Product datasheet

Anti-Nav1.8/SCN10A antibody ab63331

Overview

Product name  Anti-Nav1.8/SCN10A antibody
Description  Rabbit polyclonal to Nav1.8/SCN10A
Host species  Rabbit
Tested applications  Suitable for: ICC, WB, IHC-Fr
Species reactivity  Reacts with: Rat
Immunogen  Synthetic peptide corresponding to Nav1.8/SCN10A aa 1892-1956.
General notes  This product was previously labelled as Nav1.8

Properties

Form  Liquid
Storage instructions  Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer  Constituents: PBS, Whole serum
Purity  Whole antiserum
Clonality  Polyclonal
Isotype  IgG

Applications

Our Abpromise guarantee covers the use of ab63331 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
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<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>ICC</td>
<td></td>
<td>1/4000.</td>
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<tr>
<td>WB</td>
<td></td>
<td>1/4000. Predicted molecular weight: 217 kDa.</td>
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<td>IHC-Fr</td>
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<td>Use at an assay dependent concentration.</td>
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**Function**
Tetrodotoxin-resistant channel that 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 sodium ions may pass in accordance with their electrochemical gradient. Plays a role in neuropathic pain mechanisms.

**Tissue specificity**
Expressed in the dorsal root ganglia and sciatic nerve.

**Involvement in disease**
Episodic pain syndrome, familial, 2

**Sequence similarities**
Belongs to the sodium channel (TC 1.A.1.10) family. Nav1.8/SCN10A 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**
Ubiquitinated by NEDD4L; which promotes its endocytosis. Phosphorylation at Ser-1451 by PKC in a highly conserved cytoplasmic loop slows inactivation of the sodium channel and reduces peak sodium currents.

**Cellular localization**
Cell membrane. It can be translocated to the cell membrane through association with S100A10.

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**Images**

Western blot analysis. A single band of strong NaV1.8/SCN10A-like immunoreactivity at approximately 240 kDa in the membrane fraction of rat DRG is shown. Note that membrane fractions of rat whole brain, cerebellum, skeletal muscle, heart, superior cervical ganglia, liver and kidney showed no detectable immunoreactivity. Membrane extract from CHO-SNS22 (a cell line stably transfected with rat NaV1.8/SCN10A cDNA) showed strong immunoreactivity at the same size with DRG. Non-transfected CHO cells did not show any bands.

Immunohistochemistry was performed on 2 week old rat lumber DRG sections. NaV1.8/SCN10A-like immunoreactivity can be detected only in small diameter (<30 um) neurons.

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