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Anti-Nav1.5 Picoband Antibody
Catalog # ABO12643

Specification

Anti-Nav1.5 Picoband Antibody - Product Information

Application	**WB**
Primary Accession	Q14524
Host	**Rabbit**
Reactivity	**Human, Mouse**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Sodium channel protein type 5 subunit alpha(SCN5A) detection. Tested with WB in Human;Mouse.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Nav1.5 Picoband Antibody - Additional Information

Gene ID 6331

Other Names
Sodium channel protein type 5 subunit alpha, HH1, Sodium channel protein cardiac muscle subunit alpha, Sodium channel protein type V subunit alpha, Voltage-gated sodium channel subunit alpha Nav1.5, SCN5A

Calculated MW
226940 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Mouse, Human

Subcellular Localization
Cell membrane ; Multi-pass membrane protein .

Tissue Specificity
Found in jejunal circular smooth muscle cells (at protein level). Expressed in human atrial and ventricular cardiac muscle but not in adult skeletal muscle, brain, myometrium, liver, or spleen. Isoform 4 is expressed in brain. .

Protein Name
Sodium channel protein type 5 subunit alpha

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human Nav1.5

(1896-1932aa LRRKHEEVSAMVIQRAFRRHLLQRSLKHASFLFRQQA), different from the related mouse and rat sequences by two amino acids.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-Nav1.5 Picoband Antibody - Protein Information

Name SCN5A (HGNC:10593)

Function
Pore-forming subunit of Nav1.5, a voltage-gated sodium (Nav) channel that directly mediates the depolarizing phase of action potentials in excitable membranes. Navs, also called VGSCs (voltage-gated sodium channels) or VDSCs (voltage-dependent sodium channels), operate by switching between closed and open conformations depending on the voltage difference across the membrane. In the open conformation they allow Na(+) ions to selectively pass through the pore, along their electrochemical gradient. The influx of Na(+) ions provokes membrane depolarization, initiating the propagation of electrical signals throughout cells and tissues (PubMed:1309946, PubMed:21447824, PubMed:23085483, PubMed:23420830, PubMed:25370050, PubMed:26279430, PubMed:26392562, PubMed:26776555). Nav1.5 is the predominant sodium channel expressed in myocardial cells and it is responsible for the initial upstroke of the action potential in cardiac myocytes, thereby initiating the heartbeat (PubMed:11234013, PubMed:11804990, PubMed:12569159, PubMed:1309946). Required for normal electrical conduction including formation of the infranodal ventricular conduction system and normal action potential configuration, as a result of its interaction with XIRP2 (By similarity).

Cellular Location
Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P15389}. Cytoplasm, perinuclear region. Cell membrane, sarcolemma, T- tubule {ECO:0000250|UniProtKB:P15389}. Cell junction {ECO:0000250|UniProtKB:P15389}. Note=RANGRF promotes trafficking to the cell membrane. Colocalizes with PKP2 at intercalated disks in the heart (By similarity). {ECO:0000250|UniProtKB:P15389, ECO:0000269|PubMed:21447824, ECO:0000269|PubMed:23420830}

Tissue Location
Found in jejunal circular smooth muscle cells (at protein level). Expressed in human atrial and ventricular cardiac muscle but not in adult skeletal muscle, brain, myometrium, liver, or spleen. Isoform 4 is expressed in brain.

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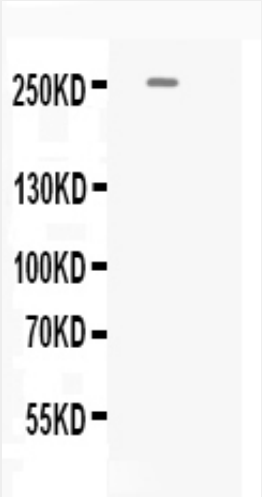
Anti-Nav1.5 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Nav1.5 Picoband Antibody - Images



Western blot analysis of Nav1.5 expression in mouse cardiac muscle extract (lane 1). Nav1.5 at 250KD was detected using rabbit anti-Nav1.5 Antigen Affinity purified polyclonal antibody (Catalog # ABO12643) at 0.5 ??g/mL. The blot was developed using chemiluminescence (ECL) method .

Anti-Nav1.5 Picoband Antibody - Background

SCN5A is the gene that encodes the cardiac sodium channel NaV1.5. The protein encoded by this gene is an integral membrane protein and tetrodotoxin-resistant voltage-gated sodium channel subunit. This protein is found primarily in cardiac muscle and is responsible for the initial upstroke of the action potential in an electrocardiogram. Defects in this gene are a cause of long QT syndrome type 3 (LQT3), an autosomal dominant cardiac disease. Alternative splicing results in several transcript variants encoding different isoforms.