

Nav1.7 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51860**Specification**

Nav1.7 Antibody - Product Information

Application	WB, E
Primary Accession	Q15858
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	226 KDa

Nav1.7 Antibody - Additional Information**Gene ID** 6335**Other Names**

Sodium channel protein type 9 subunit alpha, Neuroendocrine sodium channel, hNE-Na, Peripheral sodium channel 1, PN1, Sodium channel protein type IX subunit alpha, Voltage-gated sodium channel subunit alpha Nav17, SCN9A, NENA

Target/Specificity

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Nav1.7. The exact sequence is proprietary.

Dilution

WB~~1:1000

E~~N/A

Format

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Nav1.7 Antibody - Protein Information**Name** SCN9A ([HGNC:10597](#))**Synonyms** NENA**Function**

Pore-forming subunit of Nav1.7, 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:15385606, PubMed:16988069, PubMed:17145499, PubMed:17167479, PubMed:19369487, PubMed:24311784, PubMed:25240195, PubMed:26680203, PubMed:7720699). Nav1.7 plays a crucial role in controlling the excitability and action potential propagation from nociceptor neurons, thereby contributing to the sensory perception of pain (PubMed:17145499, PubMed:17167479, PubMed:19369487, PubMed:24311784).

Cellular Location

Cell membrane; Multi-pass membrane protein. Cell projection, neuron projection. Cell projection, axon. Note=Localizes to neuron terminals (PubMed:30765606, PubMed:30795902). Also detected at Nodes of Ranvier (PubMed:30795902).

Tissue Location

Expressed strongly in dorsal root ganglion, with only minor levels elsewhere in the body, smooth muscle cells, MTC cell line and C-cell carcinoma. Also expressed in vagus nerves within the head and neck region (PubMed:31647222). Isoform 1 is expressed preferentially in the central and peripheral nervous system. Isoform 2 is expressed preferentially in the dorsal root ganglion

Nav1.7 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 Cytometry](#)
- [Cell Culture](#)

Nav1.7 Antibody - Images

Nav1.7 Antibody - Background

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-sensitive Na(+) channel isoform. Plays a role in pain mechanisms, especially in the development of inflammatory pain (By similarity).

Nav1.7 Antibody - References

Klugbauer N.,et al.EMBO J. 14:1084-1090(1995).
Cox J.J.,et al.Nature 444:894-898(2006).

Hillier L.W.,et al.Nature 434:724-731(2005).

Raymond C.K.,et al.J. Biol. Chem. 279:46234-46241(2004).

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