abcam

ab213128

Anti-Neurofilament antibody [NF421 + NFL/736] - BSA and Azide free

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Multiclonal
Immunogen	Recombinant Full Length Protein corresponding to Human NEFH. Database link P12036
Carrier free	Yes
Clone number	NF421 + NFL/736
Purification technique	Affinity purification Protein A/G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab21593 is purified from Bioreactor Concentrate by Protein A/G.

Reactivity data

IHC-P

Tested

Species	Rat
Dilution info	1-2 µg/mL

Notes	-

Species	Human
Dilution info	1-2 µg/mL
Notes	-

Predicted

Species	Mouse, Chicken, Pig
Dilution info	-
Notes	-

ICC

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse, Chicken, Pig
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human

Dilution info	for 10^6 Cells
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse, Chicken, Pig
Dilution info	-
Notes	-

Target data

See full target information NEFH

Function	Neurofilaments usually contain three intermediate filament proteins: NEFL, NEFM, and NEFH which are involved in the maintenance of neuronal caliber. NEFH has an important function in mature axons that is not subserved by the two smaller NF proteins. May additionally cooperate with the neuronal intermediate filament proteins PRPH and INA to form neuronal filamentous networks (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

ab213128 is a carrier-free version of ab215903.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

What is an oligoclonal antibody?

This oligoclonal antibody is a cocktail of monoclonal antibodies that have been carefully selected. Oligoclonal antibodies have not only the specificity and batch-to-batch consistency of a monoclonal antibody, but also have the advantage of the sensitivity of a polyclonal antibody due to their ability to recognize multiple epitopes on an antigen.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Neurofilament is a type of intermediate filament found in neurons predominantly within the axons. Known also as neurofilament protein it has several subunits including NF-L (neurofilament light) NF-M (medium) and NF-H (heavy) with NF-L often used in research contexts. NF-L mouse models and antibodies such as anti-NFL help in the study of neuronal structure. The mass of NF-L is about 68 kilodaltons. Neurofilament protein is highly expressed in neurons and plays an important role in maintaining the structural framework of the axon.
Biological function summary	Neurofilaments are important for providing structural support to neurons and are involved in maintaining the caliber of axons. They form a complex with the other intermediate filaments and microtubules which are essential for proper neuronal function. This complex is vital for the assembly and structural integrity of the cytoskeleton affecting intracellular transport and cellular mechanics ensuring proper communication within neural circuits.
Pathways	Neurofilaments function in the neuronal cytoskeleton maintenance and are involved in the motor protein pathways. They interact with proteins such as kinesin and dynein for axonal transport which is essential for moving organelles proteins and other cargoes between the cell body and axon terminals. Neurofilament proteins acting through these pathways ensure effective communication across neuronal networks impacting overall nerve function and health.
Associated diseases and disorders	Neurofilament levels are valuable biomarkers for neurological conditions such as Amyotrophic Lateral Sclerosis (ALS) and Alzheimer's disease. In Alzheimer's disease neurofilament pathology outlines alterations that associate with tau and amyloid-beta proteins which are hallmark features of the disorder. Similarly in ALS elevated neurofilament levels indicate neuronal damage correlating with the disease's progression and severity. Neurofilament staining in tissues via immunohistochemistry (neurofilament IHC) provides insights into these diseases aiding both diagnosis and monitoring of disease progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

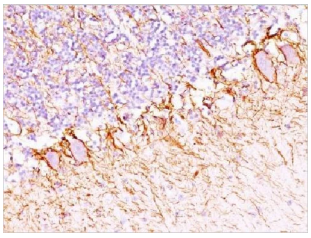
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

4 product images

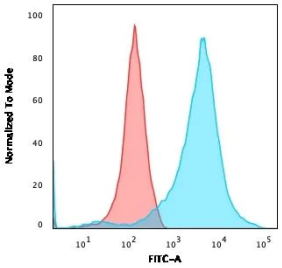


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurofilament antibody [NF421 + NFL/736] - BSA and Azide free (ab213128)

Neurofilament Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Neurofilament antibody

Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human cerebellum tissue labeling Neurofilament with ab215903 at 1 µg/ml dilution.

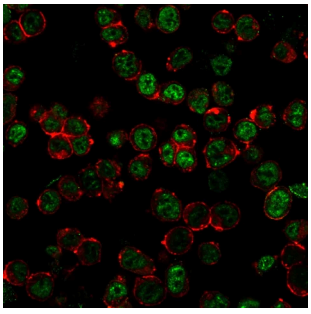
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab215903)



Flow Cytometry - Anti-Neurofilament antibody [NF421 + NFL/736] - BSA and Azide free (ab213128)

Neurofilament Flow Cytometry staining using mouse Anti-Neurofilament antibody

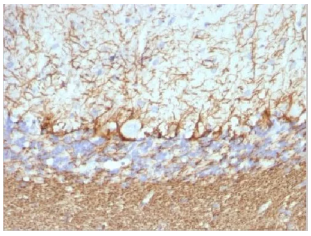
This image was produced using ab215903, the same clone but in a different formulation. Flow Cytometric analysis of HEK-293 (human epithelial cell line from embryonic kidney) cells staining neurofilament using ab215903 at 2ug/million cells, followed by goat anti-Mouse IgG-CF488 (Blue); Isotype control (Red).



Immunocytochemistry - Anti-Neurofilament antibody [NF421 + NFL/736] - BSA and Azide free (ab213128)

Neurofilament Immunocytochemistry staining using mouse Anti-Neurofilament antibody

This image was produced using ab215903, the same clone but in a different formulation. HEK-293 (human epithelial cell line from embryonic kidney) stained for Naurofilament using ab215903 at 2 µg/ml.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Neurofilament antibody [NF421 + NFL/736] - BSA and Azide free (ab213128)

Neurofilament Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-Neurofilament antibody

Immunohistochemical analysis of formalin-fixed, paraffin-embedded rat cerebellum tissue labeling Neurofilament with ab215903 at 1 µg/ml dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab215903)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.