IGF2BP1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	IGF2BP1, Polyclonal Antibody
Full Product Name	IGF2BP1 Rabbit pAb
Product Gene Name	anti-IGF2BP1 antibody
Product Synonym Names	IMP1; ZBP1; CRDBP; IMP-1; CRD-BP; VICKZ1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	PBS with 0.02% Sodium Azide, 50% Glycerol, pH 7.3.
Purity/Purification	Affinity Purified
Preparation and Storage	Store at -20 degree C. Avoid freeze/thaw cycles.
Molecular Weight	71kDa
OMIM	608288
3D Structure	ModBase 3D Structure for Q9NZI8
Immunogen	A synthetic peptide corresponding to a sequence within amino acids 500 to the C-terminus of human IGF2BP1 (NP_006537.3).
Cellular Localization	Cell Projection, Cytoplasm, Nucleus
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-IGF2BP1 antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunofluorescence (IF)
Application Notes for anti-IGF2BP1 antibody	WB: 1:500-1:2000 IHC: 1:50-1:100 IF: 1:50-1:200

Related Product Information for anti-IGF2BP1 antibody	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. Plays a direct role in the transport and translation of transcripts required for axonal regeneration in adult sensory neurons. 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. 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. May regulate mRNA transport to activated synapses. Binds to and stabilizes ABCB1/MDR-1 mRNA. During interstinal wound repair, interacts with and stabilizes PTGS2 transcript. PTGS2 mRNA stabilization may be crucial for colonic mucosal wound healing. 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 the 3'-UTR of CD44 mRNA and stabilizes it, hence promotes cell adhesion and invadopodia formation in cancer cells. Binds to the oncofetal H19 transcript and to the neuron-specific TAU mRNA and regulates their localizations. Binds to and stabilizes BTRC/FBW1A mRNA. 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. Promotes the directed movement of tumor-derived cells by fine-tuning intracellular signaling networks. Binds to MAPK4 3'-UTR and inhibits its translation. Interacts with PTEN transcript open reading frame (ORF) and prevents mRNA decay. This combined action on MAPK4 (down-regulation) and PTEN (up-regulation) antagonizes HSPB1 phosphorylation, consequently it prevents G-actin sequestration by phosphorylated HSPB1, allowing F-actin polymerization. Hence enhances the velocity of cell migration and stimulates directed cell migration by PTEN-modulated polarization. Interacts with Hepatitis C virus (HCV) 5'-UTR and 3'-UTR and specifically enhances translation at the HCV IRES, but not 5'-cap-dependent translation, possibly by recruiting eIF3. Interacts with HIV-1 GAG protein and blocks the formation of infectious HIV-1 particles. Reduces HIV-1 assembly by inhibiting viral RNA packaging, as well as assembly and processing of GAG protein on cellular membranes. 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.
Other Notes	Small volumes of anti-IGF2BP1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for IGF2BP1 purchase	MBS8544421 is an antibody targeting IGF2BP1. Also known as IGF2BP1 Rabbit pAb. Reactive in Human, Mouse, Rat. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IGF2BP1. It may not necessarily be applicable to this product.

NCBI GI #	296434536
NCBI GeneID	10642
NCBI Accession #	Q9NZI8.2
UniProt Primary Accession #	Q9NZI8
UniProt Related Accession #	Q9NZI8
NCBI Official Full Name	Insulin-like growth factor 2 mRNA-binding protein 1
NCBI Official Synonym Full Names	insulin like growth factor 2 mRNA binding protein 1
NCBI Official Symbol	IGF2BP1
NCBI Official Synonym Symbols	IMP1; ZBP1; CRDBP; IMP-1; CRD-BP; VICKZ1
UniProt Protein Name	Insulin-like growth factor 2 mRNA-binding protein 1

UniProt Synonym Protein Names	Coding region determinant-binding protein; CRD-BP; IGF-II mRNA-binding protein 1; VICKZ family member 1; Zipcode-binding protein 1; ZBP-1
Protein Family	Insulin-like growth factor 2 mRNA-binding protein
UniProt Gene Name	IGF2BP1
UniProt Synonym Gene Names	CRDBP; VICKZ1; ZBP1; IGF2 mRNA-binding protein 1; IMP-1; IMP1; CRD-BP; ZBP-1
UniProt Entry Name	IF2B1_HUMAN
NCBI Protein Information	insulin-like growth factor 2 mRNA-binding protein 1
NCBI Summary for IGF2BP1	This gene encodes a member of the insulin-like growth factor 2 mRNA-binding protein family. The protein encoded by this gene contains four K homology domains and two RNA recognition motifs. It functions by binding to the mRNAs of certain genes, including insulin-like growth factor 2, beta-actin and beta-transducin repeat-containing protein, and regulating their translation. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2009]
UniProt Comments for IGF2BP1	IGF2BP1: a conserved trans-acting factor that can control translation of specific mRNAs in vivo. Contains four K homology (KH) domains and two RNA recognition motifs. It functions by binding to the 5' UTR of the target mRNAs and repressing translation. Target mRNAs include those encoding beta-actin and insulin-like growth factor 2 (IGF2). Tyrosine phosphorylation apparently abolishes translational repression of actin expression by decreasing its binding beta-actin mRNA. May have a role in progression of ovarian cancer. Contains nuclear export signals within the RNA-binding KH2 and KH4 domains. Aberrant expression may interfere with c-myc regulation. Protein type: RNA-binding; Translation Chromosomal Location of Human Ortholog: 17q21.32 Cellular Component: growth cone; perinuclear region of cytoplasm; stress granule; axon; lamellipodium; cytoplasm; dendritic spine; ribonucleoprotein complex; cytosol; nucleus; filopodium Molecular Function: mRNA binding; protein binding; mRNA 3'-UTR binding; nucleotide binding; translation regulator activity; mRNA 5'-UTR binding Biological Process: mRNA transport; negative regulation of translation; gene expression; regulation of cytokine biosynthetic process
Research Articles on IGF2BP1	**1.** 35 SRF/IGF2BP1-dependent genes showing conserved association with SRF and IGF2BP1 expression indicate a poor overall survival probability in ovarian, liver and lung cancer. In conclusion, these findings identify the SRF/IGF2BP1-, miRNome- and m6A-dependent control of gene expression as a conserved oncogenic driver network in cancer.
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