

Datasheet for ABIN7043648

anti-SCN9A antibody (Intracellular) (Atto 633)



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1 Image

Overview

Quantity:	50 µL
Target:	SCN9A
Binding Specificity:	AA 446-460, Intracellular
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SCN9A antibody is conjugated to Atto 633
Application:	Immunohistochemistry (IHC), Immunofluorescence (IF)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to NaV1.7 (SCN9A) Channel Conjugated to the Fluorescent Dye ATTO-633
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)EFTSIGRSR IMGLSE, corresponding to amino acid residues 446-460 of rat NaV1.7
Isotype:	IgG
Specificity:	Intracellular loop between domains I and II
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	human,mouse - 13,15 amino acid residues identical,Rabbit - 14
Characteristics:	Anti-NaV1.7 (SCN9A) Antibody (ABIN7043647, ABIN7045229 and ABIN7045230) is a highly

specific antibody directed against an epitope of the rat protein. The antibody can be used in western blot, immunohistochemistry, and immunocytochemistry applications. It has been designed to recognize NaV1.7 from rat, human, and mouse samples. \nAnti-NaV1.7 (SCN9A)-ATTO Fluor-633 Antibody (ABIN7043648) is directly labeled with an fluorescent dye. ATTO dyes are characterized by strong absorption (high extinction coefficient), high fluorescence quantum yield, and high photo-stability. ATTO 633 has a maximum absorption at 629 nm and a maximum fluorescence at 657 nm. The fluorescence is excited most efficiently in the range 610 to 645 nm. This label is analogous to the well-known dyes Alexa 647, Alexa 633 and Cy5. Anti-NaV1.7 (SCN9A)-ATTO Fluor-633 Antibody is especially suited for experiments requiring simultaneous labeling of different markers.

Purification:	Affinity purified on immobilized antigen.
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Target Details

Target:	SCN9A
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Alternative Name:	SCN9A (SCN9A Products)
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Background:	Voltage-gated sodium channel type IX subunit alpha, PN1, NENA, NE, ETHA,Voltage-gated sodium channels (NaV) are essential for the generation of action potentials and for cell excitability¹. NaV channels are activated in response to depolarization and selectively allow the flow of Na⁺ ions. To date, nine NaV α subunits have been cloned and named NaV1.1-NaV1.9⁴⁻⁵. 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)²⁻³.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 β1 through β4 subunits, whereas Na⁺ channels in adult skeletal muscle have only the β1 subunit^{6,8}.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 erythralgia (a rare autosomal disease characterized by sporadic burning pain accompanied by redness and heat in the extremities).⁹⁻¹¹ Loss of 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.
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Alternative names: NaV1.7 (SCN9A), Voltage-gated sodium channel type IX subunit alpha, PN1,

Target Details

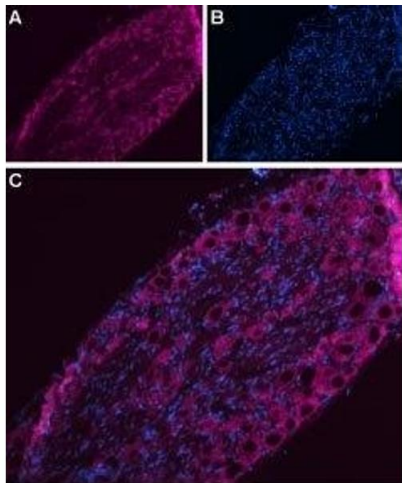
	NENA, NE, ETHA
Gene ID:	78956
NCBI Accession:	NM_002977
UniProt:	O08562

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: N/A Application Dilutions Western blot wb: N/A
Comment:	Negative Control: Blocking Peptide: (ABIN7236859)
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Reconstitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 1 % BSA with 0.05 % sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C, -20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C, protected from the light, for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).



Immunohistochemistry

Image 1. Expression of NaV1.7 in rat DRG - Immunohistochemical staining of rat dorsal root ganglion (DRG) using Anti-NaV1.7 (SCN9A)-ATTO Fluor-633 Antibody (ABIN7043648). A. NaV1.7 staining (purple) appears in DRG neurons. B. Nuclear staining using DAPI as the counterstain. C. Merge images of A and B.