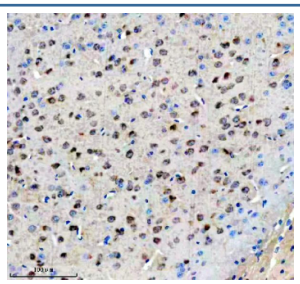
AGO3 Antibody / Argonaute-3 / eIF2C3 [clone GGF-1] (FY13405)

Catalog No.	Formulation	Size
FY13405	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

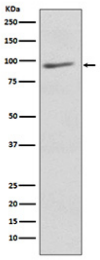
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	GGF-1
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q9H9G7
Localization	Cytoplasm, Nucleus
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200
Limitations	This AGO3 antibody is available for research use only.



Immunohistochemical staining of FFPE mouse brain tissue with AGO3 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Western blot testing of human brain tissue lysate with AGO3 antibody. Predicted molecular weight ~97 kDa.

Description

AGO3 antibody targets Argonaute-3 (AGO3), a member of the Argonaute family of RNA-binding proteins that function in RNA-mediated gene silencing. AGO3 is a core component of the RNA-induced silencing complex, where it associates with small RNAs to regulate post-transcriptional gene expression. The protein localizes predominantly to the cytoplasm, with enrichment in RNA granules such as processing bodies, reflecting its role in messenger RNA stability, translational repression, and RNA turnover. This reagent is a recombinant rabbit monoclonal antibody, providing defined specificity and lot-to-lot consistency for research use.

Functionally, AGO3 binds small regulatory RNAs and participates in sequence-guided recognition of target transcripts. Through these interactions, AGO3 contributes to fine-tuning gene expression programs involved in differentiation, stress responses, and maintenance of cellular homeostasis. While some Argonaute family members show specialized catalytic activity, AGO3 supports the broader RNA interference machinery and complements other Argonaute proteins to ensure robust post-transcriptional regulation. An AGO3 antibody supports studies examining RNA silencing pathways and RNA-protein interactions.

AGO3 expression is observed across multiple tissues and cell types, consistent with the widespread requirement for RNA-based gene regulation in eukaryotic cells. Its cytoplasmic localization and association with RNA granules provide insight into the organization and dynamics of RNA interference complexes. Analysis of AGO3 abundance and distribution helps clarify how small RNA pathways integrate into cellular regulatory networks.

From a biological and disease-relevance perspective, Argonaute proteins are widely studied in development, cancer biology, and neurological research due to their central roles in gene regulatory control. Dysregulation of RNA silencing machinery can alter cellular identity and contribute to disease-associated transcriptional changes. AGO3 therefore represents an important component of post-transcriptional control systems that shape cellular behavior under physiological and pathological conditions.

At the molecular level, AGO3 is encoded by the AGO3 gene and produces a protein of approximately 860 amino acids containing conserved PAZ and PIWI domains required for small RNA binding and target interaction. Regulation of AGO3 function depends on RNA availability, protein-protein interactions, and cellular context. An AGO3 antibody supports research applications focused on RNA interference, post-transcriptional gene regulation, and RNA biology, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the AGO3 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Argonaute-3 protein was used as the immunogen for the AGO3 antibody.

Storage

Store the AGO3 antibody at -20oC.