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SCN2B Rabbit pAb

Catalog # AP99837

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	O60939
Other Accession	O60939
Predicted	Rat, Pig, Human, Mouse, Rabbit, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	24326
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SCN2B
Epitope Specificity	65-180/215
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the sodium channel auxiliary subunit SCN2B (TC 8.A.17) family. Contains 1 Ig-like C2-type (immunoglobulin-like) domain.
SUBUNIT	[SUBUNIT] The sodium channel consists of a pore-forming alpha subunit, beta-1 and beta-2 subunits. Beta-1 is non-covalently associated with alpha, while beta-2 is covalently linked by disulfide bonds. Interaction with SCN10A and TNR (By similarity).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Voltage-gated sodium channels are selective ion channels that regulate the permeability of sodium ions in excitable cells. During the propagation of an action potential, sodium channels allow an influx of sodium ions, which rapidly depolarizes the cell. Na+ CP type II beta(sodium channel, voltage-gated, type II, beta), also known as SCN2B, is a 215 amino acid single-pass type I membrane protein that plays a critical role in the expression and assembly of the heterotrimeric complex of the sodium channel and interacts with Tenascin-R to influence the clustering and regulation of sodium channels at nodes of Ranvier. Expressed specifically in brain, Na+ CP type II beta contains one Ig-like C2-type (immunoglobulin-like) domain and is encoded by a gene that maps to human chromosome 11q23.3 and mouse chromosome 9 A5.2.

Additional Information

Gene ID	6327
Other Names	ATFB14; 2810451E09Rik; Gm183; SCNB2; SCN2B_HUMAN; SCN2B; SCN2B_MOUSE; SCN2B_RAT; sodium voltage-gated channel beta subunit 2; sodium channel, voltage-gated, type II, beta polypeptide; sodium channel, voltage-gated, type II, beta; sodium channel, voltage-gated, type II, beta subunit; sodium channel, voltage gated, type II beta subunit

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SCN2B (HGNC:10589)
Function	Regulatory subunit of multiple voltage-gated sodium (Nav) channels directly mediating the depolarization of excitable membranes (PubMed:19808477, PubMed:23559163, PubMed:26894959, PubMed:30765605, PubMed:30765606, PubMed:35277491, PubMed:36823201). 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:19808477, PubMed:23559163, PubMed:26894959). The accessory beta subunits participate in localization and functional modulation of the Nav channels (PubMed:19808477, PubMed:23559163). Modulates the activity of SCN1A/Nav1.1, SCN2A/Nav1.2, SCN2A/Nav1.3, SCN5A/Nav1.5, SCN8A/Nav1.6, SCN9A/Nav1.7 and SCN10A/Nav1.8 (PubMed:19808477, PubMed:23559163, PubMed:26894959, PubMed:30765605, PubMed:30765606, PubMed:35277491, PubMed:36823201).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:P54900}. Note=Clusters at the axon initial segment and node of Ranvier, the specialized neuronal subcellular domains involved in action potentials generation and propagation. {ECO:0000250|UniProtKB:P54900}

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