Product Datasheet

GFAP Antibody
NB300-141

Unit Size: 0.05 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Reviews: 12 Publications: 108

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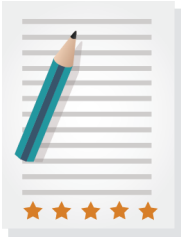
Updated 8/7/2024 v.20.1



NB300-141

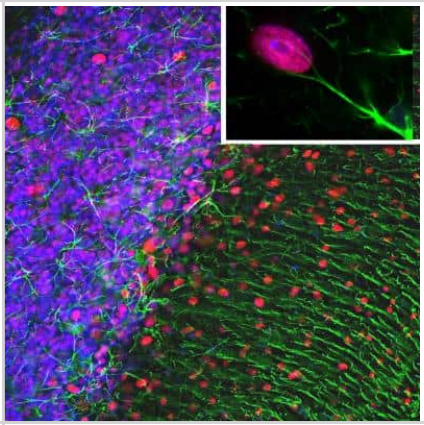
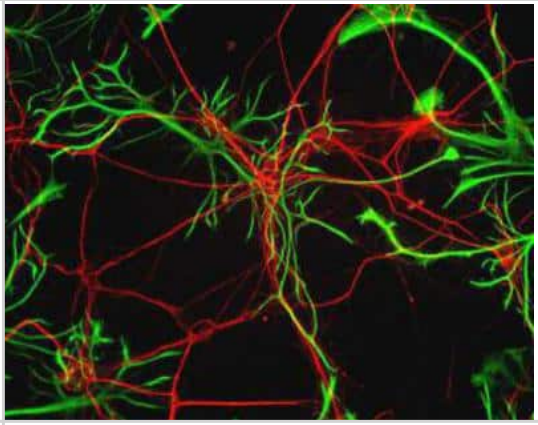
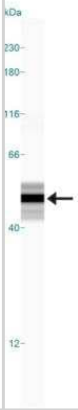
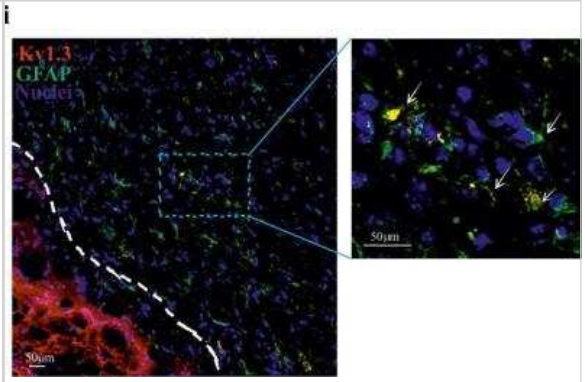
GFAP Antibody

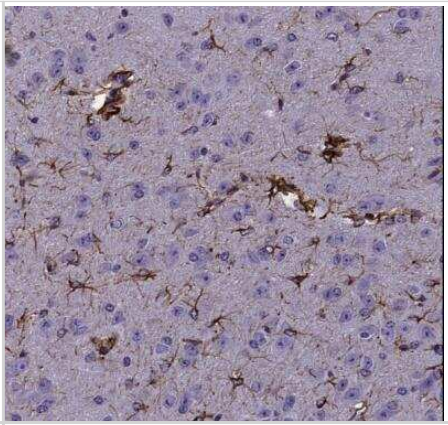
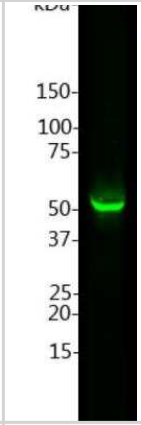
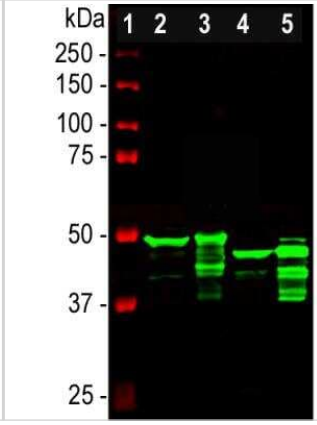
Product Information	
Unit Size	0.05 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	5mM Sodium Azide
Purity	Unpurified
Buffer	Supplied as serum
Target Molecular Weight	50 kDa

Product Description	
Host	Rabbit
Gene ID	2670
Gene Symbol	GFAP
Species	Human, Mouse, Rat, Porcine, Bovine, Chicken, Equine, Guinea Pig, Rabbit
Reactivity Notes	Predicted to work with most mammals. Chicken reactivity reported in scientific literature (PMID: 20844134). Rabbit and Guinea Pig reactivity reported in scientific literature (PMID: 4559710).
Marker	Astrocyte Marker
Immunogen	This GFAP Antibody was developed against recombinant full length human GFAP isotype 1 expressed in and purified from E. coli.

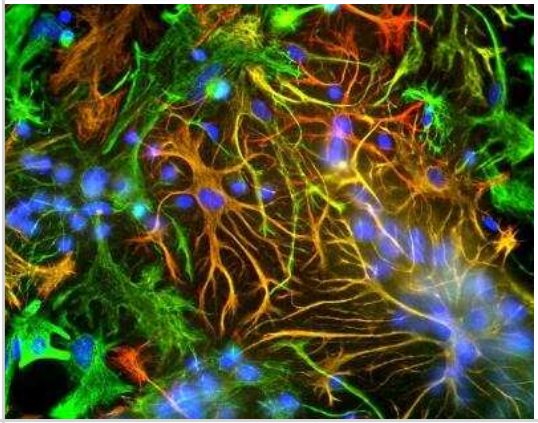
Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1:5000, Simple Western 1:10000, Immunohistochemistry 1:1000 - 1:5000, Immunocytochemistry/ Immunofluorescence 1:1000 - 1:5000, Immunohistochemistry-Paraffin, Immunohistochemistry-Frozen
Application Notes	In WB a band can be seen at 50-55 kDa representing GFAP. A lower band may be seen around 45 kDa representing a proteolytic fragment derived from the GFAP molecule. GFAP antibody validated for IHC-P from a verified customer review. IHC-Fr has been reported in scientific literature (PMID: 28040732). See Simple Western Antibody Database for Simple Western validation: tested in human brain lysate (0.05 mg/ml); separated by size, antibody dilution of 1:10,000; detects a band at 50 kDa; matrix was 12-230 kDa.

Images

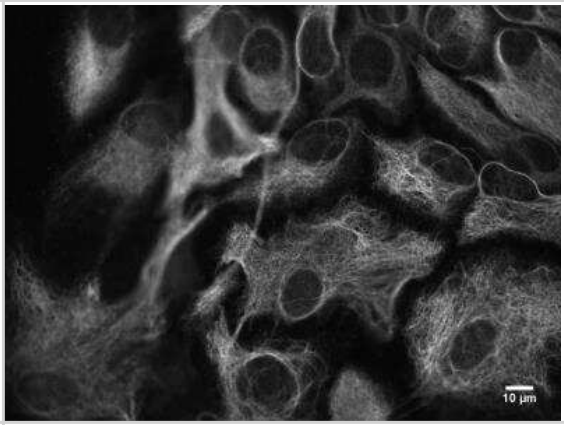
Immunohistochemistry: GFAP Antibody [NB300-141] - Analysis of a rat cerebellum section stained with rabbit polyclonal antibody to GFAP, NB300-141, dilution 1:5000 in green and mouse monoclonal antibody to MeCP2, dilution 1:500, in red. The blue is DAPI staining of nuclear DNA. Following transcardial perfusion of rat with 4% paraformaldehyde, brain was post fixed for 1 hour, cut to 45 uM, and free-floating sections were stained with above antibodies. The GFAP antibody stains the network of astrocytic cells and the processes of Bergmann glia in the molecular layer. The MeCP2 antibody specifically labels nuclei of certain neurons.	
Immunocytochemistry/Immunofluorescence: GFAP Antibody [NB300-141] - Rat neurons stained with Neurofilament Heavy antibody NB300-217 (red) and GFAP antibody NB300-141 (green).	
Simple Western: GFAP Antibody [NB300-141] - Simple Western lane view shows a specific band for GFAP in 0.05 mg/mL of Human Brain lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.	
Immunocytochemistry/Immunofluorescence: GFAP Antibody [NB300-141] - The inhibition of Kv1.3 channels induces neuroprotection against the toxic effects of glioma. Immunofluorescence analyses of Kv1.3 expression (red) on GFAP-positive cells (green) in coronal brain slices of GL261-bearing mice in peritumoral region; in the magnification (right) arrows indicate co-expression of Kv1.3 and GFAP in the same cell. Image collected and cropped by CiteAb from the following publication (https://www.nature.com/articles/s41598-018-25940-5) licensed under a CC-BY license.	

Immunohistochemistry-Paraffin: GFAP Antibody [NB300-141] - Mouse brain section, 20x magnification. Antibody at 1:1000. Detection with Polymer-HRP. IHC image submitted by a verified customer review.	
Western Blot: GFAP Antibody [NB300-141] - Analysis of Rat brain lysate. Antibody at 1:5000. Specific band running with an apparent SDS-PAGE molecular weight of ~50 kDa corresponds to rodent GFAP was observed.	
Western Blot: GFAP Antibody [NB300-141] - Analysis of GFAP expression in whole rat cerebellum homogenate.	
Western Blot: GFAP Antibody [NB300-141] - Analysis of different tissue lysates using rabbit polyclonal antibody to GFAP, NB300-141, dilution 1:5000 in green: [1] protein standard (red), [2] rat brain, [3] rat spinal cord, [4] mouse brain, [5] mouse spinal cord. Strong band at about 50 kDa corresponds to the major isotype of the GFAP protein. Smaller isotypes and proteolytic fragments of GFAP are also detected on the blot.	

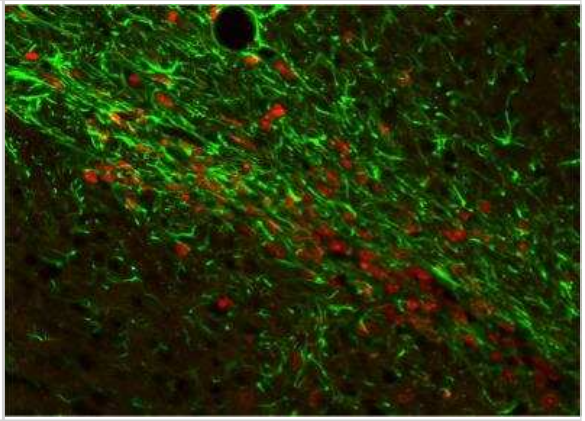
Immunocytochemistry/Immunofluorescence: GFAP Antibody [NB300-141] - Analysis of mixed neuron-glial cultures using GFAP antibody NB300-141 (red) and Vimentin antibody NB300-223 (green). The fibroblastic cells contain only Vimentin and so are green. The astrocytes contain either Vimentin and GFAP (appearing golden) or predominantly GFAP (appearing red). Blue is nuclear DNA stain.



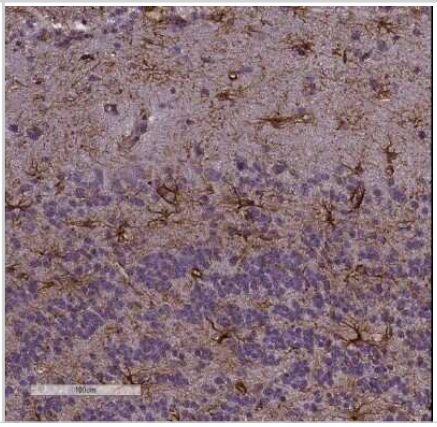
Immunocytochemistry/Immunofluorescence: GFAP Antibody [NB300-141] - Cultured Rat hippocampal neurons. ICC/IF image submitted by a verified customer review.



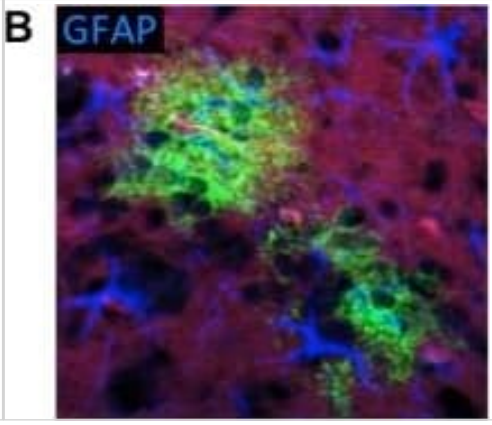
Immunohistochemistry: GFAP Antibody [NB300-141] - Xenografted mouse brain section: astocyte and human nuclei. ICC/IF image submitted by a verified customer review.



Immunohistochemistry-Frozen: GFAP Antibody [NB300-141] - Imaging of mouse brain (cortex), 20x magnification. IHC image submitted by a verified customer review.



EGFP+ neurons are positive for RABV antigen.Brains were collected from Cre reporter mice fifteen days post-infection, cryosectioned, and EGFP+ regions compared to cell-specific labeling, A) NeuN (blue, neuronal nuclei antibody, 20× fluorescence imaging), B) GFAP (blue, astrocyte antibody, 40× confocal imaging), or C) RABV P antigen (purple) and DAPI nuclear stain (blue, 63× confocal imaging). White arrows in (C) indicate regions positive for RABV P.



Publications

Karine Dos Santos Evangelho, Carlos Cifuentes-González, William Rojas-Carabali, Clemencia De Vivero-Arciniegas, Mariana Cañas-Arboleda, Gustavo Salguero, Carolina Ramírez-Santana, Alejandra de-la-Torre Mesenchymal stromal cells from human Wharton's jelly modulate the intraocular immune response in a glucocorticoid hypertension model: an exploratory analysis. Ophthalmic research 2024-03-06 [PMID: 38447539]

Cory M. Willis, Alexandra M. Nicaise, Ernesto R. Bongarzone, Maria Givogri, Cory R. Reiter, Olivia Heintz, Evan R. Jellison, Pearl A. Sutter, Gregg TeHennepe, Guruprasad Ananda, Anthony T. Vella, Stephen J. Crocker Astrocyte Support for Oligodendrocyte Differentiation can be Conveyed via Extracellular Vesicles but Diminishes with Age Scientific Reports 2020-01-21 [PMID: 31964978]

Patrizia Ratano, Germana Cocozza, Cecilia Pinchera, Ludovica Maria Busdraghi, Iva Cantando, Katiuscia Martinello, Mariarosaria Scioli, Maria Rosito, Paola Bezzi, Sergio Fucile, Heike Wulff, Cristina Limatola, Giuseppina D'Alessandro Reduction of inflammation and mitochondrial degeneration in mutant SOD1 mice through inhibition of voltage-gated potassium channel Kv1.3 Frontiers in Molecular Neuroscience 2024-01-16 [PMID: 38292023]

Garofalo S, Grimaldi A, Chece G et al. The glycoside oleandrin reduces glioma growth with direct and indirect effects on tumor cells. J. Neurosci. 2017-03-14 [PMID: 28292827]

Long-term culturing of porcine nodose ganglia Kuan SP, Atanasova KR, Guevara MV J Neurosci Methods [PMID: 31821820]

Hideki Nonaka, Takayuki Kondo, Mika Suga, Ryu Yamanaka, Yukako Sagara, Kayoko Tsukita, Naoko Mitsutomi, Kengo Homma, Ryuta Saito, Fumihiko Miyoshi, Hiromitsu Ohzeki, Masahiro Okuyama, Haruhisa Inoue Induced pluripotent stem cell□based assays recapture multiple properties of human astrocytes Journal of Cellular and Molecular Medicine 2024-03-20 [PMID: 38509731]

Chen Y, Wu XL, Hu HB et al. Neuronal MeCP2 in the dentate gyrus regulates mossy fiber sprouting of mice with temporal lobe epilepsy Neurobiology of disease 2023-11-01 [PMID: 37931884] (IHC, Mouse)

Details:
Dilution 1:2000

Tan R, Hu X, Wang X et al. Leptin Promotes the Proliferation and Neuronal Differentiation of Neural Stem Cells through the Cooperative Action of MAPK/ERK1/2, JAK2/STAT3 and PI3K/AKT Signaling Pathways International journal of molecular sciences 2023-10-13 [PMID: 37894835] (ICC/IF, Rat)

Richards T, Perron JC, Patel K et al. Therapeutic Intervention of Neuroinflammatory Alzheimer Disease Model by Inhibition of Classical Complement Pathway with the Use of Anti-C1r Loaded Exosomes Research square 2023-10-18 [PMID: 37886595] (IHC, Rat)

Details:
ICC/IF dilution 1:200; IHC dilution 1:500

de Paiva I, Silva R, Mendonça I et al. Semaglutide Attenuates Anxious And Depressive-Like Behaviors and Reverses The Cognitive Impairment in a Type 2 Diabetes Mellitus Via The Microbiota-Gut-Brain Axis Research Square 2023-09-15 (IHC, Mouse)

Grigorash BB, van Essen D, Liang G et al. p16High senescence restricts cellular plasticity during somatic cell reprogramming Nature cell biology 2023-09-01 [PMID: 37652981] (IHC-P, Mouse)

Details:
1:1000 IHC-P dilution

Teng Y, Liu Z, Chen X et al. Conditional deficiency of m6A methyltransferase Mettl14 in substantia nigra alters dopaminergic neuron function Journal of Cellular and Molecular Medicine 2021-09-01 [PMID: 34288397] (WB)

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NBL1-11043	GFAP Overexpression Lysate
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NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
H00002670-P01-2ug	Recombinant Human GFAP GST (N-Term) Protein

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