abcam

Product datasheet

Anti-68kDa Neurofilament/NF-L antibody [Nfl21] ab273441

Recombinant

6 Images

Overview

Product name	Anti-68kDa Neurofilament/NF-L antibody [Nfl21]
Description	Mouse monoclonal [Nfl21] to 68kDa Neurofilament/NF-L
Host species	Mouse
Tested applications	**Suitable for:** IHC-P, WB **Unsuitable for:** ICC/IF or IHC-Fr
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: SK-N-BE(2) whole cell lysate. Human cerebrospinal fluid. IHC-P: Human, mouse and rat cerebrum tissue.
General notes	This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 0.05% BSA, 40% Glycerol (glycerin, glycerine)
Purity	Protein A purified
Clonality	Monoclonal

Clone number	Nfl21
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab273441 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		1/1000. Predicted molecular weight: 62 kDa.

Application notes Is unsuitable for ICC/IF or IHC-Fr.

Target

Function Neurofilaments usually contain three intermediate filament proteins: L, M, and H which are involved in the maintenance of neuronal caliber.

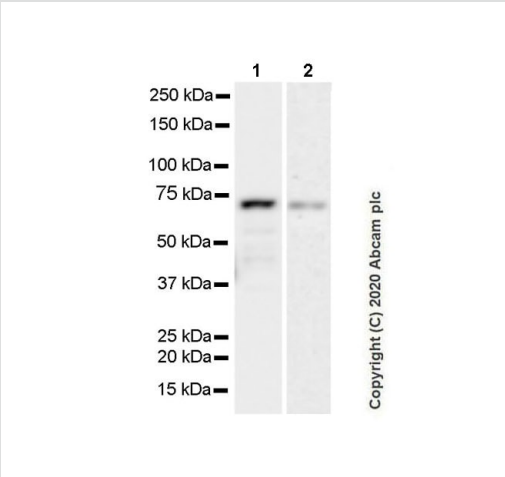
Involvement in disease Defects in NEFL are the cause of Charcot-Marie-Tooth disease type 1F (CMT1F) [MIM:607734]. CMT1F is a form of Charcot-Marie-Tooth disease, the most common inherited disorder of the peripheral nervous system. Charcot-Marie-Tooth disease is classified in two main groups on the basis of electrophysiologic properties and histopathology: primary peripheral demyelinating neuropathy or CMT1, and primary peripheral axonal neuropathy or CMT2. Neuropathies of the CMT1 group are characterized by severely reduced nerve conduction velocities (less than 38 m/sec), segmental demyelination and remyelination with onion bulb formations on nerve biopsy, slowly progressive distal muscle atrophy and weakness, absent deep tendon reflexes, and hollow feet. CMT1F is characterized by onset in infancy or childhood (range 1 to 13 years).
Defects in NEFL are the cause of Charcot-Marie-Tooth disease type 2E (CMT2E) [MIM:607684]. CMT2E is an autosomal dominant form of Charcot-Marie-Tooth disease type 2. Neuropathies of the CMT2 group are characterized by signs of axonal regeneration in the absence of obvious myelin alterations, normal or slightly reduced nerve conduction velocities, and progressive distal muscle weakness and atrophy.

Sequence similarities Belongs to the intermediate filament family.

Domain The extra mass and high charge density that distinguish the neurofilament proteins from all other intermediate filament proteins are due to the tailpiece extensions. This region may form a charged scaffolding structure suitable for interaction with other neuronal components or ions.

Post-translational modifications O-glycosylated.
Phosphorylated in the Head and Rod regions by the PKC kinase PKN1, leading to inhibit polymerization.

Images



Western blot - Anti-68kDa Neurofilament/NF-L antibody [Nfl21] (ab273441)

All lanes : Anti-68kDa Neurofilament/NF-L antibody [Nfl21] (ab273441) at 1/1000 dilution

Lane 1 : SK-N-BE(2) (human neuroblastoma neuroblast), whole cell lysate at 20 µg
Lane 2 : Human cerebrospinal fluid at 40 µl

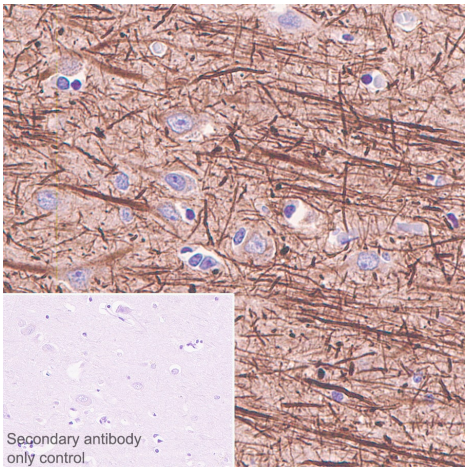
Secondary
All lanes : Peroxidase-Conjugated Goat anti-Mouse IgG (H+L) at 1/5000 dilution

Predicted band size: 62 kDa

This blot was developed using a higher sensitivity ECL substrate.

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure times: Lane 1: 37 seconds; Lane 2: 3 minutes.

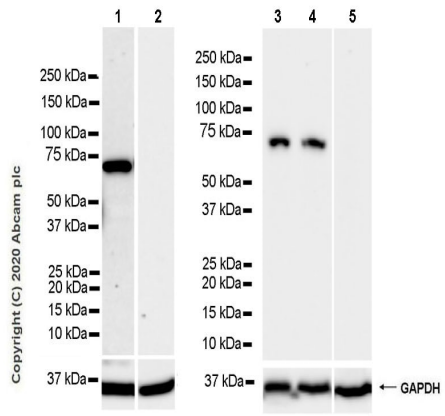


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-68kDa Neurofilament/NF-L antibody (ab273441)

Immunohistochemical analysis of paraffin-embedded human cerebrum tissue labeling Neurofilament light with ab273441 at 1/500 (2.116 µg/ml) dilution followed by a ready to use LeicaDS9800 (Bond® Polymer Refine Detection) was used. Positive staining on human cerebrum is observed. The section was incubated with ab273441 for 30 mins at room temperature and blocked mouse IgG with specific antibody **ab125913** for 8min. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond® Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Western blot - Anti-68kDa Neurofilament/NF-L antibody [Nfl21] (ab273441)

All lanes : Anti-68kDa Neurofilament/NF-L antibody [Nfl21] (ab273441) at 1/1000 dilution

Lane 1 : Mouse hippocampus tissue lysate

Lane 2 : Mouse liver tissue lysate

Lane 3 : Rat brain tissue lysate

Lane 4 : Rat hippocampus tissue lysate

Lane 5 : Rat liver tissue lysate

Lysates/proteins at 20 µg per lane.

Secondary

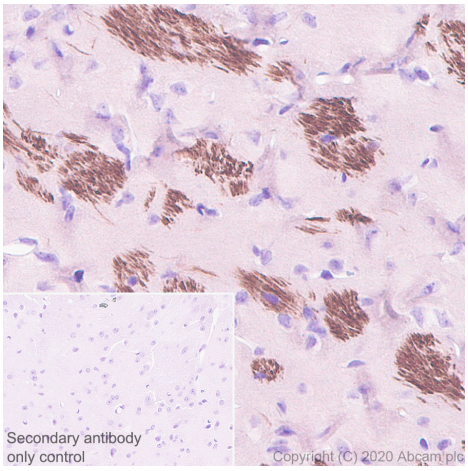
All lanes : Anti-mouse IgG for IP (HRP) (**ab131368**) at 1/1000 dilution

Predicted band size: 62 kDa

Negative control: liver (PMID: 2120242).

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure times: Lane 1-2: 10 seconds; Lane 3-5: 37 seconds.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-68kDa Neurofilament/NF-L antibody (ab273441)

Immunohistochemical analysis of paraffin-embedded mouse cerebrum tissue labeling Neurofilament light with ab273441 at 1/500 (2.116 µg/ml) dilution followed by a ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Positive staining on mouse cerebrum is observed. The section was incubated with ab273441 for 30 mins at room temperature and blocked mouse IgG with specific antibody **ab125913** for 8min. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

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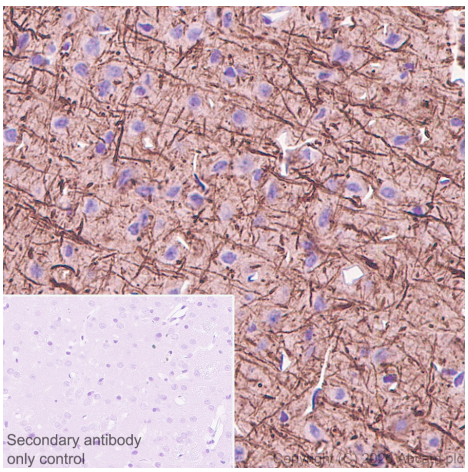
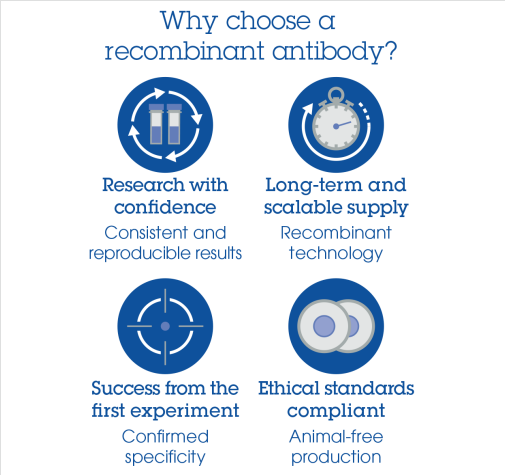


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-68kDa Neurofilament/NF-L antibody (ab273441)

Immunohistochemical analysis of paraffin-embedded rat cerebrum tissue labeling Neurofilament light with ab273441 at 1/500 (2.116 µg/ml) dilution followed by a ready to use LeicaDS9800 (Bond® Polymer Refine Detection). Positive staining on rat cerebrum is observed. The section was incubated with ab273441 for 30 mins at room temperature and blocked mouse IgG with specific antibody **ab125913** for 8min. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond® Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Anti-68kDa Neurofilament/NF-L antibody [Nfl21]

(ab273441)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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