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Anti-Glial Fibrillary Acidic Protein (GFAP) Antibody

Our Anti-Glial Fibrillary Acidic Protein (GFAP) primary antibody from PhosphoSolutions is chicken po
Catalog # AN1414

Product Information

Application	WB, IHC, ICC
Primary Accession	P14136
Host	Chicken
Clonality	Polyclonal
Isotype	IgY
Calculated MW	49880

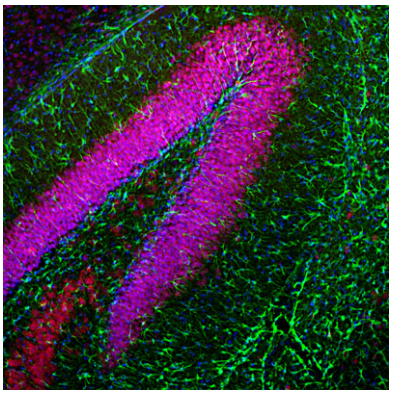
Additional Information

Gene ID	2670
Other Names	wu:fb34h11 antibody, ALXDRD antibody, cb345 antibody, etID36982.3 antibody, FLJ42474 antibody, FLJ45472 antibody, GFAP antibody, GFAP_HUMAN antibody, gfapl antibody, Glial fibrillary acidic protein antibody, Intermediate filament protein antibody, wu:fk42c12 antibody, xx:af506734 antibody, zgc:110485 antibody
Target/Specificity	Glial Fibrillary Acidic Protein (GFAP) was discovered by Amico Bignami and co-workers as a major fibrous protein of multiple sclerosis plaques (1). 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 (2).
Dilution	WB~~1:1000 IHC~~1:100~500 ICC~~N/A
Format	Total IgY fraction
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-Glial Fibrillary Acidic Protein (GFAP) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

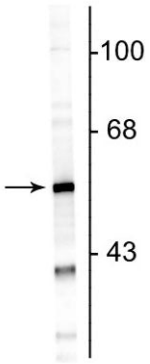
Background

Glial Fibrillary Acidic Protein (GFAP) was discovered by Amico Bignami and co-workers as a major fibrous protein of multiple sclerosis plaques (1). 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 (2).

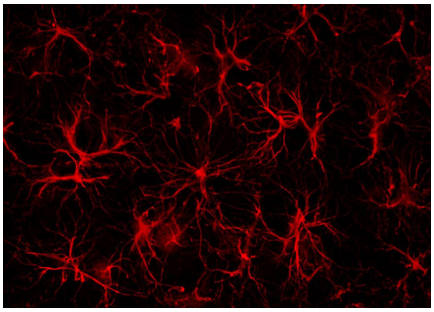
Images



Immunofluorescence of a section of mouse hippocampus colabeled with Anti-GFAP(cat. AN1414, green, 1:5000) and Anti-FOX3 (red). The Anti-FOX3 labels the nuclei and proximal perikarya of neurons while the Anti-GFAP labels a network of astroglial cells. The blue is DAPI staining of nuclear DNA.

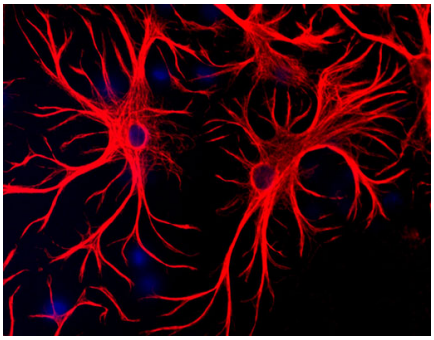


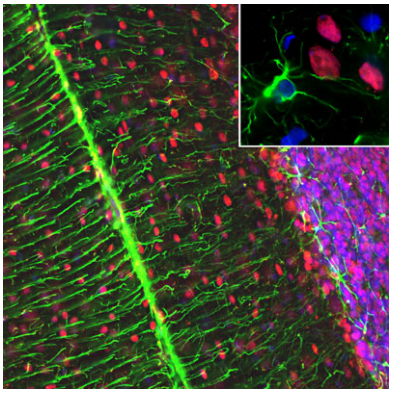
Western blot of rat cortical lysate showing specific immunolabeling of the ~50 kDa GFAP protein.



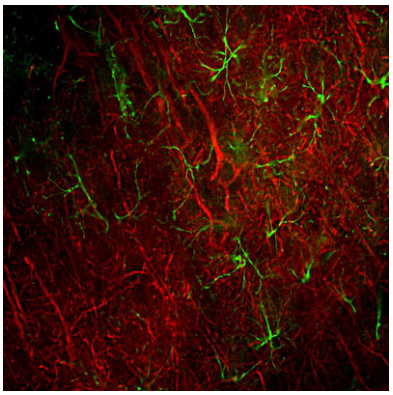
Immunofluorescence of a section of mouse prefrontal cortex labeled with Anti-GFAP(cat. AN1414, red, 1:1000). Image courtesy Andrea Cardenas, Rosalind Franklin Unversity, Medicine and Science.

Immunolabeling of mixed neuron and glia cultures where astrocytes are strongly and specifically labeled with Anti-GFAP(cat. AN1414, 1:1000, red), and nuclear staining with DAPI (blue).





Immunofluorescence of a section of rat cerebellum showing specific labeling of MeCP2 (cat. 1205-MeCP2, 1:1000, red) in nuclei of neurons and specific labeling of GFAP (cat. AN1414, 1:5000, green) in the network of astroglial cells and projections of Bergmann glia, and Hoechst staining of nuclear DNA.



Immunofluorescence of a section of rat frontal cortex showing labeling of Neurofilament-L (cat. 1452-NFL, 1:500, red) and labeling of GFAP(cat. AN1414 , 1:5000, green). The anti-NFL antibody labels cell bodies and processes of pyramidal neurons, as well as dendrites and axons of other neuronal cells. While the anti-GFAP antibody labels the network of glial cells.