCAAGGAAGGGCGGAACCTGAAGAAGGTGGAGC
 AGGACACAGAGACGAAGATCACCATCTCATCGTCCAGGACCTCACGCTCTATAACCCTGAGAGGACCAT
 CACTGTGAAGGGCGCCATTGAGAAGTGTGAGGGCCGAGCAGGAGATCATGAAGAAAGTTCGAGAGGCT
 TACGAGAACGACGTGGCCGCCATGAGCTTGAGTCCACCTCATCCCTGGGCTTAACCTGGCTGCTGTAG
 GTCTCTTCCAGCTTCCAGCGCTGTCCTCTCCAGCAGTGTACCCGGGCTGCTCCCTATAG
 CTCTTTCATGCAGGCTCCGGAGCAGGAGATGGTACAAGTGTTCATCCCGCCAGGCTGTGGGCGCCATC
 ATTTGGCAAGAAGGGCCAGCACATCAAACAATCTCCCGCTTCGCCAGCGCTCCATCAAGATTGCACCAC
 CAGAAAACCTGACTCCAAAGTTCGAATGGTCTGTCATCACTGGACCCCGAGAGGCTCAGTTCAAGGCCCA
 GGAAGAATCTATGGCAAACTAAAAGAAGAGAATTTCTTTGGTCCCAAGGAGGAAGTAAAGCTAGAGACC
 CACATACGGGTTCCGGCTTCAGCAGCCGGCGTGTATCGGCAAGGGCGGCAAAACGGTGAATGAGCTGC
 AGAACTTGACCGCAGCTGAGGTGGTAGTCCAAGAGACCAGCCCGGATGAGAACGACCAAGTCATTGT
 TAAGATCATCGGACATTTCTATGCCAGCCAGATGGCTCAGCGGAAGATCCGAGACATCTGGCTCAAGTT
 AAGCAACAGCACCAGAAGGGACAGAGCAACCTGGCCAGGCTCGGAGGAAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

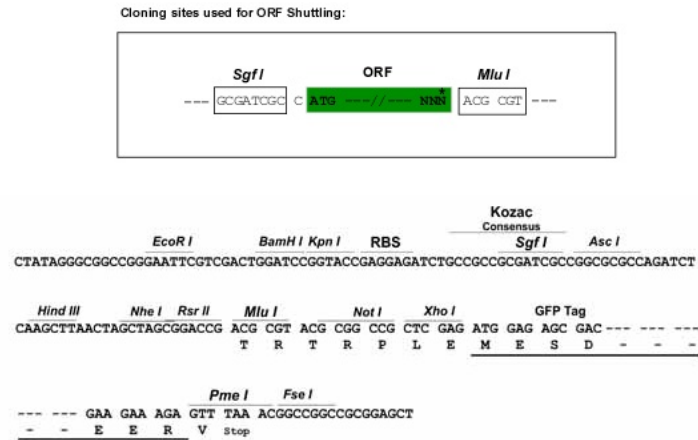
>MG209055 representing NM_009951
 Red=Cloning site Green=Tags(s)

MNKLYIGNLINESVTPADLEKVF AEHKISYSQFLV KSGYAFVDCPDEHWAMKAIETFSGKVELQGKRLEI
 EHSVPPKQSRKIQIRNIPPQLRWEVLDSL LAQYGTVENCEQVNTSE TAVVNVYTSNREQTRQAIMKLN
 GHQLENHALKVSYPDEQITQGPENRRGGFSGRQPRQGS PVAAGAPAKQQPVDIPLRLLVPTQYVGA I
 IGKEGATIRNITKQTQSKIDVHRKENAGAAEKAI SVHSTPEGCSSACKMILEIMHKEAKDTKTADGVPLK
 ILAHHNFVGR LIGKEGRNLKQVEQDTE TKITISSLQDL TLYNPERTITVKGAIENCCRAEQEIMKKVREA
 YENDVAAMSLQSHLIPGLNLA AVGLFPASSAVPPPSSVTGAAPYSSFMQAPEQEMVQVFI PAQAVGAI
 IGKKGQHIKQLSRFASASIKIAPPETPDSKVRMVITGPPEAQFKAQGR IYGKLEENFFGPKKEEVKLET
 HIRVPASAAGRVIKGGKTVNELQNL TAAEVVPRDQTPDENDQVIVKIIIGHFYASQMAQRKIRDILAQV
 KQQHQKQSNLAQARRK

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_009951

ORF Size: 1731 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_009951.4](#), [NP_034081.1](#)

RefSeq Size: 8382 bp

RefSeq ORF: 1734 bp

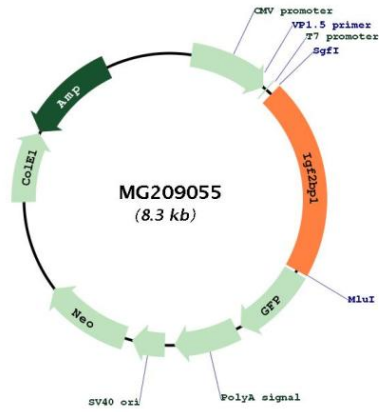
Locus ID: 140486

UniProt ID: [O88477](#)

Cytogenetics: 11 59.08 cM

Gene Summary: RNA-binding factor that recruits target transcripts to cytoplasmic protein-RNA complexes (mRNPs). This transcript 'caging' into mRNPs allows mRNA transport and transient storage. It also modulates the rate and location at which target transcripts encounter the translational apparatus and shields them from endonuclease attacks or microRNA-mediated degradation. Regulates localized beta-actin/ACTB mRNA translation, a crucial process for cell polarity, cell migration and neurite outgrowth. Co-transcriptionally associates with the ACTB mRNA in the nucleus. This binding involves a conserved 54-nucleotide element in the ACTB mRNA 3' UTR, known as the 'zipcode'. The RNP thus formed is exported to the cytoplasm, binds to a motor protein and is transported along the cytoskeleton to the cell periphery. During transport, prevents ACTB mRNA from being translated into protein. When the RNP complex reaches its destination near the plasma membrane, IGF2BP1 is phosphorylated. This releases the mRNA, allowing ribosomal 40S and 60S subunits to assemble and initiate ACTB protein synthesis. Monomeric ACTB then assembles into the subcortical actin cytoskeleton (By similarity). During neuronal development, key regulator of neurite outgrowth, growth cone guidance and neuronal cell migration, presumably through the spatiotemporal fine tuning of protein synthesis, such as that of ACTB (By similarity). May regulate mRNA transport to activated synapses (By similarity). Binds to the 3' UTR of CD44 mRNA and stabilizes it, hence promotes cell adhesion and invadopodia formation in cancer cells (By similarity). Binds to the oncofetal H19 transcript and regulates its localization (By similarity). Binds to and stabilizes BTRC/FBW1A mRNA (By similarity). Binds to the adenine-rich autoregulatory sequence (ARS) located in PABPC1 mRNA and represses its translation. PABPC1 mRNA-binding is stimulated by PABPC1 protein. Prevents BTRC/FBW1A mRNA degradation by disrupting microRNA-dependent interaction with AGO2 (By similarity). During cellular stress, such as oxidative stress or heat shock, stabilizes target mRNAs that are recruited to stress granules, including CD44, IGF2, MAPK4, MYC, PTEN, RAPGEF2 and RPS6KA5 transcripts (By similarity). Interacts with GAP43 transcript and transports it to axons. Binds to the 3' UTR of IGF2 mRNA by a mechanism of cooperative and sequential dimerization and regulates IGF2 mRNA subcellular localization and translation. Binds to MYC mRNA, in the coding region instability determinant (CRD) of the open reading frame (ORF), hence prevents MYC cleavage by endonucleases and possibly microRNA targeting to MYC-CRD. Binds to and stabilizes ABCB1/MDR-1 mRNA. Binds to the neuron-specific TAU mRNA and regulates its localization. Plays a direct role in the transport and translation of transcripts required for axonal regeneration in adult sensory neurons. During interstitial wound repair, interacts with and stabilizes PTGS2 transcript. PTGS2 mRNA stabilization may be crucial for colonic mucosal wound healing. [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG209055