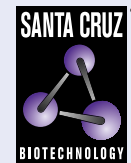


GFAP (2E1): sc-33673



The Power to Question

BACKGROUND

Glial fibrillary acidic protein, or GFAP, is an intermediate filament (IF) protein belonging to the type III subclass of IF proteins. Like other IF proteins, GFAP is composed of an amino terminal head domain, central rod domain and a carboxy terminal tail domain. GFAP is specifically found in astroglia, a cell type which is highly responsive to neurologic insults. Astrogliosis is found to be a result of mechanical trauma, AIDS dementia, prion infection and inflammatory demyelination diseases, and is accompanied by an increase in GFAP expression. GFAP is an immunohistochemical marker for localizing benign astrocyte and neoplastic cells of glial origin in the central nervous system.

CHROMOSOMAL LOCATION

Genetic locus: GFAP (human) mapping to 17q21.31; Gfap (mouse) mapping to 11 E1.

SOURCE

GFAP (2E1) is a mouse monoclonal antibody raised against spinal chord homogenate of bovine origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GFAP (2E1) is available conjugated to agarose (sc-33673 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33673 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33673 PE), fluorescein (sc-33673 FITC), Alexa Fluor® 488 (sc-33673 AF488), Alexa Fluor® 546 (sc-33673 AF546), Alexa Fluor® 594 (sc-33673 AF594) or Alexa Fluor® 647 (sc-33673 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33673 AF680) or Alexa Fluor® 790 (sc-33673 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GFAP (2E1) is recommended for detection of GFAP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

GFAP (2E1) is also recommended for detection of GFAP in additional species, including bovine.

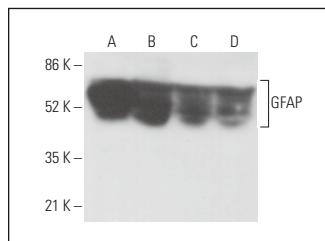
Suitable for use as control antibody for GFAP siRNA (h): sc-29332, GFAP siRNA (m): sc-35466, GFAP siRNA (r): sc-155993, GFAP shRNA Plasmid (h): sc-29332-SH, GFAP shRNA Plasmid (m): sc-35466-SH, GFAP shRNA Plasmid (r): sc-155993-SH, GFAP shRNA (h) Lentiviral Particles: sc-29332-V, GFAP shRNA (m) Lentiviral Particles: sc-35466-V and GFAP shRNA (r) Lentiviral Particles: sc-155993-V.

Molecular Weight of GFAP: 50 kDa.

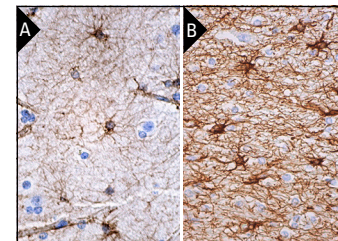
Positive Controls: SK-N-SH cell lysate: sc-2410, U-87 MG cell lysate: sc-2411 or U-251-MG whole cell lysate: sc-364176.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA

GFAP (2E1): sc-33673. Western blot analysis of GFAP expression in C6 (A), U-87 MG (B), SK-N-SH (C) and U-251-MG (D) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



GFAP (2E1): sc-33673. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain showing staining of astrocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of astrocytes and neuropil staining (B).

SELECT PRODUCT CITATIONS

- Müller, A., et al. 2007. Astrocyte-derived CNTF switches mature RGCs to a regenerative state following inflammatory stimulation. *Brain* 130: 3308-3320.
- Kim, Y.E., et al. 2017. Inhibitory effect of punicalagin on lipopolysaccharide-induced neuroinflammation, oxidative stress and memory impairment via inhibition of nuclear factor-κB. *Neuropharmacology* 117: 21-32.
- Miranda-Azpiazu, P., et al. 2018. A novel dynamic multicellular co-culture system for studying individual blood-brain barrier cell types in brain diseases and cytotoxicity testing. *Sci. Rep.* 8: 8784.
- Jianrong, S., et al. 2019. DUSP14 rescues cerebral ischemia/reperfusion (IR) injury by reducing inflammation and apoptosis via the activation of Nrf-2. *Biochem. Biophys. Res. Commun.* 509: 713-721.
- Ali, W., et al. 2020. Oral administration of α linoleic acid rescues Aβ-induced glia-mediated neuroinflammation and cognitive dysfunction in C57BL/6N mice. *Cells* 9: 667.
- Wang, Y., et al. 2021. The essential role of transcription factor Pitx3 in preventing mesodiencephalic dopaminergic neurodegeneration and maintaining neuronal subtype identities during aging. *Cell Death Dis.* 12: 1008.
- Huang, Y., et al. 2022. IL-10 alleviates radicular pain by inhibiting TNF-α/p65 dependent Nav1.7 up-regulation in DRG neurons of rats. *Brain Res.* 1791: 147997.
- Sun, Y., et al. 2023. Losartan attenuates acetic acid enema-induced visceral hypersensitivity by inhibiting the ACE1/Ang II/AT1 receptor axis in enteric glial cells. *Eur. J. Pharmacol.* 946: 175650.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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