10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Nav1.4 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51859

## Product Information

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| **Application** | WB |
| **Primary Accession** | P35499 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 208061 |

## Additional Information

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| **Gene ID** | 6329 |
| **Other Names** | Sodium channel protein type 4 subunit alpha, SkM1, Sodium channel protein skeletal muscle subunit alpha, Sodium channel protein type IV subunit alpha, Voltage-gated sodium channel subunit alpha Nav14, SCN4A |
| **Dilution** | WB~~1:1000 |
| **Format** | 0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50% |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## Protein Information

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| **Name** | SCN4A ( HGNC:10591) |
| **Function** | Pore-forming subunit of Nav1.4, a voltage-gated sodium (Nav) channel that directly mediates the depolarizing phase of action potentials in excitable membranes. 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:12766226, PubMed:15318338, PubMed:16890191, PubMed:17898326, PubMed:18690054, PubMed:19347921, PubMed:25707578, PubMed:26659129, PubMed:26700687, PubMed:29992740, PubMed:30190309). Highly expressed in skeletal muscles, Nav1.4 generates the action potential crucial for muscle contraction (PubMed:16890191, PubMed:19347921, PubMed:25707578, PubMed:26659129, PubMed:26700687). |

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| **Cellular Location** | Cell membrane; Multi-pass membrane protein |

## Background

This protein 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. This sodium channel may be present in both denervated and innervated skeletal muscle.

## References

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McClatchey A.I.,et al.Hum. Mol. Genet. 1:521-527(1992).
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