

Anti-SCN11A Antibody Picoband™

Catalog Number: A04126

About SCN11A

Sodium channel, voltage-gated, type XI, alpha subunit also known as SCN11A or Nav1.9 is a voltage-gated sodium ion channel protein which is encoded by the SCN11A gene on chromosome 3 in humans. Voltage-gated sodium channels are transmembrane glycoprotein complexes composed of a large alpha subunit with 24 transmembrane domains and one or more regulatory beta subunits. They are responsible for the generation and propagation of action potentials in neurons and muscle. This gene encodes one member of the sodium channel alpha subunit gene family, and is highly expressed in nociceptive neurons of dorsal root ganglia and trigeminal ganglia. It mediates brain-derived neurotrophic factor-evoked membrane depolarization and is a major effector of peripheral inflammatory pain hypersensitivity. Mutations in this gene have been associated with hereditary sensory and autonomic neuropathy type VII and familial episodic pain syndrome-3. Alternative splicing results in multiple transcript variants.

Overview

Product Name	Anti-SCN11A Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-SCN11A Antibody Picoband™ catalog # A04126. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q9UI33

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence of human SCN11A (MDDRCYPVIFPDERNFRPFTSDSLAAIEKRIAQKEKKK).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used "Western blot, 0.25-0.5μg/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1μg/ml, Mouse, Rat Flow Cytometry, 1-3μg/1x10⁶ cells, Human "</p> <p>For protocols, please visit https://www.bosterbio.com/protocol-and-troubleshooting/</p>

Anti-SCN11A Antibody Picoband™ (A04126) Images

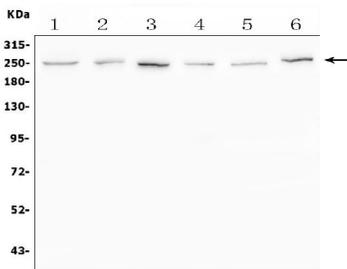


Figure 1. Western blot analysis of SCN11A using anti-SCN11A antibody (A04126).

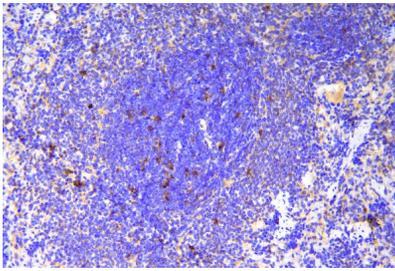
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50 μ g of sample under reducing conditions.

- Lane 1: human PC-3 whole cell lysates,
- Lane 2: rat brain tissue lysates,
- Lane 3: rat kidney tissue lysates,
- Lane 4: rat C6 whole cell lysates,
- Lane 5: mouse spleen tissue lysates,
- Lane 6: mouse brain tissue lysates,
- Lane 7: mouse kidney tissue lysates.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SCN11A antigen affinity purified polyclonal antibody (Catalog # A04126) at 0.5 μ g/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. Specific bands were detected for SCN11A at approximately 250KD. The expected band size for SCN11A is at 205KD.

Figure 2. IHC analysis of SCN11A using anti-SCN11A antibody (A04126).

SCN11A was detected in paraffin-embedded section of rat spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-SCN11A Antibody (A04126) overnight at 4°C. Biotinylated



goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

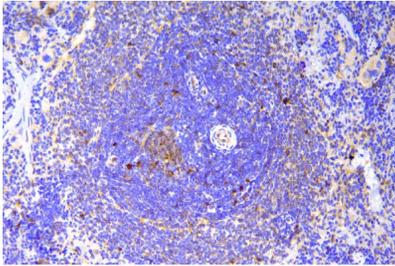


Figure 3. IHC analysis of SCN11A using anti-SCN11A antibody (A04126).

SCN11A was detected in paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-SCN11A Antibody (A04126) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

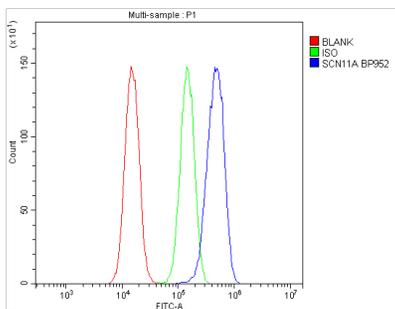


Figure 4. Flow Cytometry analysis of U87 cells using anti-SCN11A antibody (A04126).

Overlay histogram showing U87 cells stained with A04126 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SCN11A Antibody (A04126, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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