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.



Reviews: 12 Publications: 116

Protocols, Publications, Related Products, Reviews, Research Tools and Images at: www.novusbio.com/NB300-141

Updated 4/13/2025 v.20.1

Earn rewards for product reviews and publications.

Submit a publication at www.novusbio.com/publications Submit a review at www.novusbio.com/reviews/destination/NB300-141



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 <u>Simple Western Antibody Database</u> 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. | |

www.novusbio.com



CC-BY license.





10000

Immunohistochemistry-Paraffin: [NID200 1441 N 4 -• brain section, 20x ma Polymer-HRP. IHC in

| 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. | 150- 100- 75- 50- 37- 25- 20- 15- |
| Western Blot: GFAP Antibody [NB300-141] - Analysis of GFAP expression in whole rat cerebellum homogenate. | GFAP > |
| 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. | kDa 1 2 3 4 5 250 - 150 - 100 - 75 - 37 - |



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.

Immunocytochemistry/ Immunofluorescence: GFAP Antibody [NB300-141] - EGFP+ neurons are positive for RABV antigen.Brains were collected from Cre reporter mice fifteen days post-infection, cryosectioned, & 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) & DAPI nuclear stain (blue, 63× confocal imaging). White arrows in (C) indicate regions positive for RABV P. Image collected & cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.ppat.1002971), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Western Blot: GFAP Antibody [NB300-141] - Effects of the repeated administration of NVP CXCR2 20 (NVP; 10 µg/5 µl; i.t.; 16 h & 1 h before CCI & then once a day for 7 days) on the protein levels of CXCR2, IBA1, GFAP, CXCL1, CXCL2, & CXCL3 proteins (A–I) in the spinal cord (A–F) & DRG (G–I) on the 7th day after CCI in rats. The data are presented as the mean fold changes relative to the control \pm SEM (5–6 samples per group). Intergroup differences were analyzed using ANOVA with Bonferroni's multiple comparisons test. *p < 0.05, **p < 0.01, ***p < 0.001 indicate differences vs. naive rats. #p < 0.05, indicate differences between V-treated & NVP-treated rats. CCI, chronic constriction injury; N, naive; V, vehicle; NVP, NVP CXCR2 20. Image collected & cropped by CiteAb from the following publication

(https://pubmed.ncbi.nlm.nih.gov/31616413), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Immunocytochemistry/ Immunofluorescence: GFAP Antibody [NB300-141] - Increased astrocyte activation in IL-1 β -stimulated two-week old offspring is reduced by maternal LB supplementation. Representative images of fluorescence microscopy of claudin-5+ (location of the brain capillaries, red), GFAP+ astrocyte (green), & DAPI (nuclei, blue). Three to five sections per mouse were examined & at least three mice were examined in each group. Stronger than control SPF GFAP staining was observed around the blood vessel (see arrow) after IL-1 β insult. Maternal supplemented group (LB) with or without postnatal insult had GFAP levels similar to the control group indicating that LB supplementation prevented astrocyte activation around the BBB endothelium. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32424168), licensed under a CC-BY license. Not internally tested by Novus Biologicals.





GFAP

С





Immunocytochemistry/ Immunofluorescence: GFAP Antibody [NB300-141] - Glial cells density is differently modulated during AD progression.a Retinal slices were immunolabeled with anti-GFAP antibody (green) & Hoechst for nuclei visualization (blue) at different ages of 3xTg-AD & non-Tg mice & density of GFAP signal was quantified as shown in b (**p < 0.01 pre vs early; n = 16 fields/four slices for each condition; two-way ANOVA, Holm-Sidak; ##p < 0.01 for comparison with age-matched non-Tg mice, two-way ANOVA, Holm-Sidak). c Representative multiarea image of retinal slice immunolabeled with anti-lba1 antibody (green) & Hoechst for nuclei visualization (blue); density of lba1+ cells was quantified as shown in d (**p < 0.01 vs 3xTg-AD pre; ##p < 0.01 vs agematched non-Tg mice, n = 16 fields/four slices for each condition, twowav ANOVA, Holm-Sidak method for multiple comparison) Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29880901), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Shinozaki Y, Danjo Y, Koizumi S., et Al. Microglial ROCK is essential for chronic methylmercury-induced neurodegeneration J Neurochem 2019-07-07 [PMID: 31278875]

Tiwari, A;Myeong, J;Hashemiaghdam, A;Stunault, MI;Zhang, H;Niu, X;Laramie, MA;Sponagel, J;Shriver, LP;Patti, GJ;KIyachko, VA;Ashrafi, G; Mitochondrial pyruvate transport regulates presynaptic metabolism and neurotransmission Science advances 2024-11-15 [PMID: 39546604]

Wang C, Terrigno M, Li J et al. Increased G3BP2-Tau interaction in tauopathies is a natural defense against Tau aggregation Neuron 2023-06-23 [PMID: 37385246]

Schneider KM, Blank N, Alvarez Y, Thum K et Al. The enteric nervous system relays psychological stress to intestinal inflammation Cell 2023-05-26 [PMID: 37236193]

Heller JP, Michaluk P, Sugao K, Rusakov DA. Probing nano-organization of astroglia with multi-color super-resolution microscopy. J. Neurosci. Res. 2017-02-02 [PMID: 28151556]

Zhang B, Bailey WM, McVicar AL, Gensel JC. Age increases reactive oxygen species production in macrophages and potentiates oxidative damage after spinal cord injury. Neurobiol Aging 2016-11-01 [PMID: 27596335]

Foright RM, Johnson GC, Kahn D et Al. Compensatory eating behaviors in male and female rats in response to exercise training Am J Physiol Regul Integr Comp Physiol 2021-08-01 [PMID: 32551825]

Chen P, Liu XY, Lin MH et Al. NeuroD1 administration ameliorated neuroinflammation and boosted neurogenesis in a mouse model of subarachnoid hemorrhage J Neuroinflammation 2023-11-12 [PMID: 37953259]

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]

More publications at http://www.novusbio.com/NB300-141





Novus Biologicals USA

10730 E. Briarwood Avenue Centennial, CO 80112 USA Phone: 303.730.1950 Toll Free: 1.888.506.6887 Fax: 303.730.1966 nb-customerservice@bio-techne.com

Bio-Techne Canada

21 Canmotor Ave Toronto, ON M8Z 4E6 Canada Phone: 905.827.6400 Toll Free: 855.668.8722 Fax: 905.827.6402 canada.inquires@bio-techne.com

Bio-Techne Ltd

19 Barton Lane Abingdon Science Park Abingdon, OX14 3NB, United Kingdom Phone: (44) (0) 1235 529449 Free Phone: 0800 37 34 15 Fax: (44) (0) 1235 533420 info.EMEA@bio-techne.com

General Contact Information

www.novusbio.com Technical Support: nb-technical@biotechne.com Orders: nb-customerservice@bio-techne.com General: novus@novusbio.com

Products Related to NB300-141

| NBL1-11043 | GFAP Overexpression Lysate |
|--------------------|---|
| HAF008 | Goat anti-Rabbit IgG Secondary Antibody [HRP] |
| NB7160 | Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP] |
| H00002670-Q01-10ug | Recombinant Human GFAP GST (N-Term) Protein |

Limitations

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.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

Earn gift cards/discounts by submitting a review: www.novusbio.com/reviews/submit/NB300-141

Earn gift cards/discounts by submitting a publication using this product: www.novusbio.com/publications

www.novusbio.com

