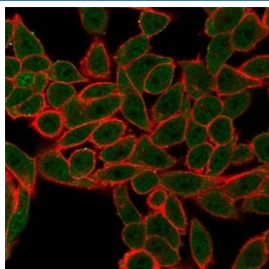


AGO3 Antibody / Argonaute RNA Silencing and RISC Complex Marker [clone PCR-AGO3-1C5] (V9391)

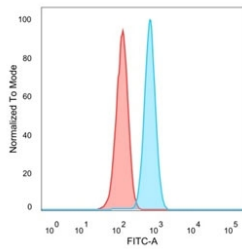
Catalog No.	Formulation	Size
V9391-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9391-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9391SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

[Bulk quote request](#)

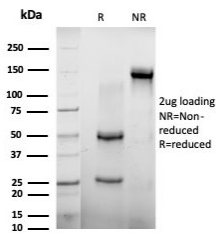
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	PCR-AGO3-1C5
Purity	Protein A/G affinity
UniProt	Q9H9G7
Localization	Cytoplasm, Nucleus
Applications	ELISA (order BSA-free Format For Coating) : Flow Cytometry : 1-2ug/million cells Immunofluorescence : 1-2ug/ml
Limitations	This AGO3 Antibody / Argonaute RNA Silencing and RISC Complex Marker is available for research use only.



AGO3 Antibody HeLa IF. Immunofluorescence analysis of PFA-fixed human HeLa cells stained with AGO3 antibody detecting Argonaute 3 (green), clone PCR-AGO3-1C5. Cytoplasmic puncta consistent with P-bodies and diffuse nucleoplasmic staining are observed, reflecting localization of AGO3 within RNA processing and RISC-associated compartments involved in post-transcriptional gene regulation. Phalloidin counterstain (red) highlights the actin cytoskeleton.

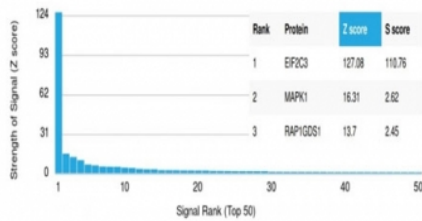


AGO3 Antibody HeLa FACS. Flow cytometry analysis of PFA-fixed human HeLa cells stained with AGO3 antibody detecting Argonaute 3, clone PCR-AGO3-1C5. The antibody signal (blue) shows a clear rightward shift compared to the isotype control (red), indicating positive intracellular detection of AGO3 following fixation and permeabilization. This pattern is consistent with AGO3 localization as a cytoplasmic and nucleoplasmic component of RNA silencing and RISC-associated complexes.



SDS-PAGE analysis of purified, BSA-free AGO3 antibody (clone PCR-AGO3-1C5) as confirmation of integrity and purity.

Human Protein Microarray Specificity Validation



AGO3 Antibody HuProt Microarray. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using AGO3 antibody detecting Argonaute 3, clone PCR-AGO3-1C5. The antibody shows a strong and highly specific signal for AGO3 with a markedly elevated Z-score and clear separation from lower-ranked proteins, resulting in a high S-score consistent with target specificity. Z-score represents signal intensity in standard deviations above the array mean, while S-score reflects the difference between the top-ranked target and subsequent signals, indicating relative binding specificity of the monoclonal antibody.

Description

Argonaute 3 (AGO3), also known as EIF2C3, is a member of the Argonaute protein family that plays a central role in RNA-mediated gene silencing. AGO3 Antibody, clone PCR-AGO3-1C5, is a mouse monoclonal antibody designed to detect this key component of the RNA-induced silencing complex (RISC), which regulates gene expression through interactions with small RNAs such as microRNAs and small interfering RNAs.

AGO3 belongs to a conserved family of proteins that includes AGO1, AGO2, AGO3, and AGO4 in humans. These proteins bind short RNA guides and facilitate sequence-specific recognition of target mRNAs, leading to translational repression or degradation. Within this family, AGO2 is the primary endonuclease responsible for mRNA cleavage, while AGO3 is thought to function mainly in non-cleavage regulatory pathways, contributing to fine-tuning of gene expression rather than direct catalytic activity.

Structurally, AGO3 contains characteristic PAZ and PIWI domains that enable 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, although less catalytically active than AGO2, remains essential for RISC assembly and stability. Through these domains, AGO3 participates in the formation and maintenance of functional silencing complexes.

AGO3 is predominantly localized in the cytoplasm, where it associates with processing bodies and other ribonucleoprotein granules involved in mRNA storage, degradation, and translational control. Its presence in these structures highlights its role in post-transcriptional regulation and dynamic control of mRNA fate. Expression of AGO3 is observed across many tissues, reflecting the widespread importance of RNA interference pathways in maintaining cellular homeostasis.

Dysregulation of Argonaute proteins, including AGO3, has been linked to cancer, developmental abnormalities, and other diseases characterized by altered gene expression networks. Changes in AGO3 levels can affect microRNA-mediated

repression and disrupt regulatory circuits controlling proliferation, differentiation, and stress responses. In cancer, altered Argonaute activity may contribute to oncogenic signaling by modifying microRNA function and downstream target expression.

The specificity of AGO3 within the Argonaute family, combined with its role in RISC-mediated gene regulation, makes it a valuable marker for studying RNA silencing mechanisms. Detection of AGO3 expression provides insight into post-transcriptional control processes and the broader regulatory landscape of gene expression, supporting the use of an AGO3 Antibody in investigations of RNA biology, cellular regulation, and disease-associated signaling pathways.

This antibody is part of a [broader antibody panel](#) offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the AGO3 Antibody / Argonaute RNA Silencing and RISC Complex Marker should be determined by the researcher.

Immunogen

Recombinant full-length human AGO3 protein was used as the immunogen for the AGO3 antibody.

Storage

Aliquot the AGO3 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

AGO3 antibody, Argonaute 3 antibody, EIF2C3 antibody, Argonaute family protein 3 antibody, RISC component AGO3 antibody, clone PCR-AGO3-1C5 antibody