SCN1A Antibody – Polyclonal

PRODUCT OVERVIEW

Product Name	SCN1A, Polyclonal Antibody
Full Product Name	SCN1A Polyclonal Antibody
Product Gene Name	anti-SCN1A antibody
Product Synonym Names	SCN1A NAC1 SCN1
Clonality	Polyclonal
Species Reactivity	Human, Mouse, Rat
Form/Format	Liquid in PBS containing 50% Glycerol, 0.5% BSA and 0.02% Sodium Azide.
OMIM	182389
3D Structure	ModBase 3D Structure for P35498
Immunogen	Synthesized peptide derived from human SCN1A
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for anti-SCN1A antibody	MBS8537508 is an antibody targeting SCN1A. Also known as SCN1A Polyclonal Antibody. Reactive in Human, Mouse, Rat. This antibody detects endogenous levels of human SCN1A
Other Notes	Small volumes of anti-SCN1A antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SCN1A. It may not necessarily be applicable to this product.

NCBI GI #	260166633
NCBI GeneID	6323
NCBI Accession #	NP_001159435.1
UniProt Primary Accession #	P35498
UniProt Related Accession #	P35498
GenBank Nucleotide #	NP_001159435.1
NCBI Official Full Name	sodium channel protein type 1 subunit alpha isoform 1
NCBI Official Synonym Full Names	sodium voltage-gated channel alpha subunit 1
NCBI Official Symbol	SCN1A
NCBI Official Synonym Symbols	FEB3; FHM3; NAC1; SCN1; SMEI; EIEE6; FEB3A; HBSCI; GEFSP2; Nav1.1
UniProt Protein Name	Sodium channel protein type 1 subunit alpha
UniProt Synonym Protein Names	Sodium channel protein brain I subunit alpha; Sodium channel protein type I subunit alpha; Voltage-gated sodium channel subunit alpha Nav1.1
Protein Family	Sodium channel protein
UniProt Gene Name	SCN1A

UniProt Synonym Gene Names	NAC1; SCN1
UniProt Entry Name	SCN1A_HUMAN
NCBI Protein Information	sodium channel protein type 1 subunit alpha
NCBI Summary for SCN1A	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. [provided by RefSeq, Oct 2015]
UniProt Comments for SCN1A	SCN1A: 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. Defects in SCN1A are the cause of generalized epilepsy with febrile seizures plus type 2 (GEFS+2). Generalized epilepsy with febrile seizures-plus refers to a rare autosomal dominant, familial condition with incomplete penetrance and large intrafamilial variability. Patients display febrile seizures persisting sometimes beyond the age of 6 years and/or a variety of afebrile seizure types. GEFS+ is a disease combining febrile seizures, generalized seizures often precipitated by fever at age 6 years or more, and partial seizures, with a variable degree of severity. Defects in SCN1A are a cause of severe myoclonic epilepsy in infancy (SMEI); also called Dravet syndrome. SMEI is a rare disorder characterized by generalized tonic, clonic, and tonic-clonic seizures that are initially induced by fever and begin during the first year of life. Later, patients also manifest other seizure types, including absence, myoclonic, and simple and complex partial seizures. Psychomotor development delay is observed around the second year of life. SMEI is considered to be the most severe phenotype within the spectrum of generalized epilepsies with febrile seizures-plus. Defects in SCN1A are a cause of intractable childhood epilepsy with generalized tonic-clonic seizures (ICEGTC). ICEGTC is a disorder characterized by generalized tonic-clonic seizures beginning usually in infancy and induced by fever. Seizures are associated with subsequent mental decline, as well as ataxia or hypotonia. ICEGTC is similar to SMEI, except for the absence of myoclonic seizures. Defects in SCN1A are the cause of familial hemiplegic migraine type 3 (FHM3). FHM3 is an autosomal dominant severe subtype of migraine with aura characterized by some degree of hemiparesis during the attacks. The episodes are associated with variable features of nausea, vomiting, photophobia, and phonophobia. Age at onset ranges from 6 to 15 years. FHM is occasionally associated with other neurologic symptoms such as cerebellar ataxia or epileptic seizures. A unique eye phenotype of elicited repetitive daily blindness has also been reported to be cosegregating with FHM in a single Swiss family. Defects in SCN1A are the cause of familial febrile convulsions type 3A (FEB3A); also known as familial febrile seizures 3. Febrile convulsions are seizures associated with febrile episodes in childhood without any evidence of intracranial infection or defined pathologic or traumatic cause. It is a common condition, affecting 2-5% of children aged 3 months to 5 years. The majority are simple febrile seizures (generally defined as generalized onset, single seizures with a duration of less than 30 minutes). Complex febrile seizures are characterized by focal onset, duration greater than 30 minutes, and/or more than one seizure in a 24 hour period. The likelihood of developing epilepsy following simple febrile seizures is low. Complex febrile seizures are associated with a moderately increased incidence of epilepsy. Belongs to the sodium channel (TC 1.A.1.10) family. Nav1.1/SCN1A subfamily. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Channel, sodium; Membrane protein, multi-pass; Membrane protein, integral Chromosomal Location of Human Ortholog: 2q24.3 Cellular Component: cell soma; plasma membrane; T-tubule; voltage-gated sodium channel complex; Z disc Molecular Function: sodium ion binding; voltage-gated sodium channel activity Biological Process: action potential propagation; adult walking behavior; generation of action potential; neuromuscular process controlling posture; positive regulation of defense response to virus by host; regulation of postsynaptic membrane potential; sodium ion transport Disease: Epileptic Encephalopathy, Early Infantile, 6; Generalized Epilepsy With Febrile Seizures Plus, Type 2; Migraine, Familial Hemiplegic, 3

Research Articles on SCN1A	**1.** Polymorphisms of rs3812718 of the SCN1A gene is associated with carbamazepine resistance among ethnic Zhuang Chinese epilepsy patients from Baise region
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