SANTA CRUZ BIOTECHNOLOGY, INC.

GFAP (N-18): sc-6171

SANTA CRUZ BIOTECHNOLOGY

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 demylination 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 (N-18) is available as either goat (sc-6171) or rabbit (sc-6171-R) polyclonal affinity purified antibody raised against a peptide mapping at the N-terminus of GFAP of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6171 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as phycoerythrin (sc-6171 PE), PerCP (sc-6171 PerCP) or PerCP-Cy5.5 (sc-6171 PCPC5) conjugates for flow cytometry 100 tests.

Available as Alexa Fluor® 488 (sc-6171 AF488) or Alexa Fluor® 647 (sc-6171 AF647) conjugates for flow cytometry or immunofluorescence; 100 µg/2 ml.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

GFAP (N-18) 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), 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GFAP (N-18) is also recommended for detection of GFAP in additional species, including porcine.

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

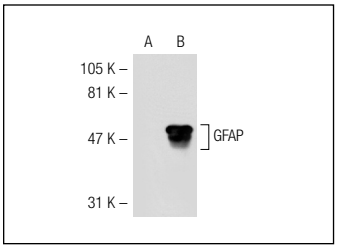
Molecular Weight of GFAP: 50 kDa.

Positive Controls: GFAP (h2): 293T Lysate: sc-115582, rat brain extract: sc-2392 or SK-N-SH cell lysate: sc-2410.

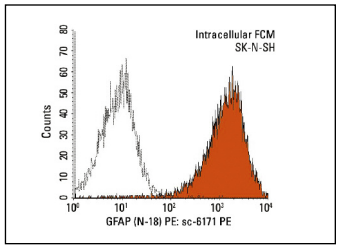
STORAGE

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

DATA



GFAP (N-18): sc-6171. Western blot analysis of GFAP expression in non-transfected: sc-117752 (**A**) and human GFAP transfected: sc-115582 (**B**) 293T whole cell lysates.



GFAP (N-18) PE: sc-6171 PE. Intracellular FCM analysis of fixed and permeabilized SK-N-SH cells. Black line histogram represents the isotype control, normal goat IgG: sc-3992.

SELECT PRODUCT CITATIONS

1. Jennings, L.L., et al. 2001. Distinct regional distribution of human equilibrative nucleoside transporter proteins 1 and 2 (hENT1 and hENT2) in the central nervous system. Neuropharmacology 40: 722-731.
2. Smithson, L.J., et al. 2009. A comparative examination of biomarkers for olfactory ensheathing cells in cats and guinea pigs. Brain Res. 1284: 41-53.
3. Brevet, M., et al. 2010. Chronic foot-shock stress potentiates the influx of bone marrow-derived microglia into hippocampus. J. Neurosci. Res. 88: 1890-1897.
4. Woehrling, E.K., et al. 2010. Evaluation of the importance of astrocytes when screening for acute toxicity in neuronal cell systems. Neurotox. Res. 17: 103-113.
5. Jana, A. and Pahan, K. 2010. Fibrillar amyloid-β-activated human astroglia kill primary human neurons via neutral sphingomyelinase: implications for Alzheimer's disease. J. Neurosci. 30: 12676-12689.
6. MohanKumar, S.M., et al. 2011. Chronic estradiol exposure induces oxidative stress in the hypothalamus to decrease hypothalamic dopamine and cause hyperprolactinemia. Am. J. Physiol. Regul. Integr. Comp. Physiol. 300: R693-R699.
7. Wang, Z., et al. 2011. Differentiation of neuronal cells from NIH/3T3 fibroblasts under defined conditions. Dev. Growth Differ. 53: 357-365.

RESEARCH USE

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