

Product Datasheet

GFAP Antibody (GA-5) NBP2-29415

Unit Size: 0.1 mg

Store at 4C.

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NBP2-29415

GFAP Antibody (GA-5)

Product Information	
Unit Size	0.1 mg
Concentration	0.2 mg/ml
Storage	Store at 4C.
Clonality	Monoclonal
Clone	GA-5
Preservative	0.05% Sodium Azide
Isotype	IgG1 Kappa
Purity	Protein A or G purified
Buffer	10 mM PBS with 0.05% BSA
Target Molecular Weight	50 kDa
Product Description	
Description	200ug/ml of antibody purified from Bioreactor Concentrate by Protein A or G. Prepared in 10 mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0 mg/ml. (NBP2-33184) Antibody with azide - store at 2 to 8C. Antibody without azide - store at -20 to -80C.
Host	Mouse
Gene ID	2670
Gene Symbol	GFAP
Species	Human, Mouse, Rat, Porcine, Bovine, Chicken, Rabbit
Marker	Astrocyte & Neural Stem Cell Marker
Specificity/Sensitivity	This monoclonal antibody recognizes a protein of ~50kDa which is identified as Glial Fibrillary Acidic Protein (GFAP). It shows no cross-reaction with other intermediate filament proteins. GFAP is specifically found in astroglia. GFAP is a very popular marker for localizing benign astrocyte and neoplastic cells of glial origin in the central nervous system. Antibody to GFAP is useful in differentiating primary gliomas from metastatic lesions in the brain and for documenting astrocytic differentiation in tumors outside the CNS.
Immunogen	GFAP isolated from pig spinal cord (Uniprot: P14136)
Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Paraffin, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Multiplex Immunofluorescence
Recommended Dilutions	Western Blot 1-2 ug/ml, Simple Western 10 ug/mL, Flow Cytometry 1-2 ug/million cells, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence 1-2 ug/ml, Immunohistochemistry-Paraffin 1-2 ug/ml, Immunohistochemistry-Frozen 0.5 - 1 ug/mL, Multiplex Immunofluorescence

Application Notes

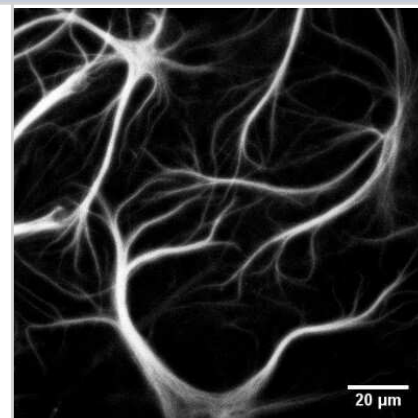
Immunohistochemistry (Formalin-fixed): 1-2 ug/mL for 30 minutes at RT. Staining of formalin-fixed tissues requires heating tissue sections in 10 mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95C followed by cooling at RT for 20 minutes. Optimal dilution for a specific application should be determined.
 Immunohistochemistry (cryosections): see Tobin et. al. for details.

In Simple Western only 10 - 15 uL of the recommended dilution is used per data point.

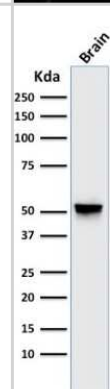
See [Simple Western Antibody Database](#) for Simple Western validation: Tested in h. Brain lysate(s), separated by Size, antibody dilution of 10 ug/mL, apparent MW was 54 kDa

Images

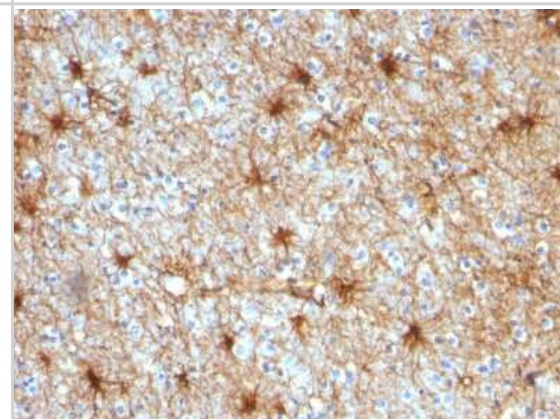
Immunocytochemistry/Immunofluorescence: GFAP Antibody (GA-5) [NBP2-29415] - Cultured Rat Hippocampal Neurons. ICC/IF image submitted by a verified customer review.



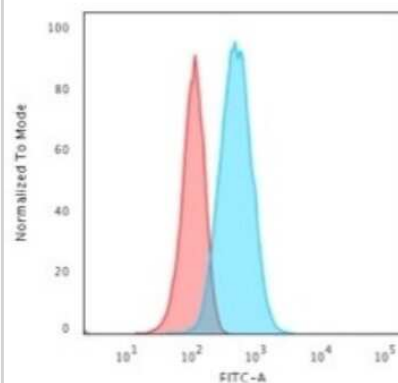
Western Blot: GFAP Antibody (GA-5) [NBP2-29415] - Western Blot Analysis of human brain tissue lysate using GFAP Antibody (GA-5).



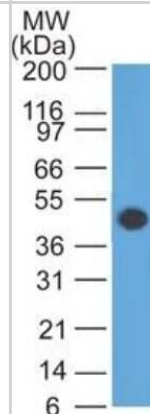
Immunohistochemistry-Paraffin: GFAP Antibody (GA-5) [NBP2-29415] - Formalin-fixed, paraffin-embedded human Cerebellum stained with GFAP Antibody (GA-5).



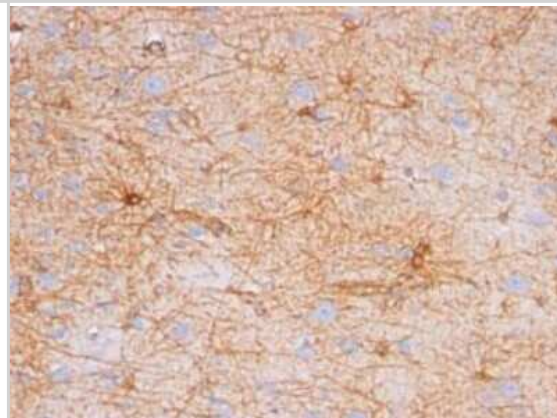
Flow Cytometry: GFAP Antibody (GA-5) [NBP2-29415] - Flow Cytometric Analysis of T98G cells using GFAP Antibody (GA-5) followed by Goat anti-Mouse IgG-CF488 (Blue); Isotype Control (Red).



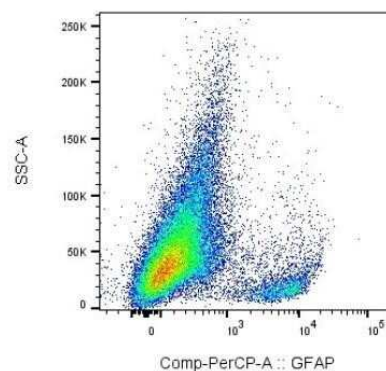
Western Blot: GFAP Antibody (GA-5) [NBP2-29415] - Analysis of GFAP in human brain lysate using GFAP (GA5) antibody at 1 ug/mL. Goat anti-mouse Ig HRP secondary antibody and PicoTect ECL substrate solution were used for this test.



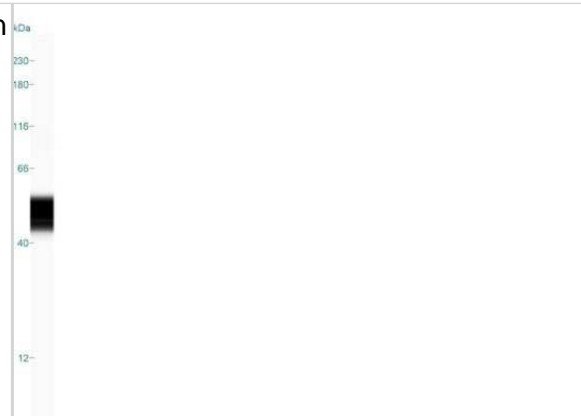
Immunohistochemistry-Paraffin: GFAP Antibody (GA-5) [NBP2-29415] - Formalin-paraffin human brain stained with GFAP Ab (GA-5). Note cytoplasmic staining.



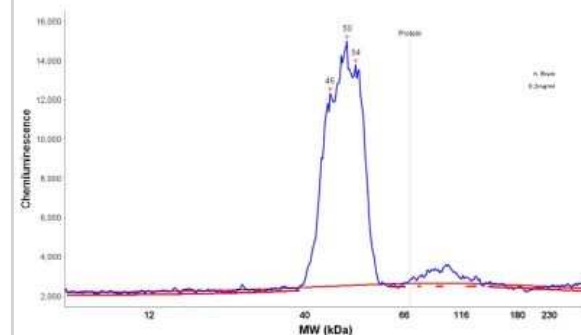
Flow Cytometry: GFAP Antibody (GA-5) [NBP2-29415] - Experimental autoimmune encephalomyelitis was induced in C57BL6/J mice, and mononuclear cells were isolated from the CNS at day 10 (onset of symptoms). Cells were stained for GFAP, Neun, CX3CL1, CXCL12, CCL2, CD45 and CD11b, plus for viability to exclude dead cells. GFAP staining is shown for viable cells. Flow cytometry image submitted by a verified customer review.



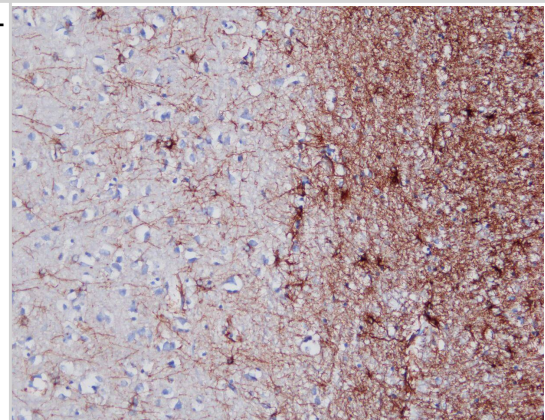
Simple Western: GFAP Antibody (GA-5) [NBP2-29415] - Simple Western lane view shows a specific band for GFAP in 0.2 mg/mL of human brain lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



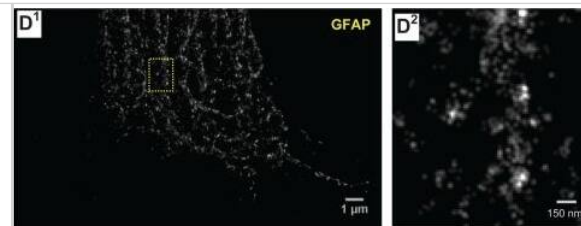
Simple Western: GFAP Antibody (GA-5) [NBP2-29415] - Electropherogram image of the corresponding Simple Western lane. GFAP antibody was used at 10 ug/mL dilution of human brain lysate.



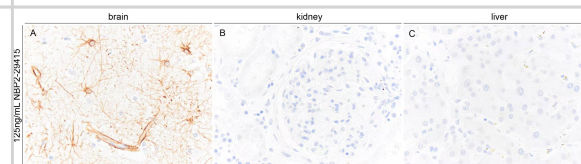
Immunohistochemistry-Paraffin: Mouse Monoclonal GFAP Antibody (GA-5) [NBP2-29415] - Analysis of GFAP on adult human brain tissue. Antigen retrieval in a basic buffer x200 (1ug/mL). Image from a verified customer review.



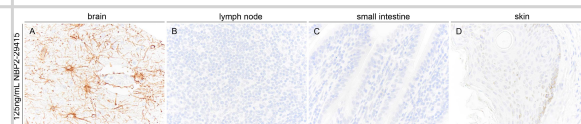
Immunocytochemistry/ Immunofluorescence: GFAP Antibody (GA-5) [NBP2-29415] - Advancing super-resolution microscopy for astroglial research. (A) STED images showing CA1 stratum radiatum astrocytic processes (green, whole-cell loading with Alexa Fluor 488) adjacent to synaptic structures in organotypic slices (red; Thy1-YFP; dendritic spines, arrows) at lower (A1) & higher (A2, area indicated by square in A1) magnification; asterisk, O-ring structures indicating tentative cell process envelopes; adapted from (Panatier et al., 2014). (B) STED image of P2Y1 receptors (red) along a multi-branched astrocytic process (glutamine synthase, grey) in the adult mouse hippocampus. Adapted from (Volterra et al., 2014). (C) STORM imaging of pre- (Bassoon; red) & postsynaptic (Homer1; green) scaffolding proteins in the mouse main olfactory bulb glomeruli imaged using conventional fluorescence imaging (C1) & STORM (C2); adapted from (Dani et al., 2010). (D, E) dSTORM images of cultured (14 DIV) mixed glial cells from rat hippocampus (ProLong Diamond in Zeiss Elyra PS.1 microscope; Fiji Plugin ThunderSTORM, 3,000 frames); unpublished data by J. Heller. (D) GFAP stained with monoclonal antibody (Novus, GA5, secondary Alexa Fluor 488 donkey anti-mouse antibody, Life Technologies) shown at lower (D1) & higher (D2, fragment indicated in D1) magnification. (E) GLT-1 (polyclonal, Millipore) visualized with Alexa Fluor 568 goat anti-guinea pig antibody (Life Technologies) shown at lower (E1) & higher (E2, fragment indicated in E1) magnification. Note that the cells were permeabilized, & therefore GLT-1 was stained throughout cellular compartments. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/25782611>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



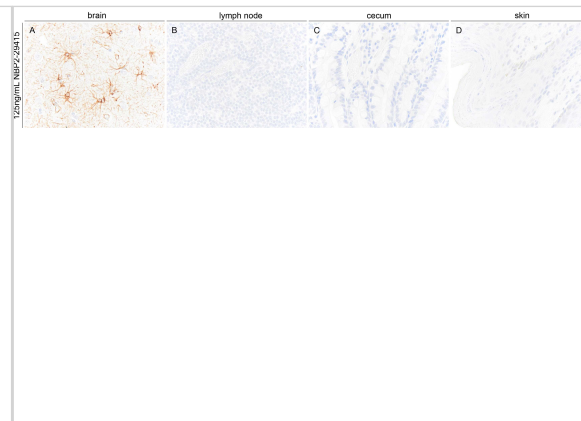
Images demonstrating GFAP immunoreactivity in a variety of human FFPE tissue sections. NBP2-29415 was used at a concentration of 125ng/mL and was left on tissue sections for 30m at room temperature. Heat induced epitope retrieval with a citrate-based buffer was used. Image from a verified customer review.



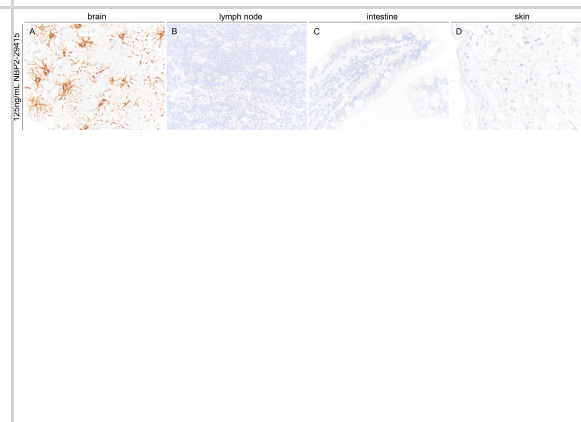
Images demonstrating GFAP immunoreactivity in a variety of horse FFPE tissue sections. NBP2-29415 was used at a concentration of 125ng/mL and was left on tissue sections for 30m at room temperature. Heat induced epitope retrieval with a citrate-based buffer was used. Image from a verified customer review.



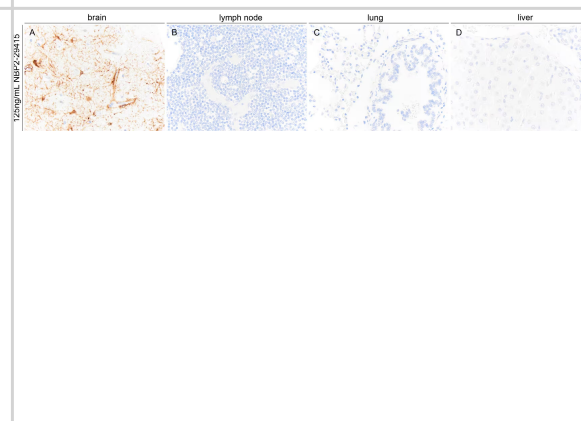
Images demonstrating GFAP immunoreactivity in a variety of dog FFPE tissue sections. NBP2-29415 was used at a concentration of 125ng/mL and was left on tissue sections for 30m at room temperature. Heat induced epitope retrieval with a citrate-based buffer was used. Image from a verified customer review.



Images demonstrating GFAP immunoreactivity in a variety of cat FFPE tissue sections. NBP2-29415 was used at a concentration of 125ng/mL and was left on tissue sections for 30m at room temperature. Heat induced epitope retrieval with a citrate-based buffer was used. Image from a verified customer review.



Images demonstrating GFAP immunoreactivity in a variety of alpaca FFPE tissue sections. NBP2-29415 was used at a concentration of 125ng/mL and was left on tissue sections for 30m at room temperature. Image from a verified customer review.



Publications

Chomiak AA, Guo Y, Kopsidas CA et al. Nde1 is required for heterochromatin compaction and stability in neocortical neurons iScience 2022-06-17 [PMID: 35601919] (Immunohistochemistry-Frozen, Rat)

Pla L, Köhne BA, Guardia-Escote L et al. Protocols for the Evaluation of Neurodevelopmental Alterations in Rabbit Models In Vitro and In Vivo Frontiers in Toxicology 2022-07-22 [PMID: 35936386] (Immunohistochemistry-Frozen, Rat)

Kopsidas CA, Lowe CC, McDaniel DP, Zhou X et al. Sustained generation of neurons destined for neocortex with oxidative metabolic upregulation upon filamin abrogation iScience 2024-07-11 [PMID: 38989458]

Alanko J, Bannai H, Cazaux B, Peterlongo P et al. Finding all maximal perfect haplotype blocks in linear time Algorithms Mol Biol 2020-02-15 [PMID: 32055252]

Kremsky I, Ali S, Stanbouly S et al. Spaceflight-Induced Gene Expression Profiles in the Mouse Brain Are Attenuated by Treatment with the Antioxidant BuOE Int J Mol Sci 2023-09-01 [PMID: 37686374]

Daniel Z. Radecki, Heather M. Messling, James R. Haggerty-Skeans, Sai Krishna Bhamidipati, Elizabeth D. Clawson, Christian A. Overman, Madison M. Thatcher, James L. Salzer, Jayshree Samanta Relative Levels of Gli1 and Gli2 Determine the Response of Ventral Neural Stem Cells to Demyelination Stem Cell Reports 2020-10-29 [PMID: 33125874]

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

Hamilton HL, Kinscherf NA, Balmer G et al. FABP7 drives an inflammatory response in human astrocytes and is upregulated in Alzheimer's disease GeroScience 2023-09-09 [PMID: 37688656] (IHC-P, Mouse)

Johnson M, Bell A, Lauing KL et al. Advanced age in humans and mouse models of glioblastoma show decreased survival from extratumoral influence Clinical cancer research : an official journal of the American Association for Cancer Research 2023-09-19 [PMID: 37725593] (FLOW, Mouse)

Moffet J, Fatunla O, Freytag L et al. Recapitulating thyroid cancer histotypes through engineering embryonic stem cells bioRxiv 2023-03-15 (IHC-P, Human)

Details:
Citation using the version of this antibody.

Kim EJ, Kim JY, Kim SO et al. The oncogenic JAG1 intracellular domain is a transcriptional cofactor that acts in concert with DDX17/SMAD3/TGIF2 Cell reports 2022-11-22 [PMID: 36417870] (WB, Human)

Guo Y, Chomiak AA, Hong Y et al. Histone H2A ubiquitination resulting from Brap loss of function connects multiple aging hallmarks and accelerates neurodegeneration iScience 2022-07-15 [PMID: 35754718] (WB, Mouse)

More publications at <http://www.novusbio.com/NBP2-29415>



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Products Related to NBP2-29415

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)
H00002670-Q01-10ug	Recombinant Human GFAP GST (N-Term) Protein

Limitations

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