Product Datasheet

Dcp1a Antibody (3G4) - Azide and BSA Free
H00055802-M06-50ug

Unit Size: 50 ug

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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Reviews: 1 Publications: 54

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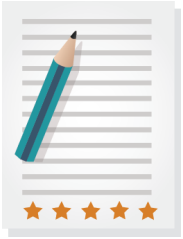
Updated 9/9/2025 v.20.1



H00055802-M06-50ug

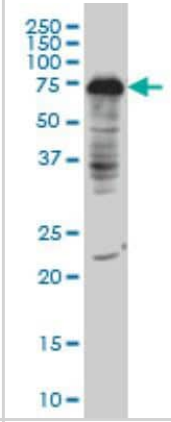
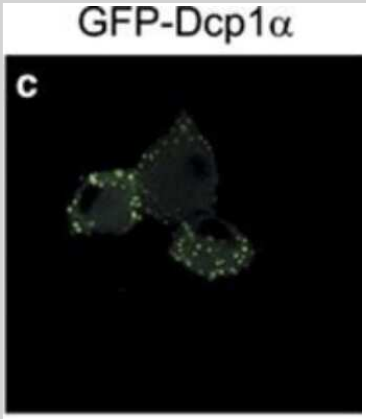
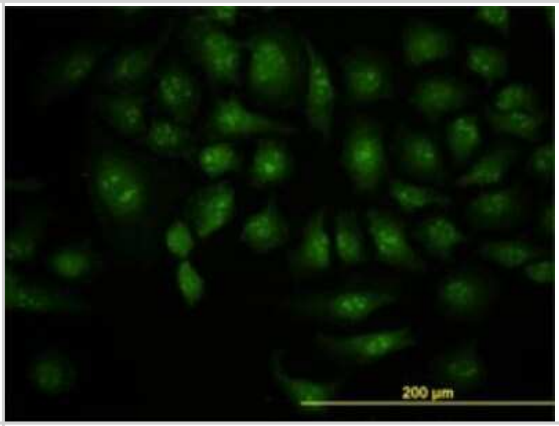
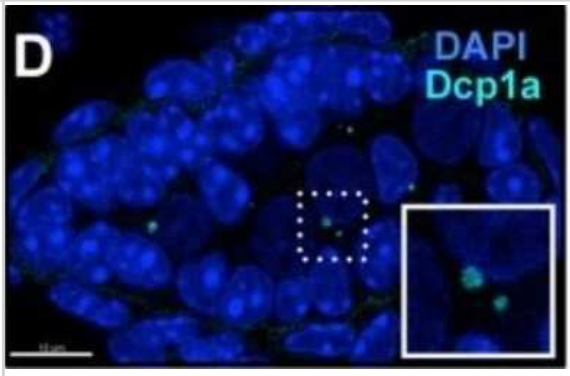
Dcp1a Antibody (3G4) - Azide and BSA Free

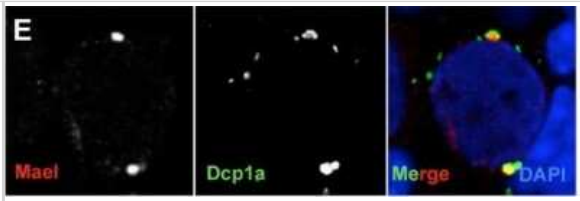
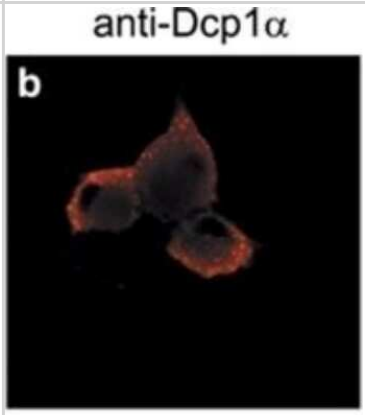
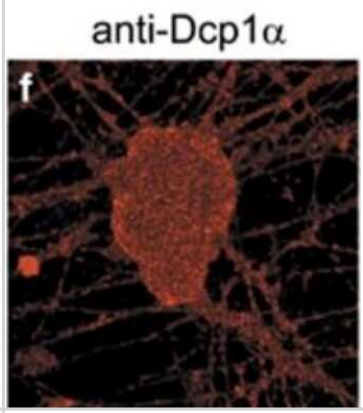
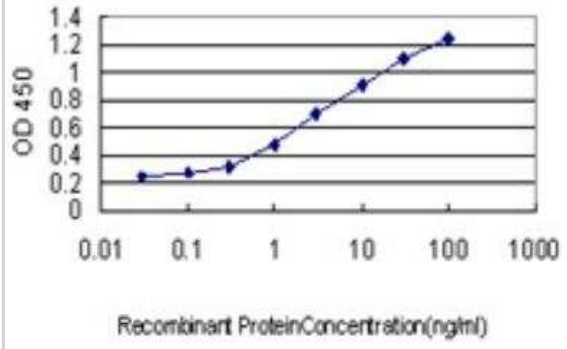
Product Information	
Unit Size	50 ug
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	3G4
Preservative	No Preservative
Isotype	IgG2a Kappa
Purity	IgG purified
Buffer	In 1x PBS, pH 7.4

Product Description	
Description	Novus Biologicals Mouse Dcp1a Antibody (3G4) - Azide and BSA Free (H00055802-M06) is a monoclonal antibody validated for use in IHC, WB, ELISA, ICC/IF and IP. Anti-Dcp1a Antibody: Cited in 54 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	55802
Gene Symbol	DCP1A
Species	Human, Mouse, Rat, Insect
Reactivity Notes	Mouse reactivity reported in scientific literature (PMID: 25530357).
Specificity/Sensitivity	DCP1A - DCP1 decapping enzyme homolog A (S. cerevisiae)
Immunogen	DCP1A (NP_060873, 186 a.a. ~ 285 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa. STQLSNLGSTETLEEMPSGSQDKSAPSGHKHLTVEELFGTSLPKEQPAVVGLD SEEMERLPGDASQKEPNSFLPFPFEQLGGAPQSETLGVPSAAHHSVQ
Notes	This product is produced by and distributed for Abnova, a company based in Taiwan.

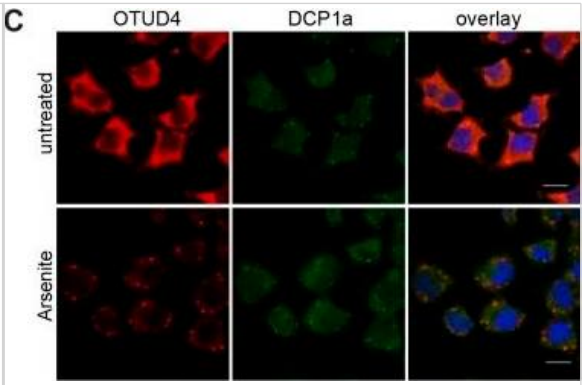
Product Application Details	
Applications	Western Blot, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunoprecipitation, Proximity Ligation Assay
Recommended Dilutions	Western Blot 1:500, ELISA 1:100-1:2000, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence 1:10-1:2000, Immunoprecipitation, Proximity Ligation Assay
Application Notes	Antibody reactive against cell lysate and recombinant protein for Western Blot. Has also been used for immunofluoresence and ELISA. Use in immunprecipitation reported in scientific literature (PMID 21883093)

Images

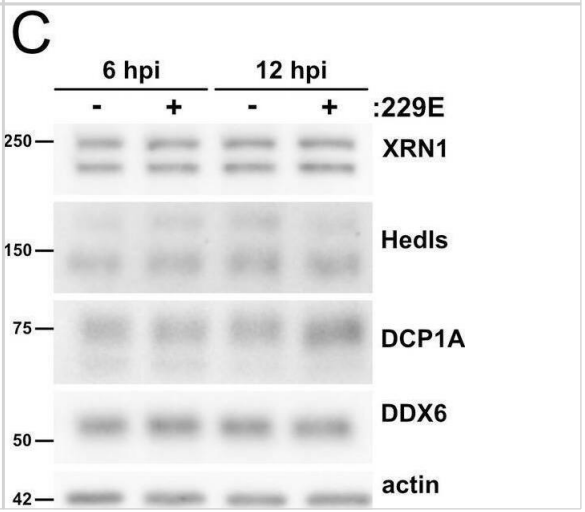
Western Blot: Dcp1a Antibody (3G4) [H00055802-M06] - Western Blot analysis of DCP1A expression in IMR-32 (Cat # L008V1).	
Immunocytochemistry/Immunofluorescence: Dcp1a Antibody (3G4) [H00055802-M06] - Anti-Dcp1alpha antibody recognizes its antigen. SCG neurons shown overexpressing GFP-Dcp1alpha and immunostained with anti-Dcp1alpha antibody. Note that all GFP-Dcp1alpha granules are recognized by anti-Dcp1alpha antibody. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/cddis2013297), licensed under a CC-BY license.	
Immunocytochemistry/Immunofluorescence: Dcp1a Antibody (3G4) [H00055802-M06] - Analysis of monoclonal antibody to DCP1A on HeLa cell. Antibody concentration 10 ug/ml	
Immunocytochemistry/Immunofluorescence: Dcp1a Antibody (3G4) [H00055802-M06] - The MIWI2/MAEL granule is a modified P-body. Localization of P-bodies in gonocytes. Cross section seminiferous tubule from wild-type testis (E18.5) were probed with antibodies against DCP1a. Image collected and cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pgen.1000764), licensed under a CC-BY license.	

Immunocytochemistry/Immunofluorescence: Dcp1a Antibody (3G4) [H00055802-M06] - Localization of P-bodies in gonocytes. Co-localization of MAEL and P-body component DCP1a in piP-bodies. Image collected and cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pgen.1000764), licensed under a CC-BY license.	
Immunocytochemistry/Immunofluorescence: Dcp1a Antibody (3G4) [H00055802-M06] - Anti-Dcp1alpha antibody recognizes its antigen. SCG neuron shown overexpressing GFP-Dcp1alpha. Note that all GFP-Dcp1alpha granules are recognized by anti-Dcp1alpha antibody. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/cddis2013297), licensed under a CC-BY license.	
Immunocytochemistry/Immunofluorescence: Dcp1a Antibody (3G4) [H00055802-M06] - Deconvoluted merged stacks of confocal microscopic images of typical neurons colabeled with anti-Dcp1alpha antibodies, the marker for the P-bodies. Note that the granules do not colocalize. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/cddis2013297), licensed under a CC-BY license.	
ELISA: Dcp1a Antibody (3G4) [H00055802-M06] - Detection limit for recombinant GST tagged DCP1A is approximately 0.1ng/ml as a capture antibody.	

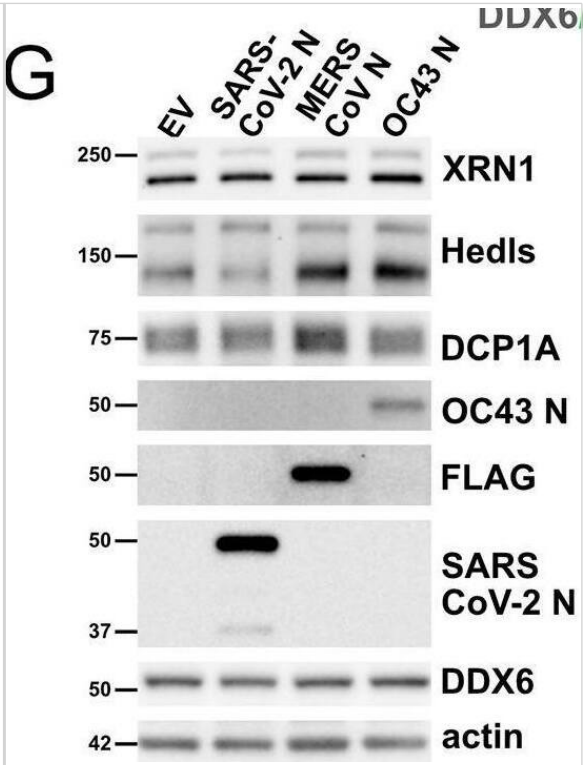
Immunocytochemistry/ Immunofluorescence: Dcp1a Antibody (3G4) [H00055802-M06] - OTUD4 is recruited to stress granules. (A) Immunofluorescence of OTUD4 (shown in red) in SH-SY5Y cells that were either untreated, arsenite-treated (30 min, 0.5 mM) or heat-shocked (42°C, 1 h). Cells were co-stained for the stress granule marker protein TIA1 (green) & DAPI as a nuclear marker (blue). OTUD4 is redistributed to granular structures upon arsenite & heat-shock treatment. Granules also contain TIA1 & are considered as stress granules. Scale bar: 20 µm. The experiment was repeated two times. (B) Exogenously expressed FLAG–OTUD4 is recruited to stress granules in HeLa cells. Transfected cells were arsenite-treated (0.5 mM) for 40 min or left untreated & co-stained with anti-FLAG (red) & anti-G3BP1 antibodies (green). Nuclei are shown in blue (DAPI). Scale bar: 20 µm. The experiment was done at least three times. (C) OTUD4 granules do not colocalize with P-bodies. Shown is immunofluorescence of HeLa cells (untreated or 0.5 mM arsenite for 30 min) stained with anti-OTUD4 (red) & anti-DCP1a (green) antibodies. Scale bar: 20 µm. The experiment was performed two times. (D) OTUD4 granules contain mRNA. HeLa cells were treated with arsenite (0.5 mM) for 1 h. FISH was carried out with Cy3-labeled oligo(dT) (red), & cells were co-stained with anti-OTUD4 (shown in green). Scale bar: 20 µm. A representative image from four independent experiments is shown. (E) Scheme illustrating OTUD4 fragments used in F, numbers indicate amino acid borders of expression constructs. IDR, intrinsically disordered region. (F) HeLa cells were transfected with EGFP-tagged OTUD4 expression constructs as shown in E) & treated with arsenite (0.5 mM for 30 min) or left untreated to monitor intrinsic ability to form granules. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31138677), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Coronavirus infection does not alter steady state levels of most processing body proteins.A. HUVECs were transduced with human ACE2 (HUVECACE2), selected, and infected with SARS-CoV-2 TO-1 isolate (MOI = 3). Cells were lysed at 6 and 12 hours post infection and immunoblotting was performed using XRN1, Hedls, DCP1A, DDX6, SARS-CoV-2 N, and β-actin specific antibodies. One representative experiment of two is shown. B-C. HUVECs were infected with OC43 (B, TCID50 = 2 x 104) or 229E (C, TCID50 = 2.4 x 103). Cells were lysed at 12 and 24 hours post infection (B, OC43) or 6 and 12 hours post infection (C, 229E). Immunoblotting was performed using XRN1, Hedls, DCP1A, DDX6, OC43 N protein (B only), and β-actin specific antibodies. One representative experiment of three is shown. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/35998203), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Processing body disassembly is not a common feature of all human coronavirus N proteins.A-D. HUVECs were transduced with recombinant lentiviruses ectopically expressing N protein from the Betacoronaviruses MERS-CoV and OC43 (A-B) or N protein from Alphacoronaviruses 229E and NL63 (C-D) or N protein from SARS-CoV-1 (E-F). A control lentiviral expressing an empty vector (EV) was used as a negative control and SARS-CoV-2 N protein expressing lentiviruses were used as a positive control in each experiment. Cells were selected, fixed and immunostained for DDX6 (PBs; white; Alexa555) and either authentic N protein or a FLAG tag (green; Alexa488). Nuclei were stained with Hoechst (blue). Scale bar = 20 µm. DDX6 puncta in EV or N-transduced cells were quantified using CellProfiler as in Fig 1. DDX6 puncta were quantified as in Fig 1. Representative images from one independent experiment of three are shown. These data represent three independent biological replicates (n = 3) with >30 cells measured per condition (EV and N) per replicate. Each EV and N replicate pair plotted independently; mean. Statistics were performed using Kruskal-Wallis H test with Dunn's correction (*, $p < 0.0332$; **, $p < 0.0021$; ****, $p < 0.0001$; ns, nonsignificant). G-I. HUVECs were transduced as above, protein lysate was harvested and immunoblotting was performed using XRN1, Hedls, DCP1A, DDX6, N protein or FLAG, and β-actin specific antibodies. One representative experiment of three is shown. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/35998203), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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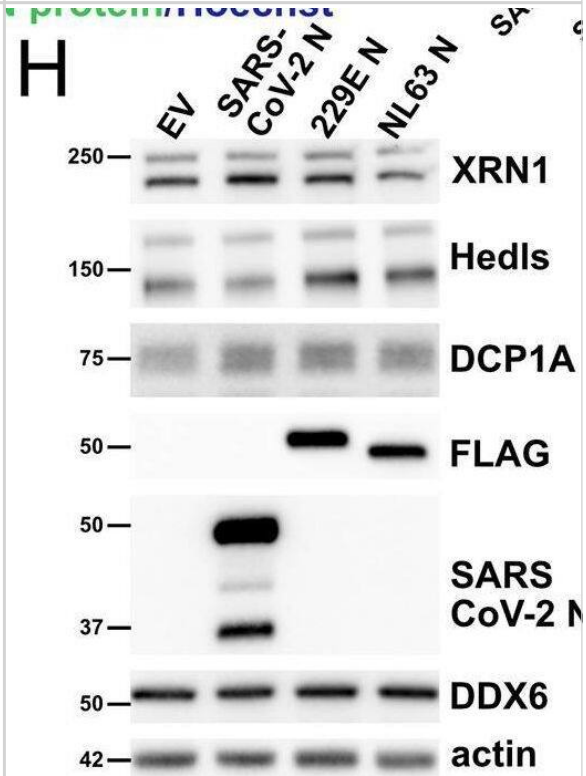

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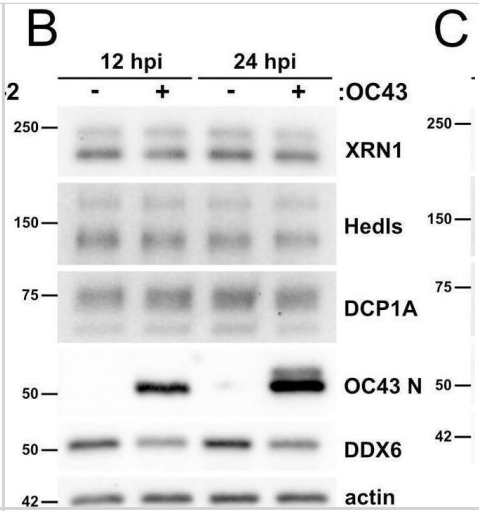

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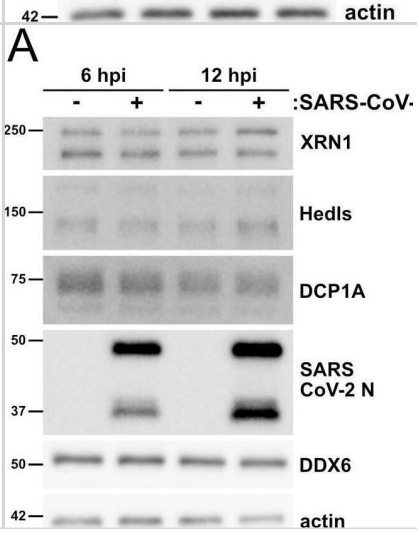

Publications

Kleer M, Mulloy RP, Robinson CA et al. Human coronaviruses disassemble processing bodies PLOS Pathogens 2022-08-23 [PMID: 35998203]

De Luca C, Gupta A, Bortvin A Retrotransposon LINE-1 bodies in the cytoplasm of piRNA-deficient mouse spermatocytes: Ribonucleoproteins overcoming the integrated stress response PLoS genetics 2023-06-01 [PMID: 37307272]

Kim J, Muraoka M, Okada H et al. The RNA helicase DDX6 controls early mouse embryogenesis by repressing aberrant inhibition of BMP signaling through miRNA-mediated gene silencing PLOS Genetics 2022-10-05 [PMID: 36197846]

Mayr-Buro C, Schlereth E, Beuerlein K et al. Single-Cell Analysis of Multiple Steps of Dynamic NF-?B Regulation in Interleukin-1?-Triggered Tumor Cells Using Proximity Ligation Assays. Cancers (Basel). 2019-08-16 [PMID: 31426445]

Shimada R, Kiso M, Saga Y et al. ES-mediated chimera analysis revealed requirement of DDX6 for NANOS2 localization and function in mouse germ cells. Sci Rep. 2019-01-24 [PMID: 30679547]

Eri A, Akira Y, Mai S et al. The association of UBAP2L and G3BP1 mediated by small nucleolar RNA is essential for stress granule formation. Commun Biol. 2023-04-14 [PMID: 37059803]

Nicolas C; Olivia L; Juan-Pablo C et al. The proteome and transcriptome of stress granules and P bodies during human T lymphocyte activation. Cell Rep. 2023-03-07 [PMID: 36884350]

Barbara S, Rene G, Julia J et al. FUS ALS neurons activate major stress pathways and reduce translation as an early protective mechanism against neurodegeneration. Cell Rep. 2023-01-24 [PMID: 36696267]

Tom V, Anna-Lena N, Rui Y et al. Inherited deficiency of stress granule ZNFX1 in patients with monocytosis and mycobacterial disease. Proc Natl Acad Sci U S A. 2021-04-13 [PMID: 33876776]

S Kedia, MR Aghanoori, KML Burns, M Subha, L Williams, P Wen, D Kopp, SL Erickson, EM Harvey, X Chen, M Hua, JU Perez, F Ishraque, G Yang Ubiquitination and deubiquitination of 4E-T regulate neural progenitor cell maintenance and neurogenesis by controlling P-body formation Oncogene, 2022-07-12;40(2):111070. 2022-07-12 [PMID: 35830814]

MJ MacPherson, SL Erickson, D Kopp, P Wen, MR Aghanoori, S Kedia, KML Burns, A Vitobello, F Tran Mau-T, Q Thomas, NB Gold, W Brucker, L Amlie-Wolf, KW Gripp, O Bodamer, L Faivre, M Muona, L Menzies, J Baptista, K Guegan, A Male, XC Wei, G He, Q Long, AM Innes, G Yang Nucleocytoplasmic transport of the RNA-binding protein CELF2 regulates neural stem cell fates Cell Reports, 2021-06-08;35(10):109226. 2021-06-08 [PMID: 34107259]

Cheng S, Altmeppen G, So C et al. Mammalian oocytes store mRNAs in a mitochondria-associated membraneless compartment Science (New York, N.Y.) 2022-10-21 [PMID: 36264786] (ICC/IF, Mouse)

More publications at http://www.novusbio.com/H00055802-M06

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HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-96981-0.5mg	Mouse IgG2a Kappa Isotype Control (M2AK)

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This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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