10320 Camino Santa Fe, Suite G
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# KD-Validated Anti-Argonaute RISC catalytic component 2 Rabbit Monoclonal Antibody

**Rabbit monoclonal antibody**
**Catalog # AGI2308**

## Specification

### KD-Validated Anti-Argonaute RISC catalytic component 2 Rabbit Monoclonal Antibody - Product Information

| | |
|---|---|
| Application | **WB, FC, ICC** |
| Primary Accession | Q9UKV8 |
| Reactivity | **Rat, Human, Mouse** |
| Clonality | **Monoclonal** |
| Isotype | **Rabbit IgG** |
| Calculated MW | **Predicted, 97 kDa , observed, 97 kDa KDa** |
| Gene Name | **AGO2** |
| Aliases | **AGO2; Argonaute RISC Catalytic Component 2; LINC00980; EIF2C2; Q10; Cancer Susceptibility Candidate 7 (Non-Protein Coding); Eukaryotic Translation Initiation Factor 2C, 2; PAZ Piwi Domain Protein; Protein Argonaute-2; Protein Slicer; HAGO2; CASC7; PPD; Eukaryotic Translation Initiation Factor 2C 2; Long Intergenic Non-Protein Coding RNA 980; Argonaute 2, RISC Catalytic Component; EC 3.1.26.N2; EC 3.1.26.N1; Argonaute 2; Argonaute2; EIF-2C 2; LESKRES; EIF2C 2; HAgo2** |
| Immunogen | **A synthesized peptide derived from human Argonaute 2** |

### KD-Validated Anti-Argonaute RISC catalytic component 2 Rabbit Monoclonal Antibody - Additional Information

| | |
|---|---|
| Gene ID | **27161** |

**Other Names**
Protein argonaute-2 {ECO:0000255|HAMAP-Rule:MF_03031}, Argonaute2 {ECO:0000255|HAMAP-Rule:MF_03031}, hAgo2, 3.1.26.n2 {ECO:0000255|HAMAP-Rule:MF_03031, ECO:0000269|PubMed:15105377, ECO:0000269|PubMed:23746446}, 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}, PAZ Piwi domain protein, PPD, Protein slicer {ECO:0000255|HAMAP-Rule:MF_03031}, AGO2 (<a href="http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=3263" target="_blank">HGNC:3263</a>), EIF2C2

### KD-Validated Anti-Argonaute RISC catalytic component 2 Rabbit Monoclonal Antibody - Protein Information

**Name** AGO2 (HGNC:3263)

**Synonyms** EIF2C2

**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.

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

## KD-Validated Anti-Argonaute RISC catalytic component 2 Rabbit Monoclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## KD-Validated Anti-Argonaute RISC catalytic component 2 Rabbit Monoclonal Antibody - Images

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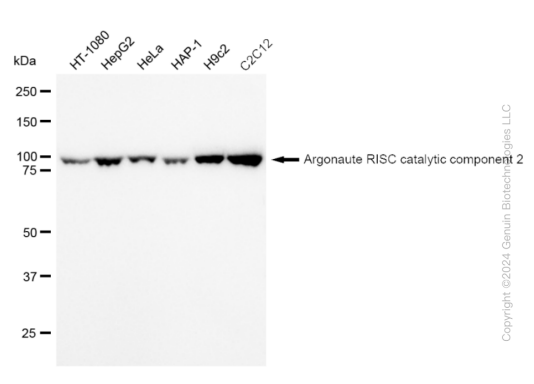
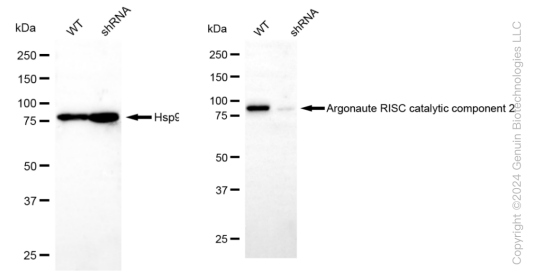
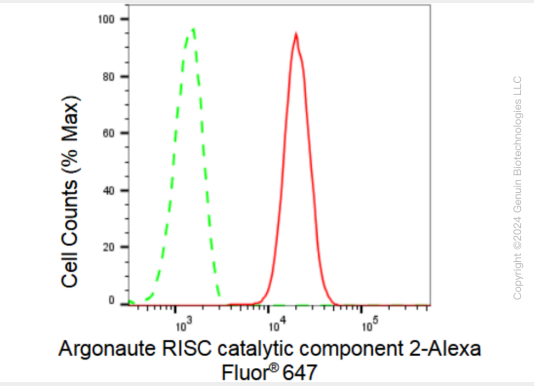


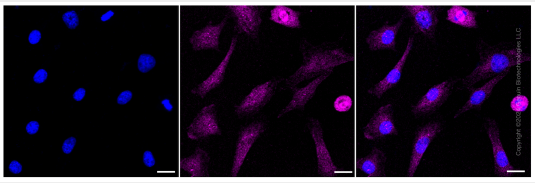

Western blotting analysis using anti-Argonaute RISC catalytic component 2 antibody (Cat#AGI2308). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Argonaute RISC catalytic component 2 antibody (Cat#AGI2308, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.




Western blotting analysis using anti-Argonaute RISC catalytic component 2 antibody (Cat#AGI2308). Argonaute RISC catalytic component 2 expression in wild type (WT) and Argonaute RISC catalytic component 2 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-Argonaute RISC catalytic component 2 antibody (Cat#AGI2308, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.




Flow cytometric analysis of Argonaute RISC catalytic component 2 expression in C2C12 cells using Argonaute RISC catalytic component 2 antibody (Cat#AGI2308, 1:2,000). Green, isotype control; red, Argonaute RISC catalytic component 2.



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Immunocytochemical staining of C2C12 cells with Argonaute RISC catalytic component 2 antibody (Cat#AGI2308, 1:1,000). Nuclei were stained blue with DAPI; Argonaute RISC catalytic component 2 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.