


Product datasheet

Anti-Nav1.7 antibody [N68/6] ab85015

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Overview

Product name	Anti-Nav1.7 antibody [N68/6]
Description	Mouse monoclonal [N68/6] to Nav1.7
Host species	Mouse
Specificity	Some customers have used this antibody successfully in rat, however our latest tests were unsuccessful and therefore we can no longer guarantee the reactivity of this species.
Tested applications	Suitable for: IHC-P Unsuitable for: Flow Cyt
Species reactivity	Reacts with: Mouse Predicted to work with: Rat, Human 
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Mouse dorsal root ganglion tissue; Mouse back skin tissue.
General notes	<p>The clone number has been updated from S68-6 to N68/6, both clone numbers name the same antibody clone.</p> <p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <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	pH: 7.40 Preservative: 0.02% Sodium azide

	Constituent: PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	N68/6
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab85015 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		Use a concentration of 1 - 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt.

Target

Function Mediates the voltage-dependent sodium ion permeability of excitable membranes. Assuming opened or closed conformations in response to the voltage difference across the membrane, the protein forms a sodium-selective channel through which Na(+) ions may pass in accordance with their electrochemical gradient (PubMed:7720699, PubMed:17167479, PubMed:25240195, PubMed:26680203, PubMed:15385606, PubMed:16988069, PubMed:17145499, PubMed:19369487, PubMed:24311784). It is a tetrodotoxin-sensitive Na(+) channel isoform (PubMed:7720699). Plays a role in pain mechanisms, especially in the development of inflammatory pain (PubMed:17167479, PubMed:17145499, PubMed:19369487, PubMed:24311784).

Tissue specificity Expressed strongly in dorsal root ganglion, with only minor levels elsewhere in the body, smooth muscle cells, MTC cell line and C-cell carcinoma. Isoform 1 is expressed preferentially in the central and peripheral nervous system. Isoform 2 is expressed preferentially in the dorsal root ganglion.

Involvement in disease Primary erythralgia
Indifference to pain, congenital, autosomal recessive
Paroxysmal extreme pain disorder
Generalized epilepsy with febrile seizures plus 7
Febrile seizures, familial, 3B

Sequence similarities Belongs to the sodium channel (TC 1.A.1.10) family. Nav1.7/SCN9A subfamily. Contains 1 IQ domain.

Domain The sequence contains 4 internal repeats, each with 5 hydrophobic segments (S1,S2,S3,S5,S6) and one positively charged segment (S4). Segments S4 are probably the voltage-sensors and are characterized by a series of positively charged amino acids at every third position.

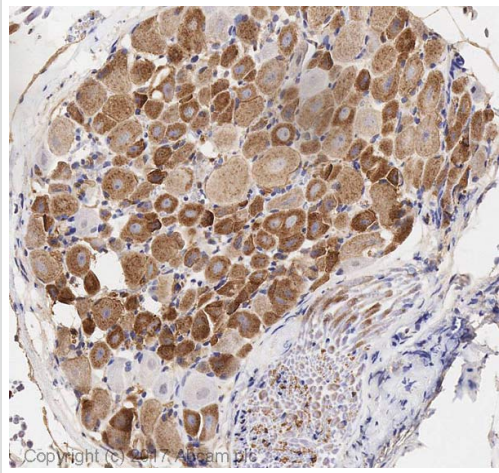
Post-translational modifications Phosphorylation at Ser-1490 by PKC in a highly conserved cytoplasmic loop increases peak sodium currents.

Ubiquitinated by NEDD4L; which may promote its endocytosis. Does not seem to be ubiquitinated by NEDD4.

Cellular localization

Cell membrane. Cell projection. In neurite terminals.

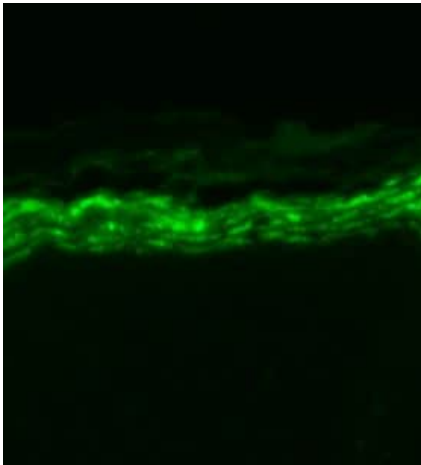
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nav1.7 antibody [N68/6] (ab85015)

IHC image of Nav1.7 staining in mouse dorsal root ganglion formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab85015, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Nav1.7 antibody [N68/6] (ab85015)

ab85015 at 1/100 dilution staining Nav1.7 in mouse back skin tissue section by IHC-P. Bouin's fixed and paraffin-embedded tissue sections were used. Tissue underwent heat mediated antigen retrieval in microwave with two, 5 minutes incubation intervals in citrate buffer. A Fluorophore conjugated goat anti mouse at 1/50 dilution was used as secondary.

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