

**EIF2C2 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP1903a****Specification**

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**EIF2C2 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [O8CJG0](#)**EIF2C2 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 239528**Other Names**

Protein argonaute-2 {ECO:0000255|HAMAP-Rule:MF\_03031}, Argonaute2 {ECO:0000255|HAMAP-Rule:MF\_03031}, mAgo2, 3126n2 {ECO:0000255|HAMAP-Rule:MF\_03031}, Argonaute RISC catalytic component 2, Eukaryotic translation initiation factor 2C 2 {ECO:0000255|HAMAP-Rule:MF\_03031}, eIF-2C 2 {ECO:0000255|HAMAP-Rule:MF\_03031}, eIF2C 2 {ECO:0000255|HAMAP-Rule:MF\_03031}, Piwi/argonaute family protein mEIF2C2, Protein slicer {ECO:0000255|HAMAP-Rule:MF\_03031}, Ago2, Eif2c2, Kiaa4215

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP1903a](/product/products/AP1903a) was selected from the N-term region of human EIF2C2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**EIF2C2 Antibody (N-term) Blocking Peptide - Protein Information****Name** Ago2**Synonyms** Eif2c2, Kiaa4215**Function**

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.

#### **Cellular Location**

Cytoplasm, P-body {ECO:0000255|HAMAP- Rule:MF\_03031}. Nucleus {ECO:0000255|HAMAP-Rule:MF\_03031} Note=Translational repression of mRNAs results in their recruitment to P-bodies. Translocation to the nucleus requires IMP8 {ECO:0000255|HAMAP-Rule:MF\_03031}

#### **Tissue Location**

Ubiquitous expression in 9.5 day embryos with highest levels in forebrain, heart, limb buds, and branchial arches

### **EIF2C2 Antibody (N-term) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

### **EIF2C2 Antibody (N-term) Blocking Peptide - Images**

### **EIF2C2 Antibody (N-term) Blocking Peptide - Background**

EIF2C2 is 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.

### **EIF2C2 Antibody (N-term) Blocking Peptide - References**

Rivas, F.V., et al., Nat Struct Mol Biol 12(4):340-349 (2005).Liu, J., et al., Science 305(5689):1437-1441 (2004).Nelson, P.T., et al., RNA 10(3):387-394 (2004).Sasaki, T., et al., Genomics 82(3):323-330 (2003).Doi, N., et al., Curr. Biol. 13(1):41-46 (2003).