Datasheet for ABIN7043649

anti-SCN9A antibody (Extracellular)

2 Images

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Overview

Quantity:	25 µL
Target:	SCN9A
Binding Specificity:	AA 1533-1543, Extracellular
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SCN9A antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunochromatography (IC), Live Cell Imaging (LCI)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to NaV1.7 (SCN9A) Channel
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)EKEGQTEYMDY(K), corresponding to amino acid residues 1533-1543 of rat NaV1.7
Isotype:	IgG
Specificity:	1st extracellular loop, domain IV.
Predicted Reactivity:	Mouse - 8,11 amino acid residues identicalHuman - Not recommended to use with human samples
Characteristics:	Anti-Nav1.7 (SCN9A) (extracellular) Antibody is directed against an epitope of the rat NaV1.7 channel. Anti-NaV1.7 (SCN9A) (extracellular) Antibody (ABIN7043649, ABIN7045252 and

Product Details

	ABIN7045253) can be used in western blot and live cell imaging applications. It recognizes an extracellular epitope and thus is ideal for detecting NaV1.7 in living cells. It has been designed to recognize NaV1.7 from rat and mouse samples. The antibody will not recognize NaV1.7 from human samples.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	SCN9A
Alternative Name:	SCN9A (SCN9A Products)
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 subunit6,8.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 erythermalgia (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. Alternative names: NaV1.7 (SCN9A), Voltage-gated sodium channel type IX subunit alpha, PN1, NENA, NE, ETHA
Gene ID:	78956
NCBI Accession:	NM_002977
UniProt:	O08562

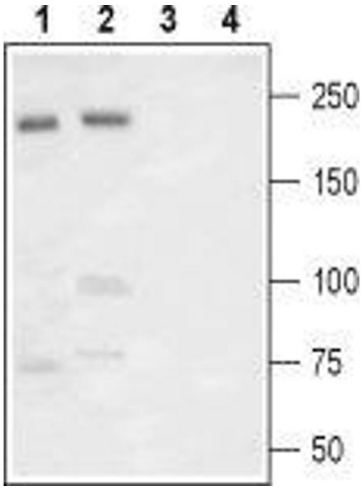
Application Details

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: 1:200
Comment:	Cited Application: ICC Negative Control: (ABIN7236863) Blocking Peptide: (ABIN7236863)
Restrictions:	For Research Use only

Handling

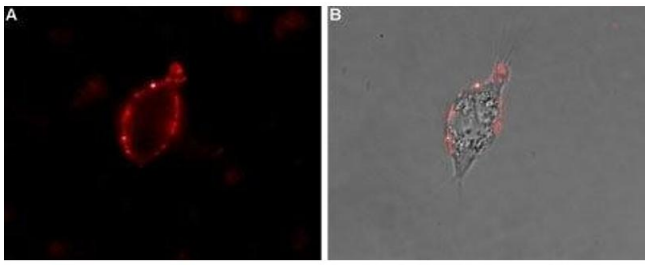
Format:	Lyophilized
Reconstitution:	0.2 mL double distilled water (DDW).
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C 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).

Images



Western Blotting

Image 1. Western blot analysis of rat brain (lanes 1 and 3) and rat DRG (lanes 2 and 4) lysates: - 1,2. Anti-NaV1.7 (SCN9A) (extracellular) Antibody (ABIN7043649, ABIN7045252 and ABIN7045253), (1:200).3,4. Anti-NaV1.7 (SCN9A) (extracellular) Antibody, preincubated with Nav1.7/SCN9A (extracellular) Blocking Peptide (#BLP-SC027).



Immunocytochemistry

Image 2. Expression of NaV1.7 in rat PC12 cells - Cell surface detection of NaV1.7 in intact living rat pheochromocytoma PC12 cells. A. Extracellular staining of cells using Anti-NaV1.7 (SCN9A) (extracellular) Antibody (ABIN7043649, ABIN7045252 and ABIN7045253), (1:50) followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). B. Merge image of A and live view of the cells.