

SCN5A / Nav1.5 Antibody (Internal)
Goat Polyclonal Antibody
Catalog # ALS11207**Specification**

SCN5A / Nav1.5 Antibody (Internal) - Product Information

Application	IHC-P, E
Primary Accession	Q14524
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Calculated MW	227kDa KDa
Dilution	IHC-P~~N/A E~~N/A

SCN5A / Nav1.5 Antibody (Internal) - 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

Target/Specificity

Human SCN5A / Nav1.5. This antibody is expected to recognise all reported isoforms (NP_932173.1; NP_000326.2; NP_001092874.1; NP_001092875.1).

Reconstitution & Storage

Store at -20°C. Minimize freezing and thawing.

Precautions

SCN5A / Nav1.5 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

SCN5A / Nav1.5 Antibody (Internal) - 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:<a

[21447824](http://www.uniprot.org/citations/21447824), PubMed: [23085483](http://www.uniprot.org/citations/23085483), PubMed: [23420830](http://www.uniprot.org/citations/23420830), PubMed: [25370050](http://www.uniprot.org/citations/25370050), PubMed: [26279430](http://www.uniprot.org/citations/26279430), PubMed: [26392562](http://www.uniprot.org/citations/26392562), PubMed: [26776555](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/11234013), PubMed: [11804990](http://www.uniprot.org/citations/11804990), PubMed: [12569159](http://www.uniprot.org/citations/12569159), PubMed: [1309946](http://www.uniprot.org/citations/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.

Volume

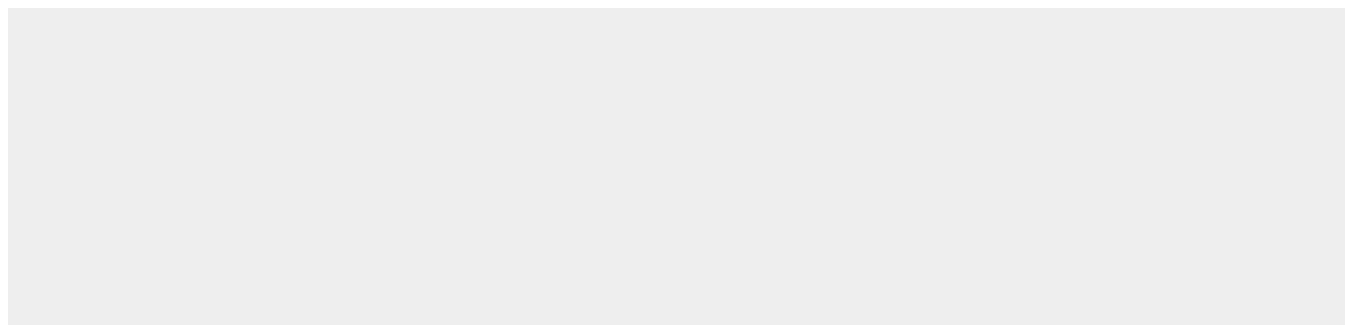
50 µl

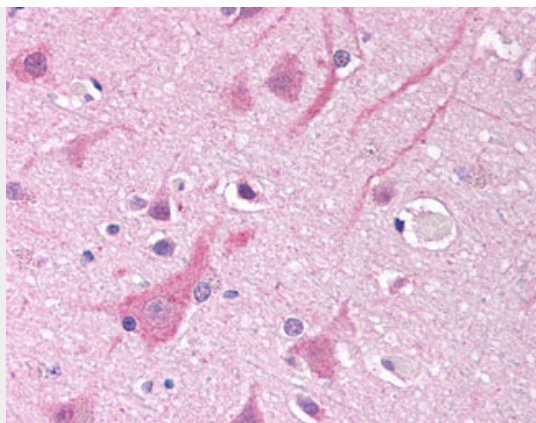
SCN5A / Nav1.5 Antibody (Internal) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SCN5A / Nav1.5 Antibody (Internal) - Images





Anti-SCN5A / Nav1.5 antibody IHC of human brain, cortex.

SCN5A / Nav1.5 Antibody (Internal) - Background

This protein 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. It is a tetrodotoxin-resistant Na(+) channel isoform. This channel is responsible for the initial upstroke of the action potential. Channel inactivation is regulated by intracellular calcium levels.

SCN5A / Nav1.5 Antibody (Internal) - References

Gellens M.E.,et al.Proc. Natl. Acad. Sci. U.S.A. 89:554-558(1992).
Ou Y.,et al.Neurogastroenterol. Motil. 14:477-486(2002).
Makielski J.C.,et al.Circ. Res. 93:821-828(2003).
Ye B.,et al.Physiol. Genomics 12:187-193(2003).
Ou S.-W.,et al.Eur. J. Neurosci. 22:793-801(2005).