Product Data Sheet:
GFAP Rabbit Polyclonal Antibody

Cat. No:	AB-84378
Conjugate:	Unconjugated
Size:	100 ul
Clone:	POLY
Concentration:	1mg/ml
Host:	Goat
Isotype:	IgG
Immunogen:	Recombinant full length human GFAP isotype 1 expressed in and purified from E. coli.
Reactivity:	Hu, Ms, Rt
Applications:	Western Blot: 1:5,000. Immunofluorescence: 1:5,000 Immunocytochemistry: 1:5,000
Molecular Weight:	~50kDa
Purification:	Affinity purification
Background:	Glial Fibrillary Acidic Protein (GFAP) is a major CNS protein which runs on SDS-PAGE as a ~50kDa protein, usually associated with somewhat lower molecule weight bands which are alternate transcripts from the single gene or in vivo proteolytic fragments. GFAP is strongly and specifically expressed in astrocytes and certain other glia in the central nervous system, in satellite cells in peripheral ganglia, in non-myelinating Schwann cells in peripheral nerves and is also a useful marker of neural stem cells. Astrocytes respond to many damage and disease states resulting i “astrogliosis” or the presence of a “glial response”. GFAP antibodies are widely used to study reactive astrocytes which form part of this response, since these cells stain much more strongly with GFAP antibodies than normal astrocytes. GFAP also forms a major component of the so-called glial scar, an astrocyte rich structure apparently forming part of the barrier to nerve fiber regeneration following damage in the central nervous system. Neural stem cells frequently strongly express GFAP but many lose this if they develop into neurons or oligodendrocytes. Finally, Alexander disease was recently shown to be caused by point mutations in the protein coding region of the GFAP gene. All forms of Alexander disease are characterized by the presence of Rosenthal fibers, which are GFAP containing cytoplasmic inclusions found in astrocytes. Antibodies to GFAP are therefore very useful as a marker of normal and reactive glial cells in central and peripheral nerve system, as well as of developing neural stem cells. GFAP antibody was made against full length human recombinant GFAP, Prot-r-GFAP, expressed in and purified from E. coli. The antibody works well on western blots, and on immunostaining of cell culture or tissue sections
Form:	Liquid
Buffer:	Store at 4°C for short term, for longer term at -20°C
Storage:	Affinity purified antibody at 1mg/mL in 50% PBS, 50% glycerol plus 5mM NaN3

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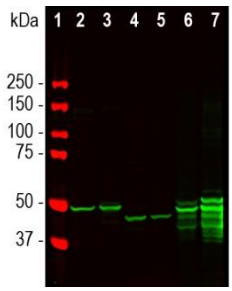
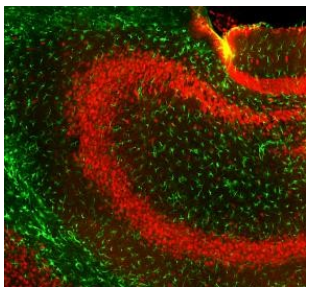


Western blot analysis of brain lysates from different species using goat pAb to GFAP, GFAP, dilution 1:5,000 in green:
[1] protein standard (red),
[2] rat cortex,
[3] rat cerebellum,
[4] mouse cortex,
[5] mouse cerebellum,
[6] cow cortex, and
[7] cow cerebellum.
Strong band at about 50 kDa corresponds to GFAP protein. Smaller proteolytic fragments of GFAP are also detected on the blot.



Immunofluorescent analysis of mouse hippocampus section stained with goat pAb to GFAP, dilution 1:5,000 in green, and costained with mouse mAb to FOX3/NeuN, dilution 1:2,000, in red. The blue is Hoechst staining of nuclear DNA. Following transcardial perfusion of mouse with 4%paraformaldehyde, brain was post fixed for 24 hours, cut to 45µM, and free-floating sections were stained with above antibodies. The GFAP antibody stains the network of astrocytic glial cells, while the FOX3/NeuN antibody specifically labels nuclei and proximal perikarya of neurons.

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