

**EIF2C2 Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP1903a****Specification**

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**EIF2C2 Antibody (N-term) - Product Information**

Application	WB, IHC-P, FC,E
Primary Accession	<a href="#">O8CJG0</a>
Other Accession	<a href="#">O9OZ81</a> , <a href="#">O77503</a> , <a href="#">O9UKV8</a> , <a href="#">O6QME8</a>
Reactivity	Human
Predicted	Bovine, Rabbit, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	97304
Antigen Region	27-59

**EIF2C2 Antibody (N-term) - 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 melf2C2, Protein slicer {ECO:0000255|HAMAP-Rule:MF\_03031}, Ago2, Eif2c2, Kiaa4215

**Target/Specificity**

This EIF2C2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 27-59 amino acids from the N-terminal region of human EIF2C2.

**Dilution**

WB~~1:1000  
IHC-P~~1:10~50  
FC~~1:10~50

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

EIF2C2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## EIF2C2 Antibody (N-term) - 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

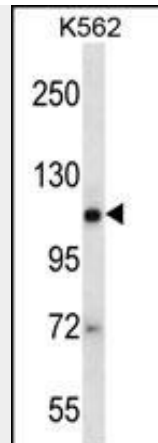
Ubiquitous expression in 9.5 day embryos with highest levels in forebrain, heart, limb buds, and branchial arches

## EIF2C2 Antibody (N-term) - Protocols

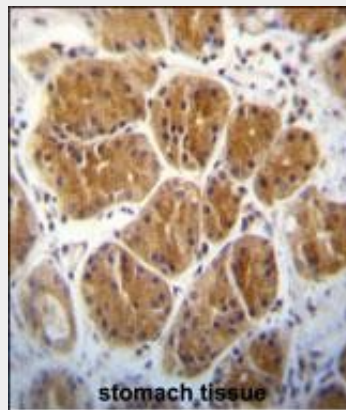
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

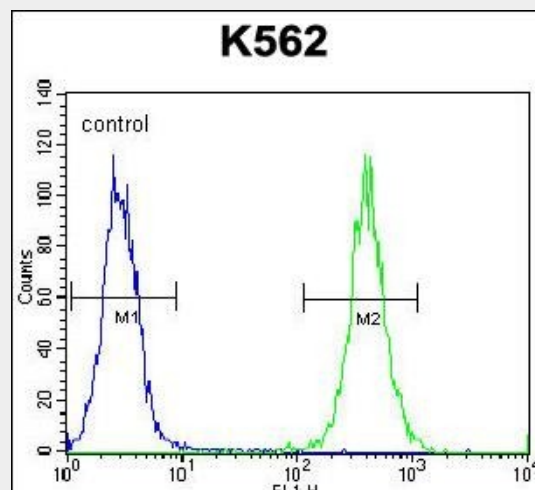
## EIF2C2 Antibody (N-term) - Images



EIF2C2 Antibody (N-term Q41) (Cat. #AP1903a) western blot analysis in K562 cell line lysates (35ug/lane). This demonstrates the EIF2C2 antibody detected the EIF2C2 protein (arrow).



EIF2C2 Antibody (N-term) (Cat. #AP1903a) immunohistochemistry analysis in formalin fixed and paraffin embedded human stomach tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of EIF2C2 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



EIF2C2 Antibody (N-term) (Cat. #AP1903a) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

#### EIF2C2 Antibody (N-term) - 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) - 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).