

Argonaute 3 Antibody / RISC Complex and Post-Transcriptional Regulation Marker (RQ6311)

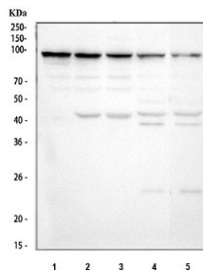
Catalog No.	Formulation	Size
RQ6311	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

[Bulk quote request](#)

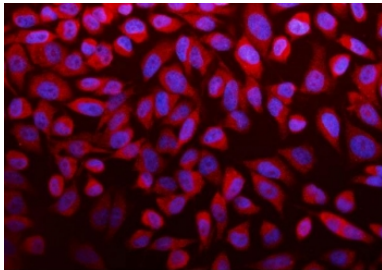
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9H9G7
Localization	Cytoplasmic
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Immunofluorescence (FFPE) : 5ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This Argonaute 3 Antibody / RISC Complex and Post-Transcriptional Regulation Marker is available for research use only.



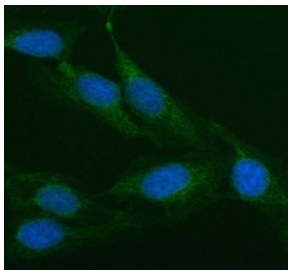
Argonaute 3 Antibody K562 WB. Western blot analysis of human K562 cell lysate using Argonaute 3 antibody detecting AGO3. A band is observed at approximately 95-100 kDa, consistent with the predicted molecular weight of AGO3. The detected signal aligns with AGO3 as a cytoplasmic component of the RISC complex involved in RNA silencing and post-transcriptional gene regulation.



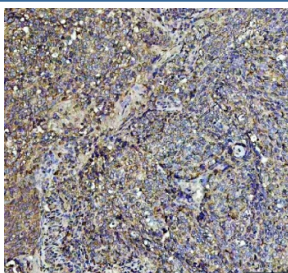
Argonaute 3 Antibody Multi-Sample WB. Western blot analysis of human and rodent lysates using Argonaute 3 antibody detecting AGO3. Lane 1: human K562, Lane 2: human PC-3, Lane 3: human Caco-2, Lane 4: rat brain, Lane 5: mouse brain. A prominent band is observed at approximately 95-100 kDa across samples, consistent with the predicted molecular weight of AGO3. Additional lower molecular weight bands may represent degradation or non-specific signal. The primary banding pattern supports AGO3 expression as a component of the RISC complex involved in RNA silencing and post-transcriptional gene regulation.



Argonaute 3 Antibody HeLa IF. Immunofluorescence analysis of FFPE human HeLa cells stained with Argonaute 3 antibody detecting AGO3 (red). Predominant cytoplasmic staining with additional nucleoplasmic signal is observed, consistent with AGO3 localization in RISC-associated compartments involved in RNA silencing and post-transcriptional gene regulation. DAPI nuclear stain (blue) highlights nuclei. HIER: steam section in pH 6 citrate buffer for 20 min.



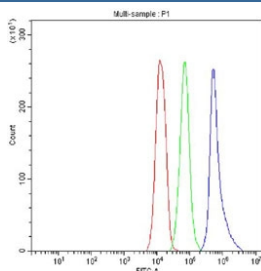
Argonaute 3 Antibody U-2 OS IF. Immunofluorescence analysis of FFPE human U-2 OS cells stained with Argonaute 3 antibody detecting AGO3 (green). Predominant cytoplasmic staining with fine granular distribution is observed, consistent with localization of AGO3 in RISC-associated ribonucleoprotein complexes involved in RNA silencing and post-transcriptional gene regulation. DAPI nuclear stain (blue) highlights nuclei. HIER: steam section in pH 6 citrate buffer for 20 min.



Argonaute 3 Antibody Cervical Carcinoma IHC. Immunohistochemistry analysis of FFPE human cervical carcinoma tissue stained with Argonaute 3 antibody detecting AGO3. Tumor cells show cytoplasmic staining with variable intensity and focal nucleoplasmic signal, consistent with AGO3 localization in RISC-associated complexes involved in RNA silencing and post-transcriptional gene regulation. The staining highlights malignant epithelial regions, while stromal components show comparatively reduced signal. Hematoxylin counterstain highlights nuclei in blue. HIER: boil tissue sections in pH 8 EDTA for 20 min and allow to cool before testing.



Argonaute 3 Antibody Rat Brain IHC. Immunohistochemistry analysis of FFPE rat brain tissue stained with Argonaute 3 antibody detecting AGO3. Neuronal and glial cells show cytoplasmic staining with scattered nucleoplasmic signal, consistent with AGO3 localization in RNA silencing and RISC-associated complexes involved in post-transcriptional gene regulation. The staining is distributed throughout the neural parenchyma, while background remains low. Hematoxylin counterstain highlights nuclei in blue. HIER: boil tissue sections in pH 8 EDTA for 20 min and allow to cool before testing.



Argonaute 3 Antibody Jurkat FACS. Flow cytometry analysis of fixed and permeabilized human Jurkat cells stained with Argonaute 3 antibody detecting AGO3. The antibody signal (blue) shows a clear rightward shift compared to cells alone (red) and isotype control (green), indicating positive intracellular detection of AGO3 following fixation and permeabilization. This pattern is consistent with AGO3 as a cytoplasmic and nucleoplasmic component of RISC-associated complexes involved in RNA silencing and post-transcriptional gene regulation.

Description

Argonaute 3 (AGO3), also known as EIF2C3, is a member of the Argonaute protein family that functions in RNA-mediated gene silencing and post-transcriptional regulation. Argonaute 3 Antibody is used to detect this protein, which serves as a core component of the RNA-induced silencing complex (RISC) and contributes to gene expression control through interactions with microRNAs and small interfering RNAs.

AGO3 belongs to a conserved family of RNA-binding proteins that includes AGO1, AGO2, AGO3, and AGO4. These proteins associate with short RNA guides to direct sequence-specific recognition of target messenger RNAs, resulting in translational repression or mRNA destabilization. While AGO2 is the primary catalytic Argonaute responsible for endonucleolytic cleavage of target transcripts, AGO3 is thought to play a more regulatory role, contributing to stabilization and function of RISC complexes.

Structurally, AGO3 contains conserved PAZ and PIWI domains that mediate binding of small RNAs and interaction with target transcripts. The PAZ domain anchors the 3' end of guide RNAs, while the PIWI domain adopts an RNase H-like fold that supports RISC assembly. Although AGO3 has limited slicing activity compared to AGO2, its presence is essential for proper formation and function of RNA silencing complexes.

AGO3 is predominantly localized in the cytoplasm, where it is enriched in processing bodies and other ribonucleoprotein granules involved in mRNA storage and turnover. It may also be detected in the nucleoplasm, reflecting dynamic regulation of RNA processing pathways. Its widespread expression across tissues highlights the importance of RNA interference mechanisms in maintaining cellular homeostasis.

Dysregulation of AGO3 and related Argonaute proteins has been implicated in cancer and other diseases involving altered gene expression. Changes in AGO3 expression can affect microRNA-mediated repression and disrupt regulatory networks controlling proliferation, differentiation, and stress responses. These features support the use of an Argonaute 3 Antibody for studying RNA silencing, gene regulation, and disease-associated changes in post-transcriptional control.

Explore our [AGO3 Antibody - Argonaute RNA Silencing and RISC Complex Marker](#) (PCRP-AGO3-1C5) page for a broader view of AGO3 expression and RNA interference biology.

Application Notes

Optimal dilution of the Argonaute 3 Antibody / RISC Complex and Post-Transcriptional Regulation Marker should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids M1-S181) was used as the immunogen for the Argonaute 3 antibody.

Storage

After reconstitution, the Argonaute 3 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.

