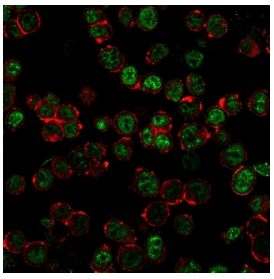
Neurofilament Antibody Cocktail NF421 + NFL/736 / NF-H and NF-L Antibody [clone NF421 + NFL/736] (V8380)

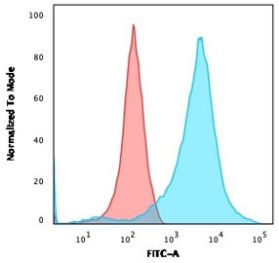
Catalog No.	Formulation	Size
V8380-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8380-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8380SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

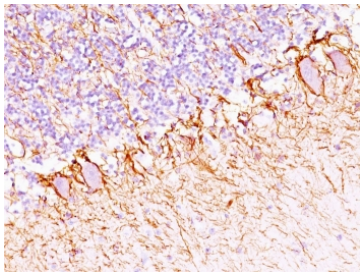
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa + Mouse IgG1, kappa
Clone Name	NF421 + NFL/736
Purity	Protein G affinity chromatography
UniProt	P12036
Localization	Cytoplasmic
Applications	Flow cytometry: 1-2ug/ million cells Immunofluorescence: 1-2ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 minutes at RT
Limitations	This Neurofilament Antibody Cocktail NF421 + NFL/736 / NF-H and NF-L Antibody is available for research use only.



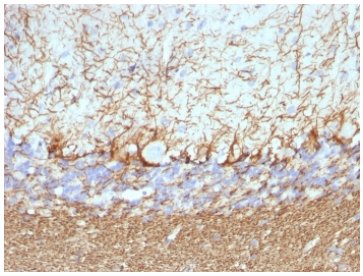
Neurofilament Antibody Cocktail NF421 + NFL/736 in HEK293 Cells IF. Immunofluorescence staining of permeabilized human HEK293 cells with Neurofilament Antibody Cocktail / NF-H and NF-L Antibody (green) and Phalloidin (red). Fluorescent staining was observed in HEK293 cells with the NF421 + NFL/736 antibody cocktail.



Neurofilament Antibody Cocktail NF421 + NFL/736 in HEK293 Cells FACS. Flow cytometry analysis of permeabilized human HEK293 cells with Neurofilament Antibody Cocktail / NF-H and NF-L Antibody. Red represents the isotype control and blue represents staining with the NF421 + NFL/736 cocktail. Antibody-associated fluorescence was observed in HEK293 cells by FACS.



Neurofilament Antibody Cocktail NF421 + NFL/736 in Human Cerebellum IHC. Immunohistochemistry staining of FFPE human cerebellum tissue with Neurofilament Antibody Cocktail / NF-H and NF-L Antibody. HIER was performed by boiling tissue sections in 10 mM citrate buffer, pH 6, for 20 min followed by cooling before testing. The observed staining highlights neurofilament-positive neuronal structures in human cerebellum.



Neurofilament Antibody Cocktail NF421 + NFL/736 in Rat Cerebellum IHC. Immunohistochemistry staining of FFPE rat cerebellum tissue with Neurofilament Antibody Cocktail / NF-H and NF-L Antibody. Tissue sections underwent HIER by boiling in 10 mM citrate buffer, pH 6, for 20 min and were allowed to cool before testing. The staining demonstrates neurofilament localization within neuronal structures of rat cerebellum.

Description

Neurofilament Antibody Cocktail NF421 + NFL/736 / NF-H and NF-L Antibody combines monoclonal antibodies directed against heavy and light neurofilament proteins, major components of the neuronal intermediate filament cytoskeleton. Neurofilaments are abundant within neurons and particularly prominent in axons, where they provide structural support and contribute to the maintenance of axonal caliber and architecture. Simultaneous recognition of NF-H and NF-L provides broad detection of neurofilament-positive neuronal structures.

Neurofilaments are assembled primarily from light, medium and heavy subunits, commonly designated NF-L, NF-M and NF-H. NF-L, encoded by NEFL, has an apparent molecular weight of approximately 68 kDa and plays an important role in neurofilament assembly. NF-H, encoded by NEFH, has an apparent molecular weight of approximately 200 kDa and contains an extended C-terminal region that undergoes extensive phosphorylation. Together with other neurofilament proteins, these subunits form intermediate filament networks that support neuronal processes.

Heavy and light neurofilament proteins are widely studied as markers of neuronal differentiation and nervous system organization. Their abundance in neuronal processes makes combined NF-H and NF-L detection useful for examining axonal architecture, neuronal morphology and neural differentiation. Neurofilament expression is also relevant to studies of neural and neuroendocrine tumors, including neuroblastoma, ganglioneuroma, ganglioneuroblastoma and other tumors exhibiting neuronal differentiation.

Neurofilament organization can change during neuronal injury and neurodegenerative processes. Alterations in filament assembly, transport or distribution may accompany loss of axonal integrity, while neurofilament proteins released following neuronal damage are extensively investigated as indicators of neuroaxonal injury. A Neurofilament Antibody Cocktail provides a complementary approach to antibodies directed against an individual neurofilament subunit by enabling recognition of both heavy and light neurofilament proteins.

This cocktail combines mouse monoclonal antibodies NF421 and NFL/736 for detection of NF-H and NF-L, respectively. It has been evaluated by immunohistochemistry, immunofluorescence and flow cytometry, including testing in human cells and human and rat cerebellum tissue. NSJ Bioreagents supplies antibodies for neuroscience and neural marker research. A Neurofilament Antibody Cocktail can be used to investigate neuronal structures, axonal organization, neurofilament expression and neural differentiation.

For additional research on combined heavy and light neurofilament detection, neuronal structure and axonal biology, see our Neurofilament Antibody / Heavy and Light Neurofilament Marker page.

Application Notes

Optimal dilution of the Neurofilament Antibody Cocktail NF421 + NFL/736 / NF-H and NF-L Antibody should be determined by the researcher.

Immunogen

Recombinant human neurofilament protein was used as the immunogen for the Neurofilament Antibody Cocktail NF421 + NFL/736.

Storage

Store the Neurofilament Antibody Cocktail NF421 + NFL/736 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Neurofilament Antibody Cocktail, NF-H and NF-L antibody, Heavy and Light Neurofilament antibody, Neurofilament Heavy and Light antibody, Pan-Neurofilament antibody

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