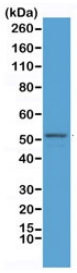
Recombinant GFAP Antibody / N-Terminal [clone RM246] (R20267)

Catalog No.	Formulation	Size
R20267-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

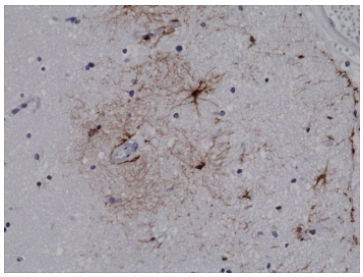
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM246
Purity	Protein A purified from animal origin-free supernatant
UniProt	P14136
Gene ID	2670
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1:200-1:500 (1) Western Blot : 1:1000-1:3000
Limitations	This recombinant GFAP antibody is available for research use only.



Western blot testing of mouse brain lysate with recombinant GFAP antibody at 1:2500.
Predicted molecular weight ~50 kDa.



IHC testing of FFPE human brain tissue with recombinant GFAP antibody at 1:500.

Description

The Recombinant GFAP antibody is a recombinant reagent engineered to detect glial fibrillary acidic protein (GFAP), an intermediate filament protein that serves as a defining marker of astrocytes in the central nervous system. GFAP is encoded by the GFAP gene and contributes to the structural integrity and functional organization of astrocytes, influencing cell shape, motility, and response to injury. The Recombinant GFAP antibody is directed against an epitope in the N terminus of the protein, ensuring specific recognition of this conserved region. By targeting the N-terminal domain, the antibody provides reliable detection across species and experimental applications.

GFAP belongs to the type III intermediate filament family, which also includes vimentin, desmin, and peripherin. It forms filamentous networks that provide structural support to astrocytes and help maintain the bloodÃ¢Â€Â“brain barrier, regulate neurotransmitter homeostasis, and modulate synaptic plasticity. GFAP expression is dynamic, increasing in response to central nervous system injury, infection, or neurodegenerative disease, a process known as reactive gliosis. The Recombinant GFAP antibody enables sensitive detection of both basal and reactive GFAP expression, making it a valuable tool for neurobiology research.

In immunohistochemistry, the Recombinant GFAP antibody highlights astrocytic processes and cell bodies, providing a clear picture of astrocyte distribution in brain and spinal cord tissues. In immunofluorescence, it produces strong filamentous staining patterns that delineate the astrocytic cytoskeleton. In western blotting, the antibody detects GFAP as a characteristic band, confirming protein expression in neural tissue extracts. By recognizing an N-terminal epitope, the Recombinant GFAP antibody ensures consistent detection of the protein even in cases where C-terminal modifications or truncations occur. Recombinant design further guarantees batch-to-batch consistency, reducing variability compared with hybridoma-derived antibodies.

GFAP is widely used as a diagnostic and research marker. In pathology, GFAP immunostaining helps identify astrocytomas, glioblastomas, and other glial tumors. In basic research, GFAP expression is monitored to evaluate astrocyte activation in models of stroke, traumatic brain injury, multiple sclerosis, and AlzheimerÃ¢Â€Â™s disease. The Recombinant GFAP antibody supports these applications by providing robust and reproducible detection of this critical astrocytic marker. Synonym terms such as recombinant glial fibrillary acidic protein antibody, recombinant astrocyte marker antibody, and recombinant GFAP N-terminal antibody broaden accessibility for different research communities.

By delivering validated and reproducible detection, the Recombinant GFAP antibody ensures accurate monitoring of astrocyte biology and central nervous system pathology. NSJ Bioreagents validates this reagent under stringent quality standards, giving researchers confidence in its application across western blotting, immunofluorescence, and immunohistochemistry. With specificity for the N terminus of GFAP, the Recombinant GFAP antibody is an indispensable tool for advancing studies in neurobiology and neuropathology.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant GFAP antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.

Immunogen

A peptide corresponding to the N-terminus of human GFAP was used as the immunogen for this recombinant GFAP antibody.

Storage

Store the recombinant GFAP antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).