

## Product datasheet for **MR209055**

### Igf2bp1 (NM\_009951) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Igf2bp1 (NM_009951) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Igf2bp1
Synonyms:	AL024068; AW549074; CRD-BP; Crdbp; D030026A21Rik; D11Moh40e; D11Moh45; IMP-1; IMP1; mir-3063
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR209055 representing NM\_009951  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAACAAGCTTTACATCGGCAACCTCAACGAGAGTGTGACCCCGCAGACTTGGAGAAAGTATTCGCGG  
 AGCACAAGATCTCTACAGCGGCCAGTTCTTGGTCAAATCCGGCTACGCCTTCGTGGATTGCCCCGACGA  
 GCACTGGGCGATGAAGGCCATCGAACTTTCTCGGGGAAAGTAGAACTGCAAGGAAAACTCTAGAGATT  
 GAACACTCAGTCCCCAAAAACAAGGAGTCGAAAAATACAGATCCGCAATATCCACCTCAGCTCCGAT  
 GGGAAAGTCTAGATAGCCTGCTGGCTCAGTACGGTACAGTGGAGAAGTGTGAGCAAGTGAACACTGAAAG  
 TGAGACAGCTGTGGTCAACGTCACCTACTCTAACCGGGAGCAGACCAGGCAAGCTATCATGAAGCTAAAT  
 GGCCATCAACTGGAGAACCATGCCCTGAAGGTCTCTACATACCTGATGAGCAGATAACGCAAGGTCTG  
 AGAATGGGCGTCTGGAGGCTTTGGGTCTCGGGCCAGCCCCGGCAAGGGTGCCTCGGAGCAGGGGC  
 TCCAGCCAAGCAGCAGCCAGTGGACATCCCTCTCCGGCTCTGGTGCCTACGCAGTATGTAGGCGCTATC  
 ATTGGCAAGGAGGGTGCACCATCCGAAACATCAGAAAACAGACGAGTCCAAAAAGACGTCATAGGA  
 AGGAGAATGCGGGCGCTCGGGAAGGCCATCAGCGTGCATTCAACCCCTGAAGGCTGCTCTCCGCGTG  
 CAAGATGATCTTGGAGATTATGCACAAGGAGGCAAGGACACAAAACGGCAGATGAAGTCCCTGAAAG  
 ATCCTGGCTCATAAACAATTCGTCGGGCGACTCATTGGCAAGGAAGGGCGGAACCTGAAGAAGGTGGAGC  
 AGGACACAGAGACGAAGATCACCATCTCATCGTCCAGGACCTCACGCTCTATAACCCTGAGAGGACCAT  
 CACTGTGAAGGGCGCCATTGAGAAGTGTGAGGGCCGAGCAGGAGATCATGAAGAAAGTTCGAGAGGCT  
 TACGAGAACGACGTGGCCGCCATGAGCTTGAGTGCAGTCCCACCTCATCCCTGGGCTTAACCTGGCTGCTG  
 TGCTCTTCCAGCTTTCATCCAGCGCTGTCCTCTCCAGCAGTGTACCCGGGCTGCTCCCTATAG  
 CTCTTTCATGACAGGCTCCGGAGCAGGAGATGGTACAAGTGTTCATCCCGCCAGGCTGTGGGCGCCATC  
 ATTGGCAAGAAGGGCCAGCACATCAAACAACCTCTCCCGCTTCGCCAGCGCCTCCATCAAGATTGCCACC  
 CAGAAAACCTGACTCCAAAGTTCGAATGGTCTGTCATCACTGGACCCCGAGAGGCTCAGTTCAAGGCCCA  
 GGAAGAATCTATGGCAAACTAAAAGAAGAGAATTTCTTTGGTCCCAAGGAGGAAGTAAAGCTAGAGACC  
 CACATACGGGTTCCGGCTTCAGCAGCCGGCGTGTATCGGCAAGGGCGGCAAAACGGTGAATGAGCTGC  
 AGAACTTGACCGCAGCTGAGGTGGTAGTCCAAGAGACCAGCCCGGATGAGAACGACCAAGTCAATGT  
 TAAGATCATCGGACATTTCTATGCCAGCCAGATGGCTCAGCGGAAGATCCGAGACATCTGGCTCAAGT  
 AAGCAACAGCACCAGAAGGGACAGAGCAACCTGGCCAGGCTCGGAGGAAG

**ACGCGT**ACGCGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR209055 representing NM\_009951  
 Red=Cloning site Green=Tags(s)

MNKLYIGNL NESVTPADLEKVF AEHKISYSQFLVKSQYAFVDCPDEHWAMKAIETFSGKVELQGKRLEI  
 EHSVPPKQSRKIQIRNIPPQLRWEVLDSL LAQYGTVENCEQVNTSE TAVVNVYTSNREQTRQAIMKLN  
 GHQLENHALKVSYPDEQITQGPENRRGGFSGRGQPRQGSPVAAGAPAKQQPVDIPLRLLVPTQYVGA I  
 IGKEGATIRNITKQTQSKIDVHRKENAGAAEKAI SVHSTPEGCSSACKMILEIMHKEAKDTKTADEVPLK  
 ILAHNNFVGR LIGKEGRNLKQVEQDTETKITISSLQDL TLYNPERTITVKGAIENCCRAEQEIMKKVREA  
 YENDVAAMSLQSHLIPGLNLAAVGLFPASSSAVPPPPSSVTGAAPYSSFMQAPEQEMVQVFI PAQAVGAI  
 IGKKGQHIKQLSRFASASIKIAPPETPDSKVRMVVITGPPEAQFKAQGR IYGLKEENFFGPKKEEVKLET  
 HIRVPASAAGRVIKGGKTVNELQNL TAAEVVVPDQTPDENDQVIVKII GHFYASQMAQRKIRDILAQV  
 KQQHQKQSNLAQARRK

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mm9036\\_d02.zip](https://cdn.origene.com/chromatograms/mm9036_d02.zip)

**Restriction Sites:**

Sgfl-Mlul

**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](mailto: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).

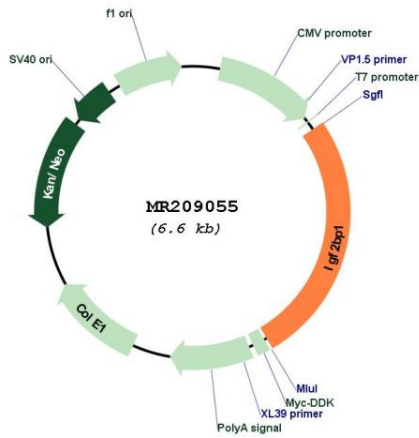
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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  
MW: 63.9 kDa

**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 MR209055