

## Product Datasheet

# Anti-Glial Fibrillary Acidic Protein (GFAP)

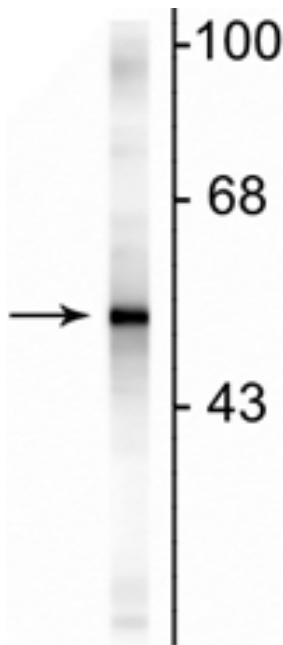
### Overview

---

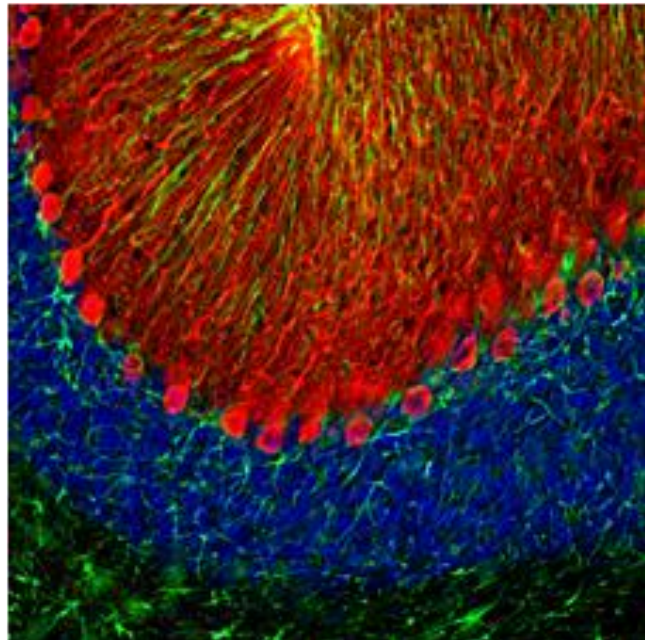
<b>Catalog #</b>	620-GFAP
<b>Host Species</b>	Rabbit Polyclonal
<b>Format</b>	Neat Serum
<b>Applications</b>	WB 1:1000-1:5000 IHC 1:300-1:5000 ICC 1:1000-1:5000
<b>Species Tested</b>	Bovine, Horse, Human, Mouse, Rat
<b>Immunogen</b>	Human recombinant protein
<b>Molecular Weight</b>	50 kDa
<b>Cite this Antibody</b>	PhosphoSolutions Cat# 620-GFAP, RRID: AB_2492124

### Images

---



Western blot of rat cortical lysate showing specific immunolabeling of the ~50 kDa GFAP protein.



Immunofluorescence of a section of rat cerebellum labeled with anti-GFAP (cat #620-GFAP, 1:5000, green), colabeled with anti-calbindin (cat #302-CALB, 1:2,000, red), and DAPI staining of nuclear DNA. The anti-calbindin prominently labels the dendrites and perikarya of Purkinje cells in the molecular layer of the cerebellum. The anti-GFAP labels the processes of Bergmann glia in the molecular layer and the astroglia in the granular and white layers of the cerebellum.

## Details

---

<b>Target Description</b>	Glial Fibrillary Acidic Protein (GFAP) was discovered by Amico Bignami and co-workers as a major fibrous protein of multiple sclerosis plaques (Bignami <i>et al</i> , 1972). It was subsequently found to be a member of the 10nm or intermediate filament (IF) family, specifically the IF family Class III, which also includes peripherin, desmin and vimentin. GFAP is strongly and specifically expressed in astrocytes and certain other astroglia in the CNS, in satellite cells, peripheral ganglia, and in non-myelinating Schwann cells in peripheral nerves. In many damage and disease states GFAP expression is heavily upregulated in astrocytes. In addition, neural stem cells frequently strongly express GFAP. Point mutations in the protein coding region of the GFAP gene lead to Alexander disease which is characterized by the presence of abnormal astrocytes containing GFAP protein aggregates known as Rosenthal fibers (Brenner <i>et al</i> , 2001).
<b>Specificity</b>	Specific for endogenous levels of the ~50 kDa GFAP protein. A lower band at ~45 kDa is a proteolytic fragment derived from the GFAP molecule.
<b>Production/Purification</b>	Neat Serum
<b>Quality Control</b>	Western blots performed on each lot.
<b>Buffer</b>	Neat serum
<b>Storage</b>	Recommended that the undiluted antibody be aliquoted into smaller working volumes (10-30 $\mu$ L/vial depending on usage) upon arrival and stored long term at -20° C or -80° C, while keeping a working aliquot stored at 4° C for short term. Avoid freeze/thaw cycles.
<b>Stability</b>	After date of receipt, stable for at least 1 year at -20°C.

## Significant Citations

---

Haggerty, A.E., Maldonado-Lasunción, I., Nitobe, Y., Yamane, K., Marlow, M.M., You, H., Zhang, C., Cho, B., Li, X., Reddy, S. and Mao, H.Q., 2022. The Effects of the Combination of Mesenchymal Stromal Cells and Nanofiber-Hydrogel Composite on Repair of the Contused Spinal Cord. *Cells*, 11(7), p.1137.

Yu, D., G Febbo, I., J Maroteaux, M., Wang, H., Song, Y., Han, X., Sun, C., E Meyer, E., Rowe, S., Chen, Y. and C Canavier, C., 2021. The Transcription Factor Shox2 Shapes Neuron Firing Properties and Suppresses Seizures by Regulation of Key Ion Channels in Thalamocortical Neurons. *Cerebral Cortex*.

Chen, C., Jiang, Z., Fu, X., Yu, D., Huang, H. and Tasker, J.G., 2019. Astrocytes amplify neuronal dendritic volume transmission stimulated by norepinephrine. *Cell Reports*, 29(13), pp.4349-4361.

Homiack, D., O'Kinneide, E., Hajmurad, S., Dohanich, G.P. and Schrader, L.A., 2018. Effect of acute alarm odor exposure and biological sex on generalized avoidance and glutamatergic signaling in the hippocampus of Wistar rats. *Stress*, Jul;21(4):292-303.

## Our Guarantee

---

As an original manufacturer, we are dedicated to creating quality and reproducible antibodies that further your research. We provide personalized customer support from the scientists that made the antibody and offer a free replacement or 100% refund if we cannot resolve an issue. Order today and experience **Antibodies that Work™**.

**Note:** For research use only. Not intended for therapeutic or diagnostic use. Use of all products is subject to our terms and conditions, viewable on our website.