

Anti-Neurofascin antibody ab31457

★★★★☆ [4 Abreviews](#) [23 References](#) [3 Images](#)

Overview

Product name	Anti-Neurofascin antibody
Description	Rabbit polyclonal to Neurofascin
Host species	Rabbit
Specificity	<p>The ab31457 antibody would be able to bind to the full length canonical sequence Isoform 1 and also to Isoforms 5, Isoform 6, Isoform 9 and Isoform 13.</p> <p>The antibody would not be able to detect Isoforms 2, 3, 4, 7, 8, 10, 11 or Isoform 12. All of these Isoforms are missing amino acids 1035-1203.</p>
Tested applications	Suitable for: WB, ICC/IF, IHC-FoFr, IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human, Common marmoset
Immunogen	<p>Synthetic peptide corresponding to Mouse Neurofascin aa 1150 to the C-terminus conjugated to keyhole limpet haemocyanin.</p> <p>Database link: Q810U3</p> <p>(Peptide available as ab33377)</p>
General notes	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	<p>pH: 7.40</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituent: PBS</p>

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising

agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab31457 in the following tested applications.

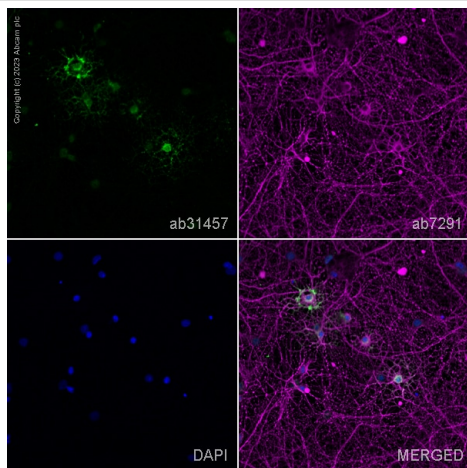
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 155,186 kDa (predicted molecular weight: 138 kDa).
ICC/IF		Use a concentration of 1 µg/ml.
IHC-FoFr	★★★★★ (1)	1/1000.
IHC-P	★★★★★ (3)	Use at an assay dependent concentration.

Target

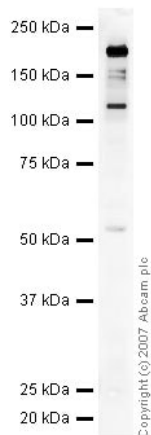
Function	Cell adhesion, ankyrin-binding protein which may be involved in neurite extension, axonal guidance, synaptogenesis, myelination and neuron-glial cell interactions.
Sequence similarities	Belongs to the immunoglobulin superfamily. L1/neurofascin/NgCAM family. Contains 5 fibronectin type-III domains. Contains 6 Ig-like C2-type (immunoglobulin-like) domains.
Cellular localization	Cell membrane.

Images



Immunocytochemistry/ Immunofluorescence - Anti-Neurofascin antibody (ab31457)

ab31457 staining Neurofascin in Rat Primary Neurons DIV14 cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab31457 at 1µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour magenta). Nuclear DNA was labelled with DAPI (shown in blue). Image was acquired with a confocal microscope (Leica-Microsystems TCS SP8) and a single confocal section is shown.



Western blot - Anti-Neurofascin antibody (ab31457)

Anti-Neurofascin antibody (ab31457) at 1 µg/ml + Brain(Mouse)Whole Cell Lysate at 10 µg

Secondary

IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

Performed under reducing conditions.

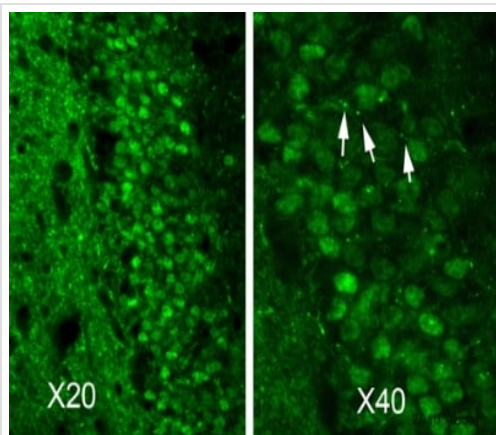
Predicted band size: 138 kDa

Observed band size: 155,186 kDa

Additional bands at: 120 kDa, 55 kDa. We are unsure as to the identity of these extra bands.

In Rat, Neurofascin has three observed isoforms , isoform 1 (138 kDa) which is known as Nfasc186, isoform 2 (133 kDa) and isoform 3 (132 kDa) which are both known as Nfasc155. These proteins are highly glycosylated and their observed molecular weight in Western blot is 186 kDa and 155 kDa respectively.

Mouse Neurofascin has a predicted molecular weight of 138 kDa (Swiss-Prot data) however the observed bands at 186 kDa and 155 kDa are thought to correspond to the glycosylated isoforms 1, 2 and 3 as observed in Rat (Sherman DL et al, 2005, PubMed:16337912)



Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-Neurofascin antibody (ab31457)

This image is courtesy of Sophie Pezet, CNRS, Paris, France

Immunohistochemical detection of Neurofascin using antibody ab31457 on PFA perfusion-fixed rat brain sections. Primary antibody ab31457 was used at 1/1000 incubated for 18 hours @ 20°C in PBS + 0.3 % Triton X100. Secondary antibody: goat anti-rabbit Alexa Fluor 488 conjugated (1/1000). Immunostaining obtained in the rat hippocampus using this antibody diluted 1:1000. Sections come from a perfused-fixed animal. The immunostaining was performed using the `free floating` technique, using direct fluorescence. Some cytoplasmic staining was observed in granular neurons and neuronal processes (arrows on the figure on the right). The lefthand figure shows the hippocampal granular cell staining (objective X20), the righthand figure shows this at higher magnification. This staining is consistent with published observation of cytoplasmic localisation of Neurofascin in the cytoplasm of hippocampal cells and their axon initial segment (Burkhardt

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