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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

href="http://www.uniprot.org/citations/21447824" target="_blank">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.

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 Cytomety
- Cell Culture

SCN5A / Nav1.5 Antibody (Internal) - Images

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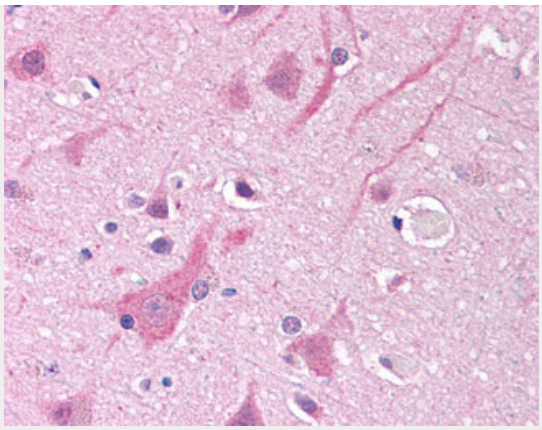

Anti-SCN5A / Nav1.5 antibody IHC of human brain, cortex.

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).