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EIF2C2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1903a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q8CJG0
Other Accession	Q9QZ81, O77503, Q9UKV8, Q6QME8
Reactivity	Human
Predicted	Bovine, Rabbit, Rat, Mouse, Canine, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB8013
Calculated MW	97304
Antigen Region	27-59

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	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~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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.

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 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

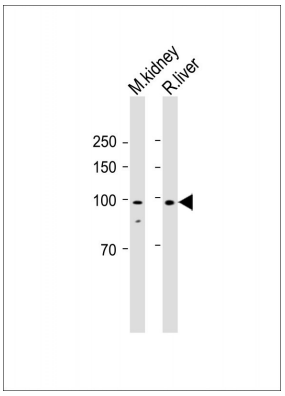
Background

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.

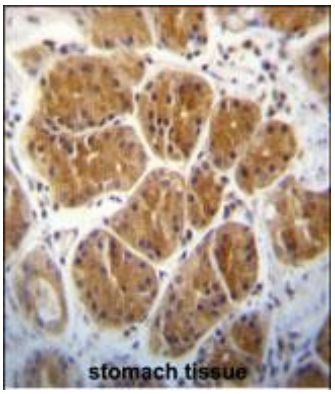
References

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).

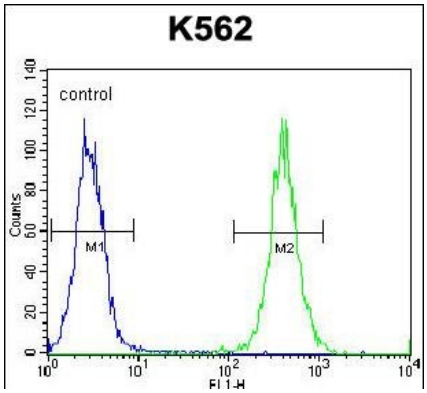
Images



All lanes: Anti-EIF2C2 Antibody (N-term) at 1:2000 dilution Lane 1: Mouse kidney lysate Lane 2: Rat liver lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 97 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



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.