SANTA CRUZ BIOTECHNOLOGY, INC.

Na^+ CP type IXα (H-17): sc-130096

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Voltage-gated sodium channels are selective ion channels that regulate the permeability of sodium ions in excitable cells. During the propagation of an action potential, sodium channels allow an influx of sodium ions, which rapidly depolarizes the cell. Na^+ CP type IXα, also known as SCN9A (sodium channel protein type 9 subunit α), NENA, PN1, Nav1.7 or ETHA, is a 1,988 amino acid multi-pass membrane protein that belongs to the voltage-gated sodium channel family. Expressed in dorsal root ganglion, smooth muscle cells and in the central and peripheral nervous system, Na^+ CP type IXα functions to mediate the voltage-dependent sodium ion permeability of membranes, specifically forming a sodium-selective ion channel through which sodium may pass. Via its ability to control the flow of sodium in and out of excitable membranes, Na^+ CP type IXα plays an important role in the inflammatory pain response. Defects in the gene encoding Na^+ CP type IXα are the cause of primary erythermalgia, autosomal recessive congenital indifference to pain and paroxysmal extreme pain disorder (PEPD), all of which are genetic pain disorders.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SCN9A (human) mapping to 2q24.3; Scn9a (mouse) mapping to 2 C1.3.

SOURCE

Na^+ CP type IXα (H-17) is a purified rabbit polyclonal antibody raised against Na^+ CP type IXα of human origin.

PRODUCT

Each vial contains 50 µg IgG in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Na^+ CP type IXα (H-17) is recommended for detection of Na^+ CP type IXα of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Na^+ CP type IXα siRNA (h): sc-94458 and Na^+ CP type IXα siRNA (m): sc-149784; and as shRNA Plasmid control antibody for Na^+ CP type IXα shRNA Plasmid (h): sc-94458-SH and Na^+ CP type IXα shRNA Plasmid (m): sc-149784-SH.

Molecular Weight of Na^+ CP type IXα: 226 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.