

Product datasheet for **TA329027**

Scn1a 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)TASEHSREPSAAGRLSD, corresponding to amino acid residues 465-481 of rat Nav1.1. \hat{A} ?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% NaN ₃ . |
| 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 1 |
| Database Link: | NP_110502 Entrez Gene 6323 Human Entrez Gene 20265 Mouse Entrez Gene 81574 Rat P04774 |



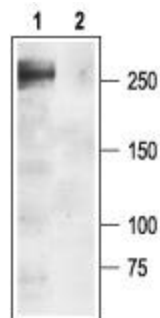
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Background:

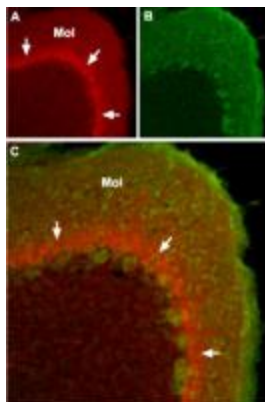
Voltage-gated sodium channels (Nav) are essential for the generation of action potentials and for cell excitability. Nav channels are activated in response to depolarization and selectively allow flow of Na⁺ ions. To date, nine Nav α subunits have been cloned and named Nav1.1-Nav1.9. The Nav channels 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. The expression of the α subunit isoform is developmentally regulated and tissue specific. Na⁺ channels in the adult central nervous system and heart contain β 1 through β 4 subunits, whereas Na⁺ channels in adult skeletal muscle have only the β 1 subunit. Nav1.1 is a highly tetrodotoxin-sensitive channel and is broadly expressed in neurons. Mutations in Nav1.1 are associated with at least two forms of epilepsy. Gain-of-function missense mutations are a primary cause of generalized epilepsy with febrile seizures plus (GEFS+). Loss-of-function mutations cause severe myoclonic epilepsy of infancy (SMEI).

Synonyms:

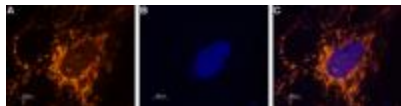
FEB3; FEB3A; GEFSP2; HBSCI; NAC1; Nav1.1; SCN1; SMEI

Product images:

Western blot analysis of rat brain membranes: 1. Anti-Nav1.1 antibody, (1:200). 2. Anti-Nav1.1 antibody, preincubated with the control peptide antigen.



Expression of Nav1.1 in mouse cerebellum. Immunohistochemical staining of mouse cerebellum using Anti-Nav1.1 antibody. A. The distribution of Nav1.1 (red) forms a band (arrows) in the molecular layer (Mol), close to the Purkinje cell bodies. B. Purkinje nerve cells are stained with mouse anti-Parvalbumin (green). C. Confocal merge of Nav1.1 and Parvalbumin.



Expression of Nav1.1 in rat DRG cells
Immunocytochemical staining of
Paraformaldehyde-fixed and permeabilized rat
dorsal root ganglion (DRG) using Anti-Nav1.1
antibody, (1:200), followed by goat anti-rabbit-
AlexaFluor-555 secondary antibody. Nuclear
staining of cells using the cell-permeable dye
Hoechst 33342.