

# Product datasheet

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ARG59343 anti-AGO2 / Argonaute 2 antibody

Package: 50 μg Store at: -20°C

#### **Summary**

Product Description Rabbit Polyclonal antibody recognizes AGO2 / Argonaute 2

Tested Reactivity Hu, Ms, Rat

Predict Reactivity Bov, Dog, Hm, Hrs, Mk, Rb

Tested Application WB

Host Rabbit

**Clonality** Polyclonal

Isotype IgG

Target Name AGO2 / Argonaute 2

Species Human

Immunogen Synthetic peptide corresponding to aa. 129-169 of Human AGO2 / Argonaute 2.

(KVSIKWVSCVSLQALHDALSGRLPSVPFETIQALDVVMRHL)

Conjugation Un-conjugated

Alternate Names EC 3.1.26.n2; eIF2C 2; PPD; Protein slicer; Argonaute RISC catalytic component 2; EIF2C2; Argonaute2;

PAZ Piwi domain protein; Q10; hAgo2; Protein argonaute-2; Eukaryotic translation initiation factor 2C 2;

eIF-2C2

### **Application Instructions**

Application table	Application	Dilution
	WB	0.1 - 0.5 μg/ml
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

### **Properties**

Form Liquid

**Purification** Affinity purification with immunogen.

Buffer 0.9% NaCl, 0.2% Na2HPO4, 0.05% Sodium azide and 5% BSA.

Preservative 0.05% Sodium azide

Stabilizer 5% BSA

Concentration 0.5 mg/ml

Storage instruction For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot

and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed

before use.

#### Bioinformation

Gene Symbol

AGO2

Gene Full Name

argonaute RISC catalytic component 2

Background

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. [provided by RefSeq, Sep 2009]

**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 RISCmediated 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. [UniProt]

Calculated Mw

97 kDa

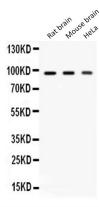
PTM

Hydroxylated. 4-hydroxylation appears to enhance protein stability but is not required for miRNA-binding or endonuclease activity. [UniProt]

Cellular Localization

Cytoplasm, P-body. Nucleus. Note=Translational repression of mRNAs results in their recruitment to P-bodies. Translocation to the nucleus requires IMP8. [UniProt]

## **Images**



#### ARG59343 anti-AGO2 / Argonaute 2 antibody WB image

Western blot: Rat brain, Mouse brain and HeLa lysates stained with ARG59343 anti-AGO2 / Argonaute 2 antibody at 0.5  $\mu$ g/ml dilution.