Anti-GFAP Antibody, Clone 2E1.E9

Antibodies

Mouse monoclonal IgG2b antibody against human, mouse, rat GFAP (glial fibrillary acidic protein), unconjugated

Catalog	#60048	100 µg	0.5 mg/mL
	#60048.1	25 µg	0.5 mg/mL

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Product Description

The 2E1.E9 antibody reacts with glial fibrillary acidic protein (GFAP), an ~49 kDa type III intermediate filament (IF) protein that, within the central nervous system, is expressed primarily by astrocytes, though found at high levels in some glial-derived tumors. GFAP is thought to contribute to the structural architecture and strength of the cytoskeleton. The 2E1.E9 antibody does not cross-react with other IF proteins and can be used to distinguish astrocytes from other glial cells. GFAP has also been identified in Leydig cells, keratinocytes, chondrocytes and osteocytes. The GFAP polypeptide comprises an N-terminal head, a central rod, and a C-terminal tail domain, and assembles as dimers by a process dependent on phosphorylation and dephosphorylation of the N-terminal domain. Several splice variants have been identified, encoding three distinct isoforms. Many mutations in the GFAP gene (>50) have been associated with Alexander disease, a progressive leukoencephalopathy characterized by cytoplasmic inclusions and dysfunctional myelination.

Target Antigen Name:	GFAP (Glial Fibrillary Acidic Protein)
Alternative Names:	Glial fibrillary acid protein (GFAP)
Gene ID:	2670
Species Reactivity:	Human, Mouse, Rat
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	2E1.E9
Isotype:	IgG2b
Immunogen:	Bovine spinal cord homogenate
Conjugate:	Unconjugated

Applications

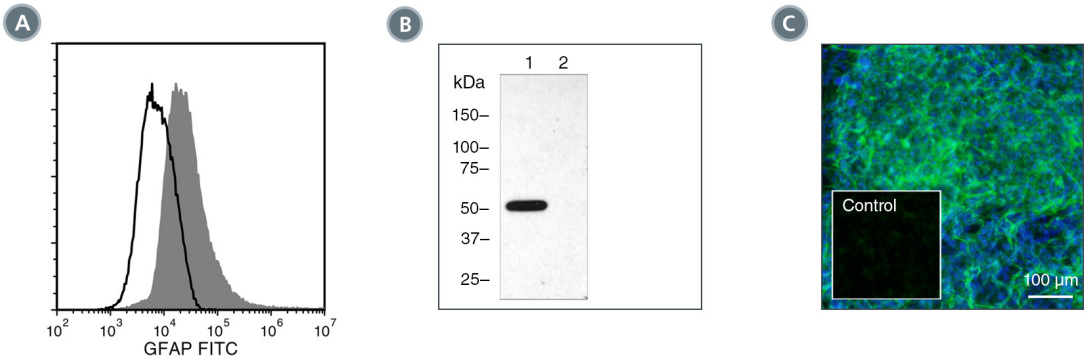
Verified:	FC, ICC, IF, WB
Reported:	FC, ICC, IF, IHC, WB
Special Applications:	This antibody clone has been verified for labeling neural stem and progenitor cells grown in NeuroCult™ NS-A Proliferation Kit (Human; Catalog #05751) and NeuroCult™ Proliferation Kit (Mouse; Catalog #05702).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	This antibody is at > 85% purity.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	The suggested use of this antibody is: FC (fixed cells), ≤ 0.5 µg per 1 x 10^6 cells in 100 µL volume; ICC/IF, ≤ 5 µg/mL; WB, 0.25 - 1 µg/mL. It is recommended that the antibody be titrated for optimal perfomance for each application.

Data



(A) Flow cytometry analysis of Sprague-Dawley rat brain cells labeled with Anti-GFAP Antibody, Clone 2E1.E9, followed by Goat Anti-Mouse IgG (H+L) Antibody, Polyclonal, FITC (Catalog #60138FI) (filled histogram), or a mouse IgG2b, kappa isotype control antibody, followed by Goat Anti-Mouse IgG (H+L) Antibody, Polyclonal, FITC (solid line histogram).
(B) Western blot analysis of denatured/reduced Sprague-Dawley rat brain lysate (lane 1) or HT1080 fibrosarcoma cells (negative control, lane 2) with Anti-GFAP Antibody, Clone 2E1.E9.
(C) Embryonic mouse cortical tissue was cultured using the NeuroCult™ Proliferation Kit (Mouse), then fixed and labeled with Anti-GFAP Antibody, Clone 2E1.E9, followed by goat anti-mouse IgG, FITC. Nuclei were counter-stained with DAPI. Inset shows cells labeled with a mouse IgG2b, kappa isotype control antibody, followed by goat anti-mouse IgG, FITC (without DAPI staining).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

1. Malchenko S et al. (2014) Onset of rosette formation during spontaneous neural differentiation of hESC and hiPSC colonies. Gene 534(2): 400–7. (FC, ICC, IF)
2. Liu W et al. (2011) Sample preparation method for isolation of single-cell types from mouse liver for proteomic studies. Proteomics 11(17): 3556–64. (FC)
3. Quinlan RA et al. (2007) GFAP and its role in Alexander disease. Exp Cell Res 313(10): 2077–87. (IHC)
4. Brenner M et al. (2001) Mutations in GFAP, encoding glial fibrillary acidic protein, are associated with Alexander disease. Nat Genet 27(1): 117–20.
5. McLendon RE & Bigner DD. (1994) Immunohistochemistry of the glial fibrillary acidic protein: basic and applied considerations. Brain Pathol 4(3): 221–8. (IHC)