Product datasheet

Anti-Nav1.7 antibody ab140991

Overview

Product name
Anti-Nav1.7 antibody

Description
Rabbit polyclonal to Nav1.7

Host species
Rabbit

Specificity
BLAST analysis of the peptide immunogen showed no homology with other Human proteins, except SCN8A (71%).

Tested applications
Suitable for: IHC-P

Species reactivity
Reacts with: Human

Predicted to work with: Mouse, Rat, Rabbit, Horse, Hamster, Cow, Dog, Pig, Monkey, Gorilla, Common marmoset

Immunogen
Synthetic peptide, corresponding to 17 amino acids from an internal region of Human Nav1.7 (NP_002968.1).

Positive control
Human small intestine (uroendocrine cells) tissue.

Properties

Form
Liquid

Storage instructions
Shipped at 4°C.

Storage buffer
Constituents: 99% PBS, 0.1% BSA

Purity
Immunogen affinity purified

Clonality
Polyclonal

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab140991 in the following tested applications.

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

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### Function

### 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 erythermalgia
- 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

### Images

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<td>IHC-P</td>
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<td>Use a concentration of 10 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.</td>
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Immunohistochemical analysis of Formalin-fixed, Paraffin-Embedded Human small intestine (neuroendocrine cells) tissue labelling Nav1.7 with ab140991 at 10 µg/ml.

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