IREB2 Blocking Peptide

PRODUCT OVERVIEW

Product Name	IREB2, Blocking Peptide
Full Product Name	IREB2 Peptide
Product Gene Name	IREB2 blocking peptide
Product Synonym Gene Name	ACO3; FLJ23381; IRP2; IRP2AD
Form/Format	Lyophilized powder
Preparation and Storage	Add 100ul of sterile PBS. Final peptide concentration is 1 mg/ml in PBS. For longer periods of storage, store at -20 degree C. Avoid repeat freeze-thaw cycles.
Antibody/Peptide Pairs	IREB2 peptide (MBS3230249) is used for blocking the activity of IREB2 antibody (MBS3205284)
Molecular Weight	105kDa
OMIM	147582
Product Categories/Family for IREB2 blocking peptide	Peptide
Applications Tested/Suitable for IREB2 blocking peptide	Western Blot (WB)
Related Product Information for IREB2 blocking peptide	This is a synthetic peptide designed for use in combination with anti-IREB2 antibody made Target Description: IREB2 binds to iron-responsive elements (IRES), which are stem-loop structures found in the 5'-UTR of ferritin, and delta aminolevulinic acid synthase mRNAs, and in the 3'-UTR of transferrin receptor mRNA. IREB2 binds to the IRE element in ferritin which results in the repression of its mRNA translation. Binding of the protein to the transferrin receptor mRNA inhibits the degradation of this otherwise rapidly degraded mRNA.
Other Notes	Small volumes of IREB2 blocking peptide 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 IREB2 purchase	MBS3230249 is a blocking peptide targeting IREB2. Also known as IREB2 Peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IREB2. It may not necessarily be applicable to this product.

NCBI GI #	1519312870
NCBI GeneID	3658
NCBI Accession #	NP_004127
UniProt Primary Accession #	P48200
UniProt Related Accession #	P48200
GenBank Nucleotide #	NM_004136
NCBI Official Full Name	iron-responsive element-binding protein 2 isoform 1
NCBI Official Synonym Full Names	iron responsive element binding protein 2
NCBI Official Symbol	IREB2

NCBI Official Synonym Symbols	ACO3; IRP2; IRP2AD; IRE-BP2; IRE-BP 2
UniProt Protein Name	Iron-responsive element-binding protein 2
UniProt Synonym Protein Names	Iron regulatory protein 2; IRP2
Protein Family	Iron-responsive element-binding protein
UniProt Gene Name	IREB2
UniProt Synonym Gene Names	IRE-BP 2; IRP2
UniProt Entry Name	IREB2_HUMAN
NCBI Protein Information	iron-responsive element-binding protein 2
NCBI Summary for IREB2	The protein encoded by this gene is an RNA-binding protein that acts to regulate iron levels in the cells by regulating the translation and stability of mRNAs that affect iron homeostasis under conditions when iron is depleted. When iron levels are low, this protein binds to iron-responsive elements (IRES), stem-loop structures located either in the 5' or 3' UTRs. Binding to the 5' UTR represses translation, while binding to the 3' UTR inhibits mRNA degradation. When iron is found in the cell, this protein is degraded in a F-box and leucine rich repeat protein 5-dependent manner. Variants in this gene have been associated with lung cancer and chronic obstructive pulmonary disease (COPD). Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Aug 2017]
UniProt Comments for IREB2	IREB2: RNA-binding protein that binds to iron-responsive elements (IRES), which are stem-loop structures found in the 5'- UTR of ferritin, and delta aminolevulinic acid synthase mRNAs, and in the 3'-UTR of transferrin receptor mRNA. Binding to the IRE element in ferritin results in the repression of its mRNA translation. Binding of the protein to the transferrin receptor mRNA inhibits the degradation of this otherwise rapidly degraded mRNA. Belongs to the aconitase/IPM isomerase family. Protein type: RNA-binding; Translation Chromosomal Location of Human Ortholog: 15q25.1 Cellular Component: mitochondrion; cytoplasm; cytosol Molecular Function: protein binding; iron-responsive element binding; translation repressor activity; RNA binding; metal ion binding; 4 iron, 4 sulfur cluster binding Biological Process: erythrocyte homeostasis; response to retinoic acid; cellular iron ion homeostasis; negative regulation of translation; response to iron(II) ion; osteoclast differentiation; iron ion transport; protoporphyrinogen IX biosynthetic process; intestinal absorption; aging; post-embryonic development
Research Articles on IREB2	**1.** All four variants were significantly associated (P < 1.4 x 10(-6)) with blood DNA methylation of IREB2, CHRNA3 and PSMA4, of which two, including IREB2 and PSMA4, were also differentially methylated in Chronic obstructive pulmonary disease cases and controls
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