

## Product datasheet for **TA329047**

### Scn4b 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)KNDKSDPKVRVKDD, corresponding to amino acid residues 85-98 of rat NaV $\beta$ 4. Extracellular, N-terminus.
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 <sub>3</sub> .
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 beta subunit 4
Database Link:	<a href="#">NP_001008880</a> <a href="#">Entrez Gene 6330 Human</a> <a href="#">Entrez Gene 399548 Mouse</a> <a href="#">Entrez Gene 315611 Rat</a> <a href="#">Q7M730</a>



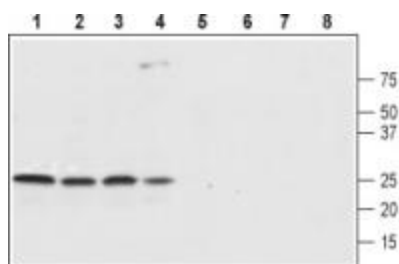
[View online »](#)

**Background:**

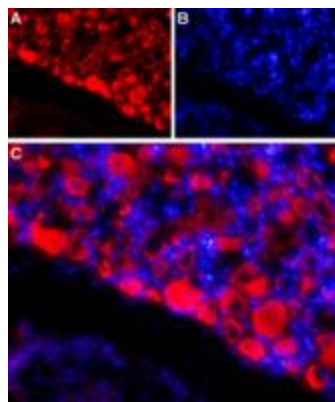
Voltage-gated sodium channels (Nav) are essential for the generation of action potentials and for cell excitability. Nav channels are activated in response to depolarization and selectively allow flow of Na<sup>+</sup> ions. To date, nine Nav  $\alpha$  subunits have been cloned and named Nav1.1-Nav1.9. 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 Na<sup>+</sup> channels are heterotrimers, composed of a central, pore-forming  $\alpha$  subunit and two auxiliary  $\beta$  subunits. The expression of the  $\alpha$  subunit isoform is developmentally regulated and tissue specific. Na<sup>+</sup> channels in the adult central nervous system and heart contain  $\beta$ 1 through  $\beta$ 4 subunits, whereas Na<sup>+</sup> channels in adult skeletal muscle have only the  $\beta$ 1 subunit. Nav $\beta$ 4 has been associated with Long QT syndrome and with Huntington's disease, showing a distinct down regulation of Nav $\beta$ 4 in the presymptomatic stage of HD mice, whereas other voltage-gated ion channel subunits were later decreased.

**Synonyms:**

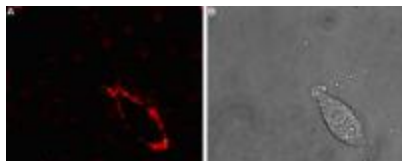
SCN4B

**Product images:**


Western blot analysis of rat brain (lanes 1 and 5), rat cortex (lane 2 and 6), mouse brain (lanes 3 and 7) and SH-SY5Y (lanes 4 and 8) lysates: 1-4. Anti-Nav $\beta$ 4 (extracellular) antibody, (1:800). 5-8. Anti-Nav $\beta$ 4 (extracellular) antibody preincubated with the control peptide antigen.



Expression of Nav $\beta$ 4 in rat DRG  
Immunohistochemical staining of adult rat dorsal root ganglion (DRG) using Anti-Nav $\beta$ 4 (extracellular) antibody followed by goat anti-rabbit-AlexaFluor-594 secondary antibody. A. Nav $\beta$ 4 labeling (red) appears in the cell bodies of the DRG neurons. B. Nuclear staining using DAPI as the counterstain (blue). C. Merged image of A and B.



Expression of Nav $\beta$ 4 in rat Pheochromocytoma (PC12) cells. Immunocytochemical staining of intact living rat Pheochromocytoma (PC12) cells. A. Extracellular staining of cells using Anti-Nav $\beta$ 4 (extracellular) antibody, (1:50) followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). B. Extracellular staining merged with live view of the cells.