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Nav1.1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51498

Product Information

Application	WB, IHC-P
Primary Accession	P35498
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	228972

Additional Information

Gene ID	6323
Other Names	Sodium channel protein type 1 subunit alpha, Sodium channel protein brain I subunit alpha, Sodium channel protein type I subunit alpha, Voltage-gated sodium channel subunit alpha Nav11, SCN1A, NAC1, SCN1
Dilution	WB~~1:1000 IHC-P~~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

Protein Information

Name	SCN1A (HGNC:10585)
Synonyms	NAC1, SCN1
Function	Pore-forming subunit of Nav1.1, 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:14672992). By regulating the excitability of neurons, ensures that they respond appropriately to synaptic inputs, maintaining the balance between excitation and inhibition in brain neural circuits (By similarity). Nav1.1 plays a role in controlling the excitability and action potential propagation from somatosensory neurons, thereby contributing to the sensory perception of mechanically-induced pain (By similarity).

Cellular Location	Cell membrane; Multi-pass membrane protein

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.

References

Escayg A.,et al.Nat. Genet. 24:343-345(2000).
Jeong S.-Y.,et al.Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.
Sugawara T.,et al.Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
Ouchida M.,et al.Submitted (OCT-2002) to the EMBL/GenBank/DDBJ databases.
Hillier L.W.,et al.Nature 434:724-731(2005).