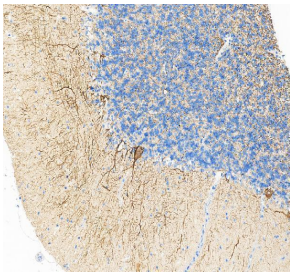
Neurofilament Heavy Polyclonal Antibody / Neuronal Intermediate Filament Antibody (RQ6260)

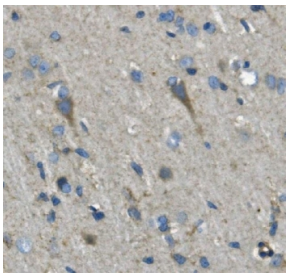
Catalog No.	Formulation	Size
RQ6260	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

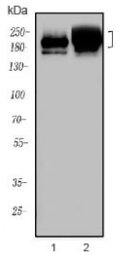
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P19246
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This Neurofilament Heavy Polyclonal Antibody / Neuronal Intermediate Filament Antibody is available for research use only.



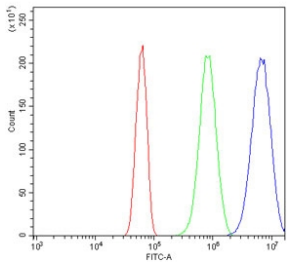
Neurofilament Heavy Polyclonal Antibody Human Cerebellum IHC. Immunohistochemical staining of FFPE human cerebellum tissue with Neurofilament Heavy antibody at 2 ug/ml. Heat-induced epitope retrieval (HIER) was performed by boiling tissue sections in pH 8 EDTA buffer prior to staining. Neurofilament Heavy immunoreactivity is observed predominantly within neuronal cell bodies and extensive axonal processes throughout the cerebellum, with particularly strong staining of the cerebellar white matter, consistent with the expected localization of this neuronal intermediate filament protein that provides structural support for axons and maintains neuronal architecture. Cell nuclei are counterstained with hematoxylin (blue).



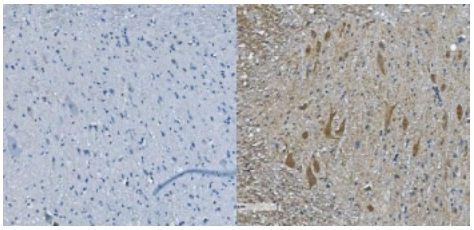
Neurofilament Heavy Polyclonal Antibody Rat Brain IHC. Immunohistochemical staining of FFPE rat brain tissue with Neurofilament Heavy antibody. Heat-induced epitope retrieval (HIER) was performed by boiling tissue sections in pH 8 EDTA buffer for 20 minutes and allowing them to cool prior to staining. Neurofilament Heavy immunoreactivity is observed predominantly within neuronal cell bodies and axonal processes, consistent with the expected localization of this neuronal intermediate filament protein that provides structural support for axons and helps maintain neuronal architecture. Cell nuclei are counterstained with hematoxylin (blue).



Neurofilament Heavy Polyclonal Antibody Rodent Brain WB. Western blot testing of 1) rat brain and 2) mouse brain lysates with Neurofilament Heavy antibody. A strong immunoreactive band is detected at approximately 200 kDa in both brain lysates, consistent with the highly phosphorylated form of Neurofilament Heavy that commonly migrates well above its predicted molecular weight of approximately 112 kDa. The results demonstrate specific detection of this neuronal intermediate filament protein in both rat and mouse brain tissue.



Neurofilament Heavy Polyclonal Antibody FACS Analysis. Flow cytometry testing of mouse Neuro-2a cells with Neurofilament heavy antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Neurofilament heavy antibody.



Neurofilament Heavy Polyclonal Antibody Mouse Spinal Cord IHC. Immunohistochemical staining of FFPE mouse spinal cord tissue with Neurofilament Heavy antibody (right). Heat-induced epitope retrieval (HIER) was performed by boiling tissue sections in pH 8 EDTA buffer for 20 minutes and allowing them to cool prior to staining. Neurofilament Heavy immunoreactivity is observed within neuronal cell bodies and axonal processes, consistent with the expected localization of this neuronal intermediate filament protein that provides structural support for axons and maintains neuronal architecture. The negative control (left), in which the primary antibody was omitted, showed no specific staining. Cell nuclei are counterstained with hematoxylin (blue).

Description

Neurofilament Heavy Polyclonal Antibody recognizes Neurofilament Heavy (NEFH), the largest subunit of the neurofilament triplet proteins that form the principal intermediate filament network within neurons. Neurofilaments provide structural support for axons, regulate axonal diameter, and contribute to the maintenance of neuronal architecture. The heavily phosphorylated carboxyl-terminal domain of Neurofilament Heavy is particularly important for stabilizing mature axons and promoting efficient nerve impulse conduction. Because of its central role in neuronal structure and function, Neurofilament Heavy Antibody is widely used to investigate neuronal intermediate filament organization, axonal biology, and nervous system development.

Neurofilament Heavy is expressed predominantly in mature neurons throughout the central and peripheral nervous systems, where it assembles with Neurofilament Light (NEFL) and Neurofilament Medium (NEFM) to form stable neurofilament polymers. These filaments provide mechanical strength while supporting intracellular transport and maintaining the caliber of myelinated axons. Neurofilament Heavy is especially abundant within large projection neurons and long axons, making it an important marker of neuronal integrity. Consequently, Neurofilament Heavy Antibody has become a valuable research tool for studies of neuronal differentiation, axonal maturation, and cytoskeletal organization.

Altered NEFH expression, abnormal phosphorylation, and neurofilament aggregation have been implicated in numerous neurological disorders, including amyotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease, multiple sclerosis, Charcot-Marie-Tooth disease, traumatic brain injury, spinal cord injury, and other neurodegenerative conditions. Fragments of Neurofilament Heavy released following axonal damage have also emerged as biomarkers of neuronal injury and disease progression. Owing to these clinical associations, Neurofilament Heavy Antibody is frequently employed to evaluate axonal degeneration, neuronal survival, cytoskeletal remodeling, and mechanisms of neurodegeneration in both experimental and translational research.

NSJ Bioreagents offers highly validated monoclonal and polyclonal Neurofilament Heavy Antibody products for reliable detection of endogenous NEFH in nervous system tissues and cultured cells. These antibodies support investigations into neuronal intermediate filament organization, axonal structure, neuronal injury, and neurodegenerative disease while enabling accurate characterization of Neurofilament Heavy expression and localization. Researchers studying neuronal cytoskeletal biology, axonal maintenance, and nervous system pathology can rely on Neurofilament Heavy Antibody for dependable and reproducible results.

For additional research on NF-H expression, axonal structure and neurofilament biology, see our Neurofilament Heavy Chain Antibody / Axonal Cytoskeleton Marker page.

Application Notes

Optimal dilution of the Neurofilament Heavy Polyclonal Antibody / Neuronal Intermediate Filament Antibody should be determined by the researcher.

Immunogen

A mouse recombinant partial protein (amino acids Y109-E466) was used as the immunogen for the Neurofilament Heavy Polyclonal Antibody.

Storage

After reconstitution, the Neurofilament Heavy Polyclonal Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

NEFH antibody, Neurofilament Heavy Polypeptide antibody, NF-H antibody, Neurofilament H antibody, 200 kDa Neurofilament antibody, Heavy Neurofilament Protein antibody

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