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Product datasheet for TA329033

Scn9a Rabbit Polyclonal Antibody

Product data:

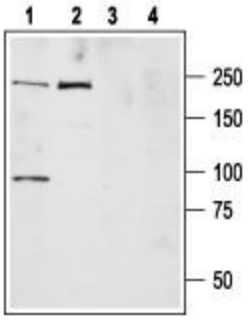
Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)EFTSIGRSR IMGLSE, corresponding to amino acid residues 446-460 of rat Nav1.7.?Â ?Â Intracellular loop between domains I and II.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	sodium voltage-gated channel alpha subunit 9
Database Link:	NP_579823 Entrez Gene 6335 HumanEntrez Gene 20274 MouseEntrez Gene 78956 Rat O08562

View online »

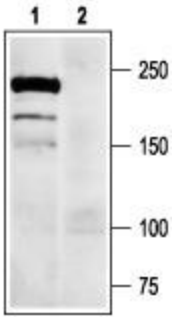
Background: Voltage-gated sodium channels (NaV) are essential for the generation of action potentials and for cell excitability. Nav channels are activated in response to depolarization and selectively allow flow of Na+ ions. To date, nine Nav α subunits have been cloned and named NaV1.1-NaV1.9.4-5 The NaV channels are classified into two groups according to their sensitivity to Tetrodotoxin (TTX): TTX-sensitive (NaV1.1, NaV1.2, NaV1.3, NaV1.4, NaV1.6 and NaV1.7) and TTX-resistant (NaV1.5, NaV1.8 and NaV1.9). Mammalian sodium channels are heterotrimers, composed of a central, pore-forming α subunit and two auxiliary β subunits. Expression of the α subunit isoform is developmentally regulated and tissue specific. Sodium channels in the adult central nervous system and heart contain β1 through β4 subunits, whereas sodium channels in adult skeletal muscle have only the β1 subunit. NaV1.7 is predominantly expressed in dorsal root ganglions (DRG) of the peripheral nervous system. Dominant gain of function mutations in the NaV1.7 gene are associated with erythermalgia (a rare autosomal disease characterized by sporadic burning pain accompanied by redness and heat in the extremities). Loss, or function mutations in NaV1.7 channels, leads to complete ablation of pain perception in humans.11 These recent findings highlight the role of this NaV isoform and the subset of DRG neurons that express this channel in physiological pain sensation.

Synonyms: ETHA; FEB3B; hNE-Na; Nav1.7; NE-NA; NENA; OTTHUMP00000204933; PN1

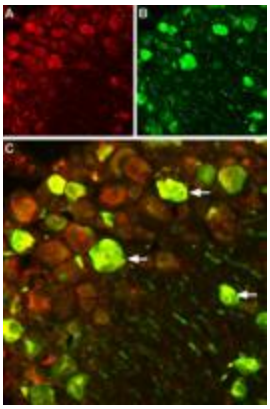
Product images:



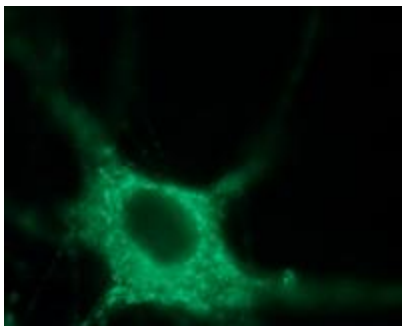
Western blot analysis of ND7/23 cell lysate (lanes 1, 3) and rat brain membranes (lanes 2, 4): 1, 2. Anti-Nav1.7 antibody, (1:200). 3, 4. Anti-Nav1.7 antibody, preincubated with the control peptide antigen.



Western blot analysis of DRG lysates: 1. Anti-NaV1.7 antibody, (1:200). 2. Anti-NaV1.7 antibody, preincubated with the control peptide antigen.



Expression of Nav1.7 in rat DRG. Immunohistochemical staining of rat dorsal root ganglion (DRG) using Anti-Nav1.7 antibody. A. Nav1.7 channel (red) in DRG neurons. B. Staining with mouse anti-Parvalbumin (green) in the same DRG section. C. Confocal merge of Nav1.7 and Parvalbumin demonstrates colocalization (arrows).



Expression of Nav1.7 in rat DRG primary culture. Immunocytochemical staining of paraformaldehyde-fixed and permeabilized rat dorsal root ganglion (DRG) primary culture. Cells were stained using Anti-Nav1.7 antibody, (1:200) followed by goat anti-rabbit-AlexaFluor-488 secondary antibody.