

Product datasheet

# Anti-160 kD Neurofilament Medium antibody [NF-09] ab7794

**KO** VALIDATED

★★★★★ 2 Abreviews 26 References 6 Images

Overview

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<b>Product name</b>	Anti-160 kD Neurofilament Medium antibody [NF-09]
<b>Description</b>	Mouse monoclonal [NF-09] to 160 kD Neurofilament Medium
<b>Host species</b>	Mouse
<b>Specificity</b>	This antibody reacts with both phosphorylated and non-phosphorylated forms of medium neurofilament protein (160 kDa) of various species.
<b>Tested applications</b>	<b>Suitable for:</b> ELISA, IHC-Fr, ICC, IHC-P, WB, IHC (PFA fixed), ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Cow, Cat, Human, Pig <b>Predicted to work with:</b> a wide range of other species, Mammals 
<b>Immunogen</b>	Pellet of pig brain cold stable proteins after depolymerization of microtubules.
<b>Positive control</b>	WB: HEK-293 and A549 whole cell lysates ICC/IF: Dental pulp stem, Neuro2A, PC12 and human nerve cells

Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.097% Sodium azide Constituent: PBS
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	NF-09
<b>Isotype</b>	IgG2a
<b>Light chain type</b>	unknown

Applications

## Applications

Our [Abpromise guarantee](#) covers the use of **ab7794** 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
ELISA		Use at an assay dependent concentration.
IHC-Fr	★★★★☆	Use at an assay dependent concentration.
ICC		Use at an assay dependent concentration.
IHC-P	★★★★★	Use at an assay dependent concentration.
WB		1/1000.
IHC (PFA fixed)		1/500.
ICC/IF		Use at an assay dependent concentration.

## Target

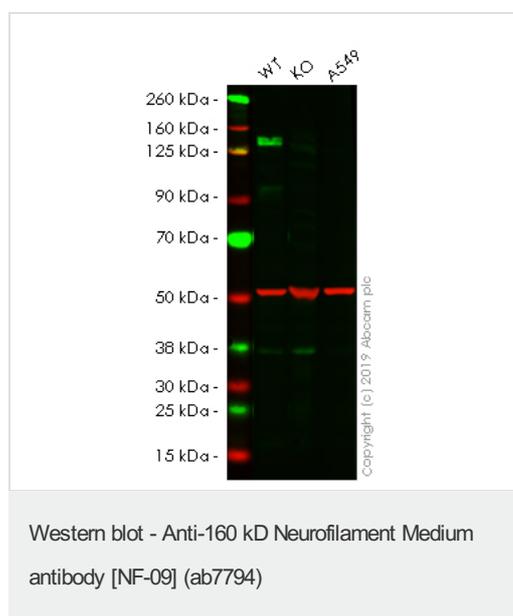
### Relevance

Neurofilaments are the 10nm or intermediate filament proteins found specifically in neurons, and are composed predominantly of three major proteins called neurofilament light (NF-L), neurofilament medium (NF-M) and neurofilament heavy (NF-H). Neurofilament medium runs on SDS-PAGE gels in the range 145-170 kDa, with some variation in different species. Antibodies to this protein are useful to identify neurons and their processes in tissue sections and in tissue culture. Neurofilament medium can also be useful in studies of neurofilament accumulations seen in many neurological diseases, such as Lou Gehrig's disease or Alzheimer's disease.

### Cellular localization

Cytoplasm

## Images



**All lanes :** Anti-160 kD Neurofilament Medium antibody [NF-09] (ab7794) at 1/1000 dilution

**Lane 1 :** Wild-type HEK-293 whole cell lysate

**Lane 2 :** NEFM knockout HEK-293 whole cell lysate

**Lane 3 :** A549 whole cell lysate

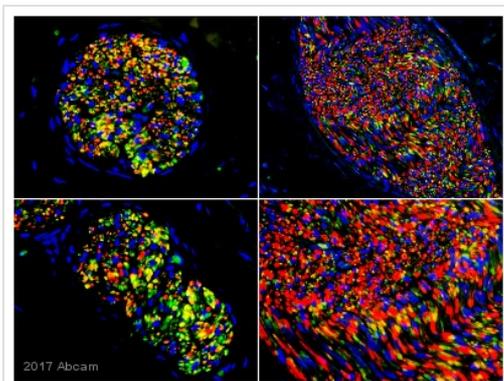
Lysates/proteins at 20 µg per lane.

**Observed band size:** 150 kDa

[why is the actual band size different from the predicted?](#)

**Lanes 1 - 4:** Merged signal (red and green). Green - ab7794 observed at 150 kDa. Red - loading control, [ab52866](#), observed at 50 kDa.

ab7794 was shown to specifically react with NEFM (Neurofilament) in wild-type HEK-293 cells as signal was lost in NEFM knockout cells. Wild-type and NEFM knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% NF Milk. Ab7794 and [ab52866](#) (Rabbit anti alpha Tubulin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preabsorbed [ab216772](#) and Goat anti-Rabbit IgG H&L (IRDye® 680RD) preabsorbed [ab216777](#) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



ab7794 staining 160 kD Neurofilament Medium (red) in Human nerve surrounding common hepatic artery tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/500 in Da Vinci Green diluent) for 16 hours at 4°C. An undiluted HRP-conjugated mouse polymer was used as the secondary antibody. Tyrosin Hydroxylase was stained green with [ab112](#)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-160 kD Neurofilament Medium antibody [NF-09] (ab7794)

This image is courtesy of an anonymous Abreview

kDa:

202 —

116 —

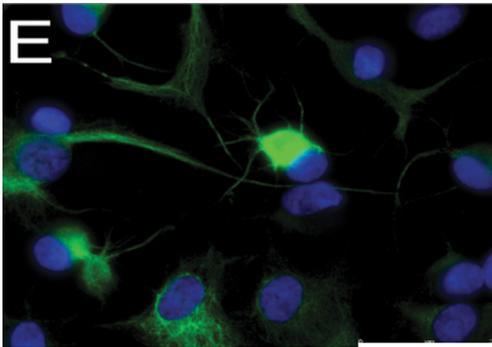
98 —

47 —



Western blot - Anti-160 kD Neurofilament Medium antibody [NF-09] (ab7794)

Western blotting analysis of neurofilament medium protein in porcine brain lysate (reducing conditions) by mouse monoclonal **NF-09**.

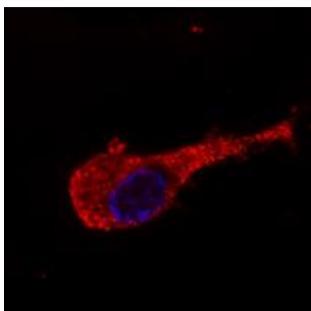


Immunofluorescence analysis of 1 month neuronal-differentiated dental pulp stem cells, staining 160 kD Neurofilament Medium with ab7794.

Cells were fixed with paraformaldehyde and incubated with primary antibody (1/600). A FITC-conjugated anti-mouse IgG (1/375) was used as the secondary antibody.

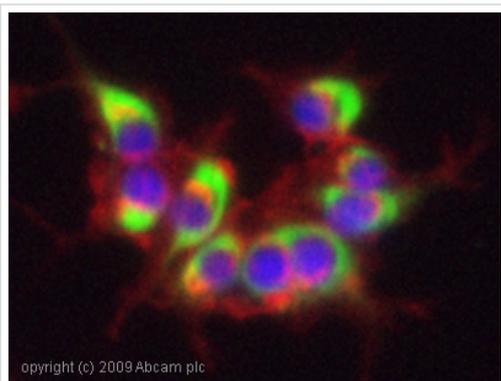
Immunocytochemistry/ Immunofluorescence - Anti-160 kD Neurofilament Medium antibody [NF-09] (ab7794)

Image from Ferro F et al., PLoS One. 2012;7(7):e41774. Epub 2012 Jul 23. Fig 3.; doi:10.1371/journal.pone.0041774; July 23, 2012, PLoS ONE 7(7): e41774.



ab7794 staining Neurofilament medium protein in mouse Neuro2A cells by ICC/IF.

Immunocytochemistry/ Immunofluorescence - Anti-160 kD Neurofilament Medium antibody [NF-09] (ab7794)



Immunocytochemistry/ Immunofluorescence - Anti-160 kD Neurofilament Medium antibody [NF-09] (ab7794)

ICC/IF image of ab7794 stained PC12 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab7794, 1 $\mu$ g/ml) overnight at +4 $\circ$ C. The secondary antibody (green) was Alexa Fluor $\text{\textcircled{C}}$  488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor $\text{\textcircled{C}}$  594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43 $\mu$ M.

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

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