Recombinant IGF2BP2 protein

Catalog No: 81290, 81990
Expressed In: Baculovirus

Quantity: 20, 1000 µg
Concentration: 0.5 µg/µl
Source: Human

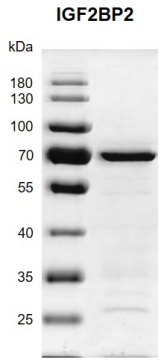
Buffer Contents: Recombinant IGF2BP2 protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5 mM TCEP.

Background: IGF2BP2 (Insulin Like Growth Factor 2 MRNA Binding Protein 2), also called as VICKZ2 or IMP2, is a member of the insulin-like growth factor 2 mRNA-binding protein family. The mammalian IGF2 mRNA binding proteins (IGF2BPs) family encompasses three RNA-binding proteins (RBPs) controlling the cytoplasmic fate of mRNAs in development, somatic cells and human diseases. IGF2BPs are RNA-binding factors that recruit 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. 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. Recent studies revealed that the association of IGF2BPs with target mRNAs, e.g. the MYC mRNA, is enhanced by the N6-methyladenosine (m6A) modification of target transcripts suggesting IGF2BPs as novel m6A-readers. N6- methyladenosine (m6A) is the most prevalent modification in eukaryotic RNAs. The biological importance of m6A relies on m6A readers, which control mRNA fate and function. Besides, it is suggested that only IGF2BP2 (but not other members of the IGF2BP family or the YTH family) directly bounds to the specific m6A sites in SOX2 CDS regions and controlled the SOX2 mRNA half-life via an m6A-dependent manner. In fact, before its identification as an m6A reader, IGF2BP2 had already suggested to be associated with tumor progression through preserving the stemness phenotype in glioblastoma and hepatocellular carcinoma.

Protein Details: Full length human IGF2BP2 protein (accession number NP_006539.3) was expressed in a baculovirus system with an N-terminal FLAG-Tag. The molecular weight of the protein is 67.4 kDa.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of arrival.

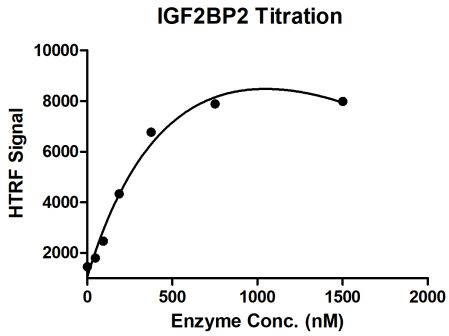


Recombinant IGF2BP2 protein gel

10% SDS-PAGE with Coomassie blue staining

MW: 67.4 kDa

Purity: >88%



HTRF for IGF2BP2 activity

1 µM ACTB zipcode ssDNA (1212-1313) was incubated with different concentrations of IGF2BP2 protein in a 10 µl reaction system containing 50 mM HEPES-NaOH pH 7.5, 0.1% BSA for 1 hour, then 10 µl anti-FLAG antibody and SA-XL665 mixture (1:100 dilution in the same buffer) was added to each reaction system and incubated for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.

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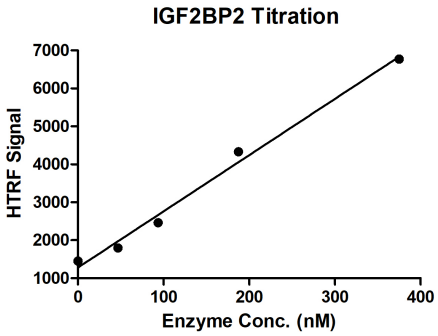

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