

Product datasheet

Anti-Argonaute-2 antibody ab5072

★★★★★ [4 Abreviews](#) [26 References](#) [2 Images](#)

Overview

Product name	Anti-Argonaute-2 antibody
Description	Rabbit polyclonal to Argonaute-2
Host species	Rabbit
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Drosophila melanogaster Does not react with: Human
Immunogen	Synthetic peptide corresponding to Drosophila melanogaster Argonaute-2 aa 550-650 conjugated to keyhole limpet haemocyanin. (Peptide available as ab24177)
General notes	<p>Please note the immunogen for this antibody has no sequence alignment to human dIFC2. When tested in human, non-specific binding is observed.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS
Purity	Immunogen affinity purified

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab5072 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (1)	1/500 - 1/1000. Detects a band of approximately 55, 95 kDa (predicted molecular weight: 106 kDa). Detects a band of approximately 55 + 95 kDa (predicted molecular weight: 106 kDa). Swissprot suggests Ago 2 may have 50kDa form. Not yet tested in other applications. Optimal dilutions/concentrations should be determined by the end user.

Target

Function

Required for RNA-mediated gene silencing (RNAi) by the RNA-induced silencing complex (RISC). The 'minimal RISC' appears to include EIF2C2/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 EIF2C2/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 upregulate 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 upregulates 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.

Sequence similarities

Belongs to the argonaute family. Ago subfamily.
Contains 1 PAZ domain.
Contains 1 Piwi domain.

Domain

The Piwi domain may perform RNA cleavage by a mechanism similar to that of RNase H. However while RNase H utilizes a triad of Asp-Asp-Glu (DDE) for metal ion coordination, this protein appears to utilize a triad of Asp-Asp-His (DDH).

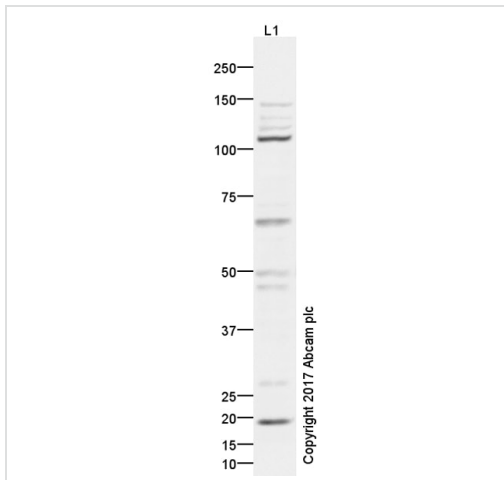
Post-translational modifications

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

Cellular localization

Cytoplasm > P-body. Nucleus. Translational repression of mRNAs results in their recruitment to P-

Images



Western blot - Anti-Argonaute-2 antibody (ab5072)

Anti-Argonaute-2 antibody (ab5072) at 1 µg/ml + Schneider L2 whole cell lysate ([ab14893](#)) at 20 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) at 1/50000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

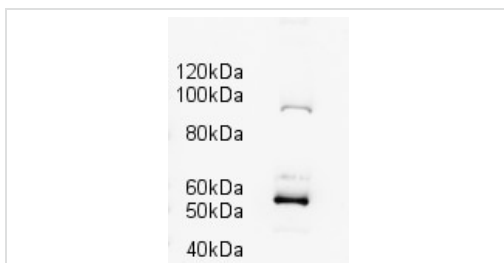
Predicted band size: 106 kDa

Observed band size: 106 kDa

Additional bands at: 120 kDa, 19 kDa, 50 kDa, 65 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 30 seconds

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab5072 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution [ab133406](#).



Western blot - Anti-Argonaute-2 antibody (ab5072)

Anti-Argonaute-2 antibody (ab5072) at 1/500 dilution + Drosophila lysate at 20 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) ([ab6721](#))

Predicted band size: 106 kDa

Observed band size: 55,95 kDa

Rabbit polyclonal to Ago2 (ab5072) at 1/500 on Drosophila lysate (20ug).

Detects a band of approximately 55 + 95 kDa (predicted molecular weight: 106 kDa). Swissprot suggests Ago 2 may have 50kDa form.

Secondary antibody - Goat polyclonal to rabbit IgG (HRP) - **ab6721**.

Swissprot suggests Ago 2 may have 50kDa form.

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