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

SCN1A Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22326c

Product Information

Application	WB, FC, E
Primary Accession	P35498
Other Accession	P04774
Reactivity	Human
Predicted	Rat
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB57630
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 Nav1.1, SCN1A, NAC1, SCN1
Target/Specificity	This SCN1A antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 481-515 amino acids from the Central region of human SCN1A.
Dilution	WB~~1:1000 FC~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SCN1A Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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

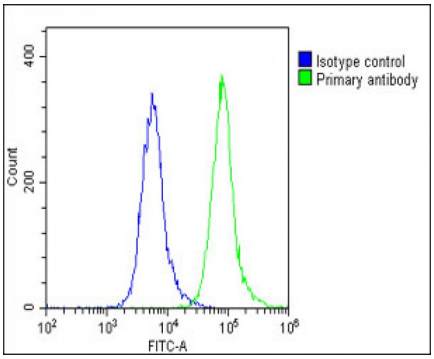
Background

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

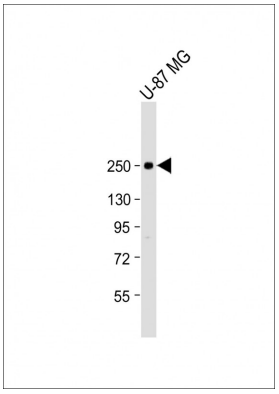
Escayg A.,et al.Nat. Genet. 24:343-345(2000).
Jeong S.-Y.,et al.Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.
Sugawara T.,et al.Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
Ouchida M.,et al.Submitted (OCT-2002) to the EMBL/GenBank/DDBJ databases.
Hillier L.W.,et al.Nature 434:724-731(2005).

Images



Overlay histogram showing U-87 MG cells stained with AP22326c(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP22326c, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

Anti-SCN1A Antibody (Center) at 1:2000 dilution + U-87 MG whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 229 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.