

DESCRIPTION

Species Reactivity	Human/Rat
Specificity	Detects human and rat GFAP in Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human GFAP Leu292-Met432 Accession # P14136
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

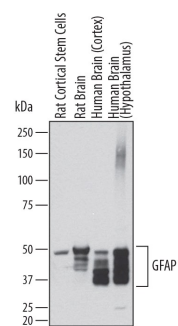
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below
Simple Western	0.1-2 µg/mL	See Below

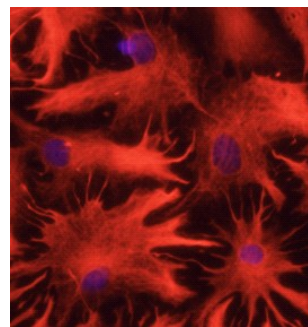
DATA

Western Blot



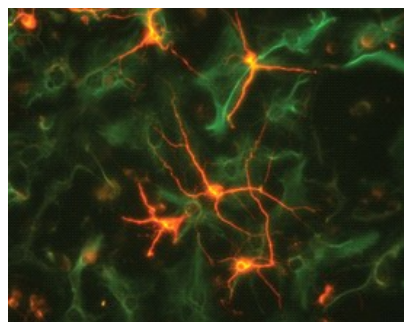
Detection of Human and Rat GFAP by Western Blot. Western blot shows lysates of rat cortical stem cells, rat brain tissue, human brain (cortex) tissue, and human brain (hypothalamus) tissue. PVDF membrane was probed with 0.2 µg/mL of Sheep Anti-Human GFAP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2594) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). Specific bands were detected for GFAP at approximately 35-50 kDa (as indicated). This experiment was conducted under reducing conditions and using *Immunoblot Buffer Group 1*.

Immunocytochemistry



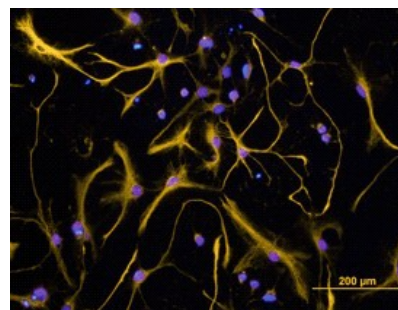
GFAP in Rat Astrocytes. GFAP was detected in immersion fixed rat astrocytes using 10 µg/mL Sheep Anti-Human GFAP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2594) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). View our protocol for *Fluorescent ICC Staining of Cells on Coverslips*.

Immunocytochemistry



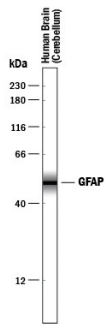
β-III Tubulin in Rat Cortical Neurons and GFAP in Rat Astrocytes. β-III Tubulin was detected in rat cortical neurons using 5 µg/mL Mouse Anti-neuron-specific Mouse β-III Tubulin Monoclonal (clone TuJ-1) Antibody (Catalog # MAB1195). GFAP was detected in rat astrocytes using 10 µg/mL Sheep Anti-Human GFAP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2594). Cells were incubated with primary antibodies for 3 hours at room temperature. Cells were stained for beta-III Tubulin using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and for GFAP using the NorthernLights 493-conjugated Anti-Sheep IgG Secondary Antibody (green; Catalog # NL012). View our protocol for *Fluorescent ICC Staining of Cells on Coverslips*.

Immunocytochemistry



GFAP in Rat Cortical Stem Cells. GFAP was detected in immersion fixed 7 days differentiated rat cortical stem cells using Sheep Anti-Human GFAP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2594) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (yellow; Catalog # NL010) and counterstained with DAPI (blue). View our protocol for *Fluorescent ICC Staining of Cells on Coverslips*.

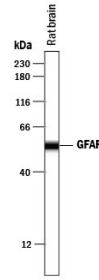
Simple Western



Detection of Human GFAP by Simple Western™. Simple Western lane view shows lysates of human brain (cerebellum) tissue, loaded at 0.2 mg/mL. A specific band was detected for GFAP at approximately 51 kDa (as indicated) using 0.1 µg/mL of Sheep Anti-Human/Rat GFAP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2594) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



Simple Western



Detection of Rat GFAP by Simple Western™. Simple Western lane view shows lysates of rat brain tissue, loaded at 0.2 mg/mL. A specific band was detected for GFAP at approximately 55 kDa (as indicated) using 2 µg/mL of Sheep Anti-Human/Rat GFAP Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2594) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

GFAP (Glial fibrillary acidic protein) is a type III intermediate filament protein. It is the major component of astrocyte intermediate filament. Defects in GFAP are a cause of Alexander disease. Alexander disease is a rare disorder of the central nervous system. It is a progressive leukoencephalopathy whose hallmark is the widespread accumulation of Rosenthal fibers which are cytoplasmic inclusions in astrocytes. At the amino acid sequence level, human GFAP shares 91% and 90% identity with rat and mouse GFAP, respectively.