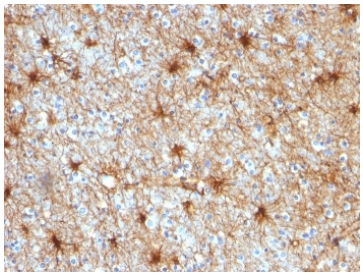
GFAP Antibody / Glial Fibrillary Acidic Protein [clone GA-5] (V2129)

Catalog No.	Formulation	Size
V2129-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2129-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2129SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2129IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

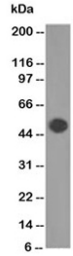
Citations (11)

Bulk quote request

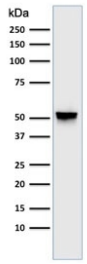
Species Reactivity	Human, Mouse, Rat, Guinea pig, Hamster
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	GA-5
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	2670
Localization	Cytoplasmic
Applications	Flow cytometry: 1-2ug/million Western blot: 1-2ug/ml (Human/Mouse/Rat/Guinea pig/Hamster) Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This **GFAP antibody** is available for research use only.



IHC staining of FFPE human cerebellum with GFAP antibody (clone GA-5).



Western blot testing of human brain lysate GFAP antibody (clone GA-5). Predicted molecular weight ~50 kDa.



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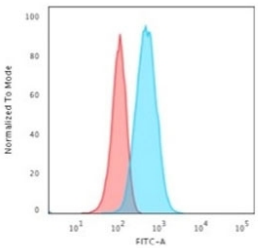
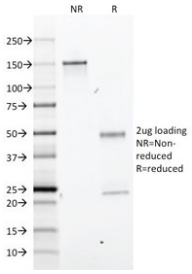
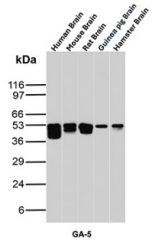


Flow cytometry testing of permeabilized human T98G cells with GFAP antibody (clone GA-5); Red=isotype control, Blue= GFAP antibody.



SDS-PAGE analysis of purified, BSA-free GFAP antibody (clone GA-5) as confirmation of integrity and purity.



GFAP Antibody Brain Tissue WB. Western blot analysis of human brain, mouse brain, rat brain, guinea pig brain, and hamster brain tissue lysates using GFAP Antibody clone GA-5. Strong bands are detected at approximately 50 kDa across multiple mammalian brain samples, consistent with the predicted molecular weight of Glial fibrillary acidic protein / GFAP, a major astrocytic intermediate filament protein involved in cytoskeletal organization and maintenance of neural tissue integrity. The observed cross-species reactivity pattern is consistent with the highly conserved expression of GFAP within central nervous system glial populations.

Description

GFAP antibody clone GA-5 is a monoclonal antibody that detects glial fibrillary acidic protein, a type III intermediate filament protein expressed in astrocytes of the central nervous system. GFAP is essential for maintaining astrocyte structure and function, contributing to cytoskeletal integrity and cellular interactions within neural tissue. NSJ Bioreagents supplies GFAP antibody clone GA-5 as a reliable tool for studying astrocytes in both normal physiology and neurological disease.

GFAP antibody clone GA-5 is most widely used in neuroscience research and neuropathology. In healthy brain tissue, it

labels astrocytes throughout the gray and white matter, providing a clear map of astrocytic networks. In pathology, GFAP expression is upregulated in response to injury and disease, making clone GA-5 a key marker of astrogliosis. This reactive state is a hallmark of neurodegenerative diseases such as Alzheimer disease, Parkinson disease, Huntington disease, and amyotrophic lateral sclerosis. Researchers also employ this antibody to study glial scars that form after traumatic brain and spinal cord injuries.

Beyond disease studies, GFAP antibody clone GA-5 is essential in developmental neuroscience, where it is used to track astrocyte maturation and lineage commitment from neural progenitors. Because astrocytes regulate synaptic function, blood brain barrier maintenance, and neuronal support, detection of GFAP provides critical insights into how glial cells contribute to brain function and homeostasis.

GFAP antibody clone GA-5 is also widely used in tumor pathology. It provides reliable detection of astrocytic tumors such as astrocytomas and glioblastomas, where GFAP expression confirms glial origin. The antibody yields strong cytoplasmic staining in astrocytic cells across a range of tissue preparations, helping pathologists distinguish glial tumors from other neoplasms.

Validated for immunohistochemistry, immunofluorescence, and western blotting, GFAP antibody clone GA-5 has been extensively published and remains a gold standard reagent for astrocyte detection. Its reproducibility and clarity of staining have supported decades of neuroscience research. Alternate names include glial fibrillary acidic protein antibody, astrocyte marker antibody, and intermediate filament GFAP antibody.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the GFAP antibody to be titered up or down for optimal performance.

1. Staining of formalin-fixed tissues requires boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 minutes.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

GFAP isolated from pig spinal cord was used as the immunogen.

Storage

Store the GFAP antibody at 2-8oC.

References (3)

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