

GFAP (2A5): sc-65343

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, a 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 (2A5) is a mouse monoclonal antibody raised against purified spinal cord GFAP of porcine origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GFAP (2A5) is recommended for detection of GFAP of mouse, rat, human and porcine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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: GFAP (h2): 293T Lysate: sc-115582, rat brain extract: sc-2392 or U-87 MG cell lysate: sc-2411.

STORAGE

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

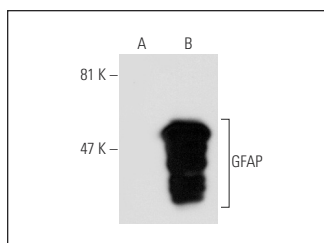
PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

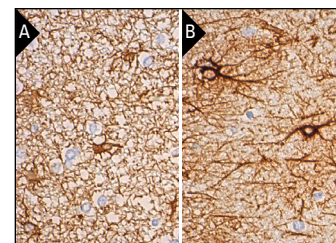
RESEARCH USE

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

DATA



GFAP (2A5): sc-65343. Western blot analysis of GFAP expression in non-transfected: sc-117752 (A) and human GFAP transfected: sc-115582 (B) 293T whole cell lysates.



GFAP (2A5): sc-65343. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex (A) and rat brain (B) tissue showing cytoplasmic and membrane staining of astrocytes and neuropil staining.

SELECT PRODUCT CITATIONS

- Edmands, S.D. and Hall, A.C. 2009. Role for metallothioneins-I/II in isoflurane preconditioning of primary murine neuronal cultures. *Anesthesiology* 110: 538-547.
- Esposito, E., et al. 2012. Neuroprotective activities of palmitoylethanolamide in an animal model of Parkinson's disease. *PLoS ONE* 7: e41880.
- Genovese, T., et al. 2013. Post-ischaemic thyroid hormone treatment in a rat model of acute stroke. *Brain Res.* 1513: 92-102.
- Sarchielli, E., et al. 2014. Multifaceted roles of BDNF and FGF2 in human striatal primordium development. An *in vitro* study. *Exp. Neurol.* 257: 130-147.
- Kim, Y., et al. 2015. Antioxidant and anti-inflammatory effects of intravenously injected adipose derived mesenchymal stem cells in dogs with acute spinal cord injury. *Stem Cell Res. Ther.* 6: 229.
- Tseng, T.C., et al. 2016. Substrate-mediated reprogramming of human fibroblasts into neural crest stem-like cells and their applications in neural repair. *Biomaterials* 102: 148-161.
- Cai, J., et al. 2018. Analysis of FK506-mediated functional recovery and neuroprotection in a rat model of spinal cord injury indicates that EGF is modulated in astrocytes. *Exp. Ther. Med.* 16: 501-510.
- Khan, I.U., et al. 2019. Therapeutic effects of intravenous injection of fresh and frozen thawed HO-1-overexpressed Ad-MSCs in dogs with acute spinal cord injury. *Stem Cells Int.* 2019: 8537541.
- Buzoianu-Anguiano, V., et al. 2020. Single vs. combined therapeutic approaches in rats with chronic spinal cord Injury. *Front. Neurol.* 11: 136.



See **GFAP (2E1): sc-33673** for GFAP antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.