Product Datasheet

AGO1/EIF2C1 Antibody
NB100-2817

Unit Size: 0.1 mg

Store at -20C. Avoid freeze-thaw cycles.

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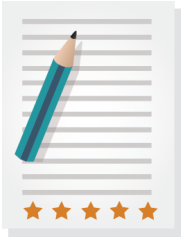
Updated 9/9/2025 v.20.1



NB100-2817

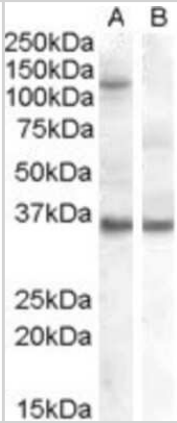
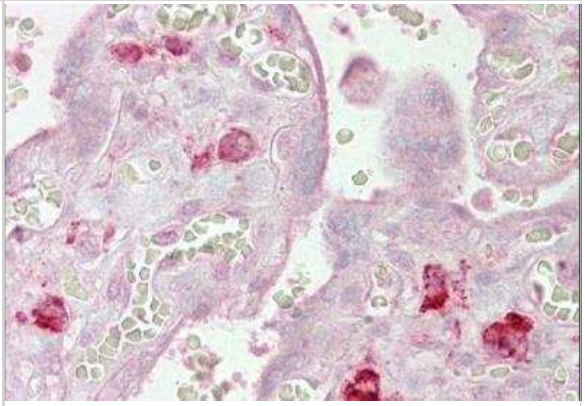
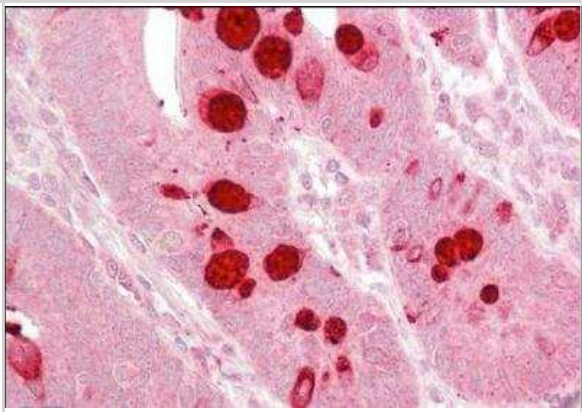
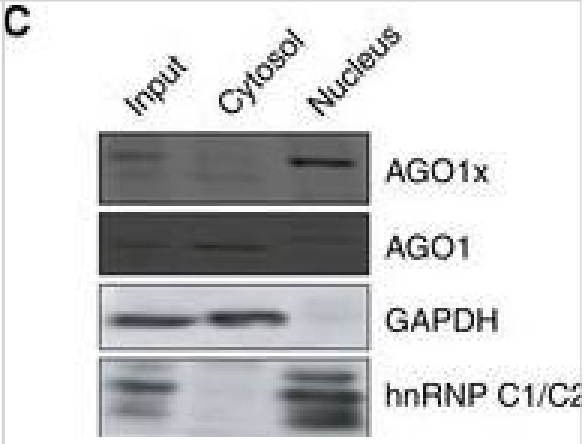
AGO1/EIF2C1 Antibody

Product Information	
Unit Size	0.1 mg
Concentration	0.5 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	Tris saline (20 mM Tris pH 7.3, 150 mM NaCl), 0.5% BSA

Product Description	
Description	Novus Biologicals Goat AGO1/EIF2C1 Antibody (NB100-2817) is a polyclonal antibody validated for use in IHC, WB, ELISA and ICC/IF. Anti-AGO1/EIF2C1 Antibody: Cited in 5 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Goat
Gene ID	26523
Gene Symbol	AGO1
Species	Human
Specificity/Sensitivity	This product is not expected to cross-react with EIF2C2, EIF2C3 and EIF2C4.
Immunogen	Peptide with sequence C-KNASYNLDPYIQEF corresponding to internal region according to NP_036331.1.

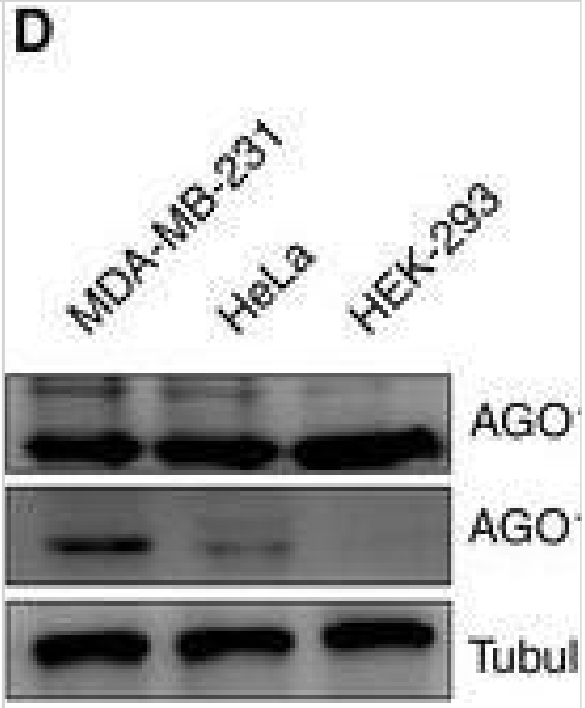
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Peptide ELISA
Recommended Dilutions	Western Blot 0.3 - 1 ug/mL, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry-Paraffin 2.5 ug/mL, Peptide ELISA Detection limit 1:16000
Application Notes	Use in Immunocytochemistry/Immunofluorescence reported in scientific literature (PMID:32812257)WB: In transfected HEK293 transiently expressing human EIF2C1bands of approx. 110 Knockdown Validateda band and 35 Knockdown Validateda band are observed. The 110 Knockdown Validateda band is not observed in the non-transfected HEK293. The calculated molecular size is 97.2 Knockdown Validateda band according to NP_036331.1

Images

Western Blot: AGO1/EIF2C1 Antibody [NB100-2817] - HEK293 overexpressing AGO1/EIF2C1 and probed with NB100-2817 (non-transfected HEK293 in lane B).	
Immunohistochemistry-Paraffin: AGO1/EIF2C1 Antibody [NB100-2817] - Staining of paraffin embedded Human Placenta. Antibody at 2.5 ug/mL. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.	
Immunohistochemistry-Paraffin: AGO1/EIF2C1 Antibody [NB100-2817] - Staining of paraffin embedded Human Small Intestine. Antibody at 2.5 ug/mL. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.	
AGO1x localizes to the nuclear regionRepresentative immunofluorescence images showing the subcellular distribution of AGO1x (red) relative to nuclear and cytoplasmic markers. DAPI was used to mark the nucleus (blue). The co□stained subcellular marker is indicated in each panel in green. SC 35, Lsm4, α□tubulin, ERP72, p54 (NRB), and nucleolin serve as markers for nuclear speckles, cytosol and nucleus, cytosol, endoplasmic reticulum, paraspeckle, and nucleolus, respectively.Mean (+/- SD) pixel intensities of AGO1x staining in nucleolus and nucleoplasm, computed from z□stack images of MDA□MB-231 cells (n = 20). The P□value was determined using a paired two□tailed t□test.Representative AGO1x and AGO1 blot from MDA-MB□231 cell fractions. GAPDH and hnRNP C1/C2 served as markers of purity of the individual fractions.Source data are available online for this figure. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/32812257), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

AGO1x antibody targets specifically its cognate protein and not the canonical AGO1AWestern blot analysis of multiple cell lines demonstrates that in addition to the canonical AGO1 protein band, a characteristic second band of higher MW is revealed by the AGO1 antibody.BHigher MW band observed in (A) corresponds to AGO1x protein. Representative Western blot shows that the intensity of the higher MW band is sensitive to ectopic overexpression (using the pIRES□Neo vector) of FLAG□tagged AGO1x but not of FLAG□tagged AGO1. Expression of the corresponding isoform is confirmed with a blot for FLAG expression. The overexpression constructs are indicated with labels above the blots. Protein ladders show that the higher MW band corresponds to approximately 100 kDa.C, DWestern blot with AGO1x antibody demonstrates its specificity for the AGO1x isoform stably expressed from pCDH□FLAG-tagged plasmids. Middle and lower panels depict AGO1x levels in individual samples, at low and high exposure, respectively, of the same blot. The higher exposure was used to better assess the expression level in untransfected (control) samples.E, FRepresentative images of MDA□MB-231 stained with AGO1 (green) and AGO1x (red) antibodies under conditions of endogenous expression or knockdown with an siRNA pool targeting the transcript that encodes both isoforms (E). An AGO1x overexpression system, where FLAG□AGO1x was stably integrated into MDA□MB-231 cells, was also tested (F). DAPI was used to mark the nucleus (blue).GWestern blot analysis of AGO1x protein level in cells treated with either siAGO1 or siControl confirms the imaging results from panel E.Source data are available online for this figure. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/32812257), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Evidence of AGO1 transcript translational readthrough and of AGO1x expressionATop: schema of analyzed TR regions (purple), located downstream of the annotated open reading frame (gray), between the annotated stop codon (red triangle) and the next in□frame stop codon (orange triangle); Bottom: histogram of average PhastCons conservation scores (x□axis) of putative TR regions of all RefSeq□annotated transcripts. The scores of the four human Argonaute protein family members are highlighted.BMultiple sequence alignment of the AGO1 putative TR region across vertebrates.CMultiple sequence alignment of the corresponding predicted amino acid sequence. The unique peptide targeted by the polyclonal antibody is indicated by the red line. The green and blue lines indicate peptide sequences obtained after tryptic digestion, in which cleavage is exclusively at arginine (R) and lysine (K) (further described below in panels E and F). Red asterisks indicate stop codons.DWestern blot showing AGO1x expression in three cell lines. For comparison, a parallel blot was probed with an antibody directed against canonical AGO1. Tubulin served as loading control.E, FAnnotated MS/MS spectrum of peptides specific for the endogenous AGO1x, “QNAVTSLDR", depicted in green (E) and “LSKPQELCHPNPEEAR", depicted in blue (F). The Mascot ion score (text color corresponds to peptides marked in Fig 1C for reference) as well as the annotated fragments (blue = y□ions; red = b□ions) together with the corresponding amino acids is indicated. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/32812257), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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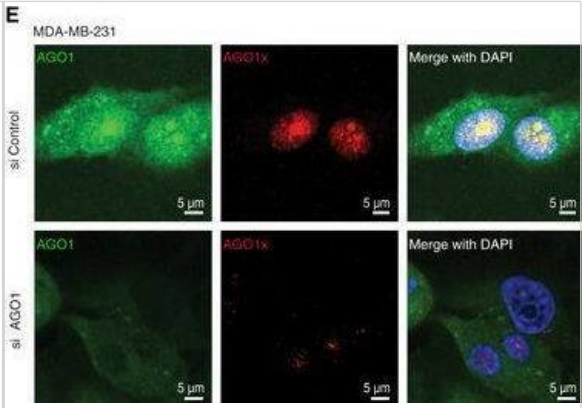

Publications

Lekha E Manjunath, Anumeha Singh, Sangeetha Devi Kumar, Kirtana Vasu, Debaleena Kar, Karthi Sellamuthu, Sandeep M Eswarappa Transcript-specific induction of stop codon readthrough using a CRISPR-dCas13 system EMBO Reports 2024-03-18 [PMID: 38499809]

Manjunath L, Singh A, Kar D et al. Transcript-specific induction of stop codon readthrough using CRISPR-dCas13 system bioRxiv 2023-03-09 (Western Blot)

Ghosh S, Guimaraes JC, Lanzafame M et al. Prevention of dsRNA-induced interferon signaling by AGO1x is linked to breast cancer cell proliferation EMBO J. 2020-08-19 [PMID: 32812257] (WB, ICC/IF, Human)

Gregory RI, Chendrimada TP, Cooch N, Shiekhattar R. Human RISC couples microRNA biogenesis and posttranscriptional gene silencing. Cell 2005-11-18 [PMID: 16271387]

Infante T, Mancini FP, Lanza A et al. Polycomb YY1 is a critical interface between epigenetic code and miRNA machinery after exposure to hypoxia in malignancy Biochim. Biophys. Acta. 2015-01-30 [PMID: 25644713] (WB, Human)

Ho JJ, Metcalf JL, Yan MS et al. Functional importance of dicer protein in the adaptive cellular response to hypoxia J Biol Chem 2012-08-17 [PMID: 22745131] (WB, Human)

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HAF109	Donkey anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
NB410-28088-1mg	Goat IgG Isotype Control

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