Protein Argonaute-2 (EIF2C2) Mouse Recombinant Protein

PRODUCT OVERVIEW

Product Name	Protein argonaute-2 (Eif2c2), Recombinant Protein
Full Product Name	Recombinant Mouse Protein argonaute-2 (Eif2c2) , partial
Product Gene Name	Eif2c2 recombinant protein
Product Synonym Gene Name	Eif2c2
Sequence	LVVVILPGKT PVYAEVKRVG DTVLGMATQC VQMKNVQRTT PQTLSNLCLK INVKLGGVNN ILLPQGRPPV FQQPVIFLGA DVTHPPAGDG KKPSIAAVVG SMDAHPNRYC ATVRVQQHRQ EIIQDLAAMV RELLIQFYKS TRFKPTRIIF YRDGVSEGQF QQVLHHELLA IREACIKLEK DYQPGITFIV VQKRHHTRLF CTDKNERVGK SGNIPAGTTV DTKITHPTEF DFYLCSHAGI QGTSRPSHYH VLWDDNRFSS DELQILTYQL CHTYVRCTRS VSIPAPAYYA HLVAFRARYH LV
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	97,304 Da
Sequence Positions	518-819aa; Partial(Piwi Domain)
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q8CJG0
Species	Mouse
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Eif2c2 recombinant protein	This gene encodes a member of the Argonaute family of proteins which play a role in RNA interference. The encoded protein is highly basic, and contains a PAZ domain and a PIWI domain. It may interact with dicer1 and play a role in short-interfering-RNA-mediated gene silencing. Multiple transcript variants encoding different isoforms have been found for this gene.
Other Notes	Small volumes of Eif2c2 recombinant protein 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 Eif2c2 purchase	MBS1351119 is a recombinant protein targeting Eif2c2. Also known as Recombinant Mouse Protein argonaute-2 (Eif2c2) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Eif2c2. It may not necessarily be applicable to this product.

NCBI GI #	219842353
NCBI GeneID	239528

NCBI Accession #	NP_694818.3
UniProt Primary Accession #	Q8CJG0
UniProt Secondary Accession #	Q4VAB3; Q571J6; A1A563
UniProt Related Accession #	Q8CJG0
GenBank Nucleotide #	NM_153178.4
NCBI Official Full Name	protein argonaute-2
NCBI Official Synonym Full Names	argonaute RISC catalytic subunit 2
NCBI Official Symbol	Ago2
NCBI Official Synonym Symbols	Eif2c2; Gerp95; Gm10365; AI225898; AL022874; AW546247; mKIAA4215; 1110029L17Rik; 2310051F07Rik
UniProt Protein Name	Protein argonaute-2
UniProt Synonym Protein Names	Argonaute RISC catalytic component 2; Eukaryotic translation initiation factor 2C 2
UniProt Gene Name	Ago2
UniProt Synonym Gene Names	Eif2c2; Kiaa4215; Argonaute2; mAgo2; eIF-2C 2; eIF2C 2
NCBI Protein Information	protein argonaute-2
UniProt Comments for Eif2c2	Required for RNA-mediated gene silencing (RNAi) by the RNA-induced silencing complex (RISC). The 'minimal RISC' appears to include AGO2 bound to a short guide RNA such as a microRNA (miRNA) or short interfering RNA (siRNA). These guide RNAs direct RISC to complementary mRNAs that are targets for RISC-mediated gene silencing. The precise mechanism of gene silencing depends on the degree of complementarity between the miRNA or siRNA and its target. Binding of RISC to a perfectly complementary mRNA generally results in silencing due to endonucleolytic cleavage of the mRNA specifically by AGO2. Binding of RISC to a partially complementary mRNA results in silencing through inhibition of translation, and this is independent of endonuclease activity. May inhibit translation initiation by binding to the 7-methylguanosine cap, thereby preventing the recruitment of the translation initiation factor eIF4-E. May also inhibit translation initiation via interaction with EIF6, which itself binds to the 60S ribosomal subunit and prevents its association with the 40S ribosomal subunit. The inhibition of translational initiation leads to the accumulation of the affected mRNA in cytoplasmic processing bodies (P-bodies), where mRNA degradation may subsequently occur. In some cases RISC-mediated translational repression is also observed for miRNAs that perfectly match the 3' untranslated region (3'-UTR). Can also up-regulate the translation of specific mRNAs under certain growth conditions. Binds to the AU element of the 3'-UTR of the TNF (TNF-alpha) mRNA and up-regulates translation under conditions of serum starvation. Also required for transcriptional gene silencing (TGS), in which short RNAs known as antigene RNAs or agRNAs direct the transcriptional repression of complementary promoter regions. Regulates lymphoid and erythroid development and function, and this is independent of endonuclease activity.
Research Articles on Eif2c2	**1.** AGO2-mediated cleavage of targets is more common than previously thought. This may explain the vital role of endonuclease activity in controlling miRNA-mediated gene regulation.
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