

GFAP (52): sc-135921

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.

REFERENCES

1. Herpers, M.J., et al. 1986. Co-expression of glial fibrillary acidic protein and vimentin-type intermediate filaments in human astrocytomas. *Acta Neuropathol.* 70: 333-339.
2. Van Muijen, G.N., et al. 1987. Coexpression of intermediate filament polypeptides in human fetal and adult tissues. *Lab. Invest.* 57: 359-369.
3. McLendon, R.E. and Bigner, D.D. 1994. Immunohistochemistry of the glial fibrillary acidic protein: basic and applied considerations. *Brain Pathol.* 4: 221-228.
4. Eng, L.F., et al. 1994. GFAP and astrogliosis. *Brain Pathol.* 4: 229-237.
5. Inagaki, M., et al. 1994. Glial fibrillary acidic protein: dynamic property and regulation by phosphorylation. *Brain Pathol.* 4: 239-243.
6. Brenner, M. 1994. Structure and transcriptional regulation of the GFAP gene. *Brain Pathol.* 4: 245-257.
7. Laping, N.J., et al. 1994. Glial fibrillary acidic protein: regulation by hormones, cytokines and growth factors. *Brain Pathol.* 4: 259-275.
8. Halliday, G.M., et al. 1996. Glial fibrillary acidic protein (GFAP) immunohistochemistry in human cortex: a quantitative study using different antisera. *Neurosci. Lett.* 209: 29-32.
9. Porchet, R., et al. 2003. Analysis of glial acidic fibrillary protein in the human entorhinal cortex during aging and in Alzheimer's disease. *Proteomics* 3: 1476-1485.

CHROMOSOMAL LOCATION

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

SOURCE

GFAP (52) is a mouse monoclonal antibody raised against amino acids 418-432 of GFAP of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

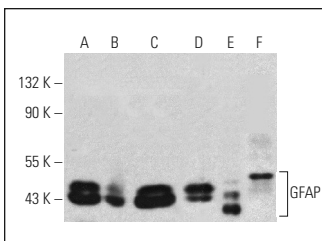
GFAP (52) is recommended for detection of GFAP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); not recommended for immunoprecipitation.

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.

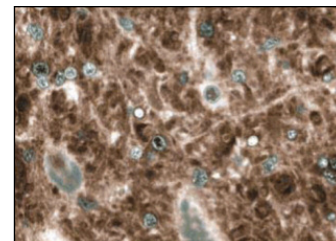
Molecular Weight of GFAP: 50 kDa.

Positive Controls: SW-13 cell lysate: sc-24778, U-87 MG cell lysate: sc-2411 or Neuro-2A whole cell lysate: sc-364185.

DATA



GFAP (52): sc-135921. Western blot analysis of GFAP expression in SW-13 (A), A-431 (B), U-87 MG (C) and Neuro-2A (D) whole cell lysates and human brain (E) and rat brain (F) tissue extracts.



GFAP (52): sc-135921. Immunofluorescence staining of rabbit brain tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Tang, Q.L., et al. 2011. Primary adenoid cystic carcinoma of sweat glands in vulva: report of an unusual case and review of the literature. *J. Obstet. Gynaecol. Res.* 37: 1694-1697.
2. Arroba, A.I., et al. 2013. Loss of protein tyrosine phosphatase 1B increases IGF-1 receptor tyrosine phosphorylation but does not rescue retinal defects in IRS2-deficient mice. *Invest. Ophthalmol. Vis. Sci.* 54: 4215-4225.
3. Sun, C., et al. 2017. IL-17 contributed to the neuropathic pain following peripheral nerve injury by promoting astrocyte proliferation and secretion of proinflammatory cytokines. *Mol. Med. Rep.* 15: 89-96.

STORAGE

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



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