abcam

Product datasheet

Anti-Argonaute-2 antibody [2E12-1C9] - BSA and Azide free ab57113

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Overview

Product name	Anti-Argonaute-2 antibody [2E12-1C9] - BSA and Azide free
Description	Mouse monoclonal [2E12-1C9] to Argonaute-2 - BSA and Azide free
Host species	Mouse
Tested applications	**Suitable for:** WB, ICC/IF, IHC-P, Flow Cyt
Species reactivity	**Reacts with:** Human, Recombinant fragment **Does not react with:** Xenopus laevis
Immunogen	Recombinant fragment corresponding to Human Argonaute-2 aa 483-859.
Positive control	IHC-P: Human stomach. Flow cyt: HeLa cells. WB: HEK-293 cell.
General notes	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. 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

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: 7.4 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	2E12-1C9
Isotype	IgG1

Light chain type kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab57113 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	★★★★☆ (5)	Use at an assay dependent concentration. Predicted molecular weight: 97 kDa.
ICC/IF		Use at an assay dependent concentration.
IHC-P	★★★★☆ (1)	Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target

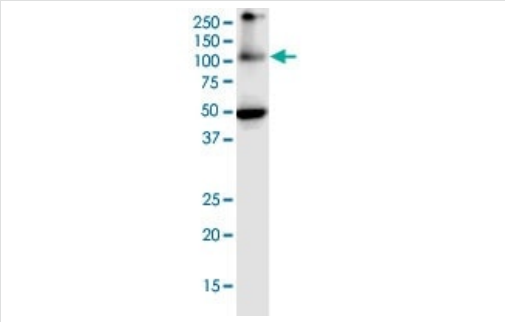
Function Required for RNA-mediated gene silencing (RNAi) by the RNA-induced silencing complex (RISC). The 'minimal RISC' appears to include EIF2C2/AGO2 bound to a short guide RNA such as a microRNA (miRNA) or short interfering RNA (siRNA). These guide RNAs direct RISC to complementary mRNAs that are 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-bodies. Translocation to the nucleus requires IMP8.

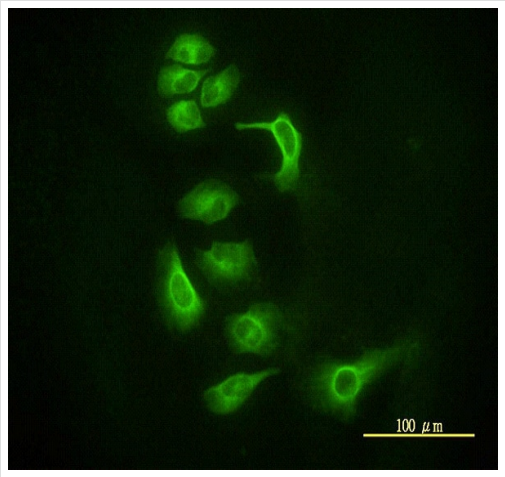
Images



Western blot - Anti-Argonaute-2 antibody [2E12-1C9] - BSA and Azide free (ab57113)

Anti-Argonaute-2 antibody [2E12-1C9] - BSA and Azide free (ab57113) + MCF7 cell lysate

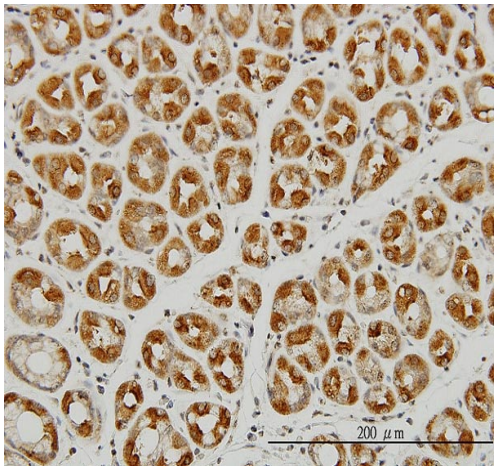
Predicted band size: 97 kDa
Observed band size: 97 kDa



Immunocytochemistry/ Immunofluorescence - Anti-Argonaute-2 antibody [2E12-1C9] - BSA and Azide free (ab57113)

Ago2 / eIF2C2 antibody (ab57113) used in immunofluorescence at 10ug/ml on HeLa cells.

This image was generated using the ascites version of the product.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Argonaute-2 antibody [2E12-1C9] - BSA and Azide free (ab57113)

Ago2 / eIF2C2 antibody (ab57113) used in immunohistochemistry at 3ug/ml on formalin fixed and paraffin embedded human stomach.

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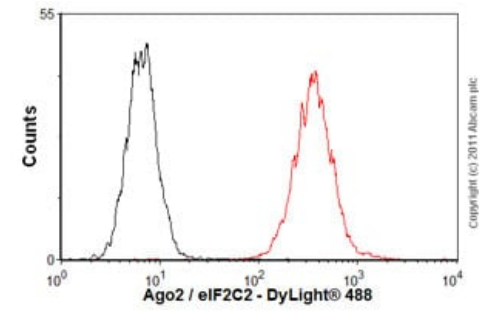
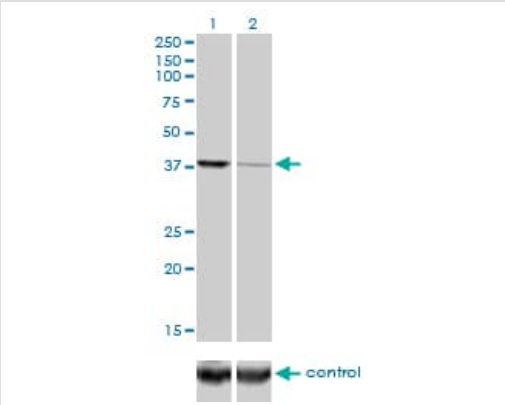


Flow Cytometry - Anti-Argonaute-2 antibody [2E12-1C9] - BSA and Azide free (ab57113)

Overlay histogram showing HeLa cells stained with ab57113 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab57113, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HeLa cells fixed with 4% paraformaldehyde/permeabilized in 0.1% PBS-Tween used under the same conditions.

This image was generated using the ascites version of the product.



Western blot - Anti-Argonaute-2 antibody [2E12-1C9] - BSA and Azide free (ab57113)

All lanes : Anti-Argonaute-2 antibody [2E12-1C9] - BSA and Azide free (ab57113) at 5 µg/ml

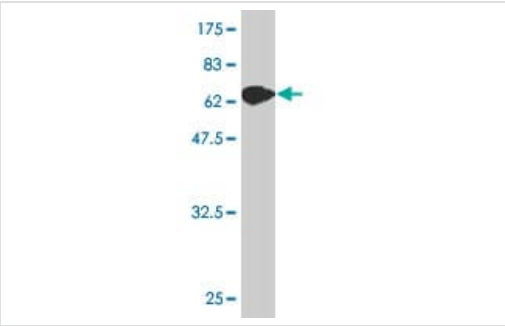
Lane 1 : Argonaute-2 overexpressing HEK-293 cells line
Lane 2 : Argonaute-2 overexpressing HEK-293 cell line cotransfected with Argonaute-2 validated chimera RNAi.

Predicted band size: 97 kDa
Observed band size: 42 kDa

The band at about 42 kDa corresponds to the recombinant fragment of human Argonaute-2 aa 483-859 (377 aa length).

The loading control is GAPDH.

This image was generated using the ascites version of the product.



Western blot - Anti-Argonaute-2 antibody [2E12-1C9] - BSA and Azide free (ab57113)

Western Blot detection against the recombinant fragment imunogen (68 KDa for a.a. ~377 plus GST tag +26 kDa).

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