

Anti-Scn1a Picoband Antibody

Catalog # ABO12573

Product Information

Application	WB
Primary Accession	P35498
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Sodium channel protein type 1 subunit alpha(SCN1A) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Calculated MW	228972
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
Subcellular Localization	Cell membrane ; Multi-pass membrane protein .
Source	Eukaryota
Protein Name	Sodium channel protein type 1 subunit alpha
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Scn1a (1981-2009aa ACPPSYDRVTKPIVEKHEQEGKDEKAKGK), identical to the related rat sequence.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20° C for one year. After reconstitution, at 4° C for one month. It can also be aliquotted and stored frozen at -20° C for a longer time. Avoid repeated freezing and thawing.

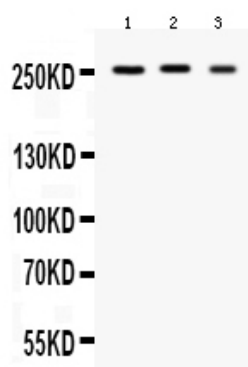
Protein Information

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

Nav1.1, also known as the sodium channel, voltage-gated, type I, alpha subunit (SCN1A), is a protein which in humans is encoded by the SCN1A gene. Voltage-dependent sodium channels are heteromeric complexes that regulate sodium exchange between intracellular and extracellular spaces and are essential for the generation and propagation of action potentials in muscle cells and neurons. Each sodium channel is composed of a large pore-forming, glycosylated alpha subunit and two smaller beta subunits. This gene encodes a sodium channel alpha subunit, which has four homologous domains, each of which contains six transmembrane regions. Allelic variants of this gene are associated with generalized epilepsy with febrile seizures and epileptic encephalopathy. Alternative splicing results in multiple transcript variants. The RefSeq Project has decided to create four representative RefSeq records. Three of the transcript variants are supported by experimental evidence and the fourth contains alternate 5' untranslated exons, the exact combination of which have not been experimentally confirmed for the full-length transcript.

Images



Western blot analysis of Scn1a expression in rat brain extract (lane 1), mouse brain extract (lane 2) and U87 whole cell lysates (lane 4). Scn1a at 250KD was detected using rabbit anti- Scn1a Antigen Affinity purified polyclonal antibody (Catalog # ABO12573) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .