

Nav1.4 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51859**Specification**

Nav1.4 Antibody - Product Information

Application	WB, E
Primary Accession	P35499
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	208 KDa

Nav1.4 Antibody - Additional Information**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

E~~N/A

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

Nav1.4 Antibody - Protein Information**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).

Cellular Location

Cell membrane; Multi-pass membrane protein

Nav1.4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Nav1.4 Antibody - Images

Nav1.4 Antibody - 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.

Nav1.4 Antibody - References

George A.L. Jr.,et al.Ann. Neurol. 31:131-137(1992).
Wang J.,et al.Biochem. Biophys. Res. Commun. 182:794-801(1992).
Tsujino A.,et al.Proc. Natl. Acad. Sci. U.S.A. 100:7377-7382(2003).
McClatchey A.I.,et al.Hum. Mol. Genet. 1:521-527(1992).
Zody M.C.,et al.Nature 440:1045-1049(2006).