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Anti-Argonaute 2 AGO2 Rabbit Monoclonal Antibody
Catalog # ABO14097

Specification

Anti-Argonaute 2 AGO2 Rabbit Monoclonal Antibody - Product Information

Application	**WB, IHC, IF, ICC, IP, FC**
Primary Accession	Q9UKV8
Host	**Rabbit**
Isotype	**Rabbit IgG**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Liquid**

Description
Anti-Argonaute 2 AGO2 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Anti-Argonaute 2 AGO2 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 (HGNC:3263), EIF2C2

Calculated MW
97208 MW KDa

Application Details
WB 1:500-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200
IP 1:50
FC 1:50

Subcellular Localization
Cytoplasm, P-body. Nucleus. Translational repression of mRNAs results in their recruitment to P-bodies. Translocation to the nucleus requires IMP8.

Contents
Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen
A synthesized peptide derived from human Argonaute 2

Purification
Affinity-chromatography

Storage	**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

Anti-Argonaute 2 AGO2 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

Anti-Argonaute 2 AGO2 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

Anti-Argonaute 2 AGO2 Rabbit Monoclonal Antibody - Images

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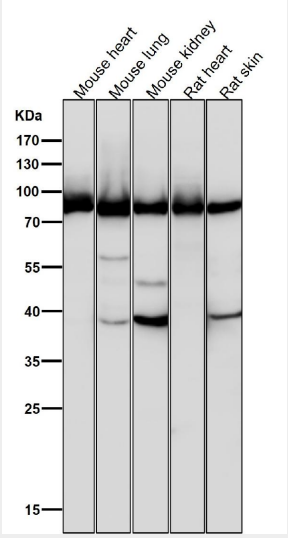
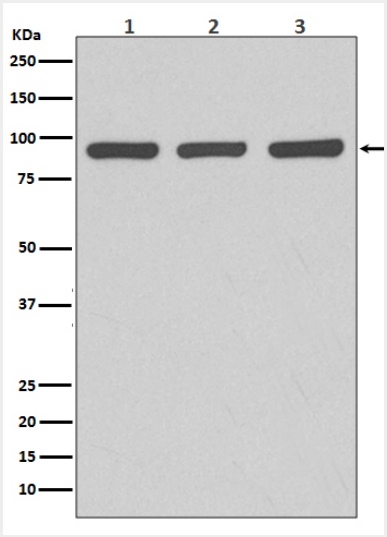


All lanes use the Antibody at 1:2K dilution for 1 hour at room temperature.



Western blot analysis of Argonaute 2 expression in (1) HeLa cell lysate; (2) RAW 264.7 cell lysate; (3) C6 cell lysate.

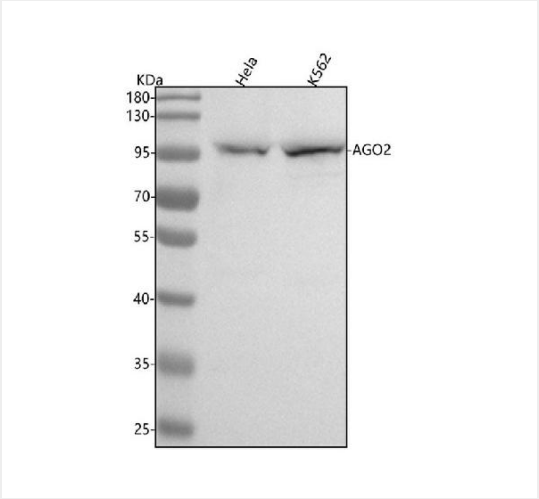


Figure 1. Western blot analysis of AGO2 using anti-AGO2 antibody (M00189).

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Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human K562 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-AGO2 antigen affinity purified monoclonal antibody (Catalog # M00189) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for AGO2 at approximately 97 kDa. The expected band size for AGO2 is at 97 kDa.