10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Nav1.7 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51860

Product Information

Application	WB
Primary Accession	Q15858
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	226372

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
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

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

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).

References

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