

Na⁺ CP type IX α (S-17): sc-168691

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 IX α , 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 IX α 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 IX α plays an important role in the inflammatory pain response. Defects in the gene encoding Na⁺ CP type IX α are the cause of primary erythralgia, 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.

RESEARCH USE

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

SOURCE

Na⁺ CP type IX α (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Na⁺ CP type IX α of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-168691 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Na⁺ CP type IX α (S-17) is recommended for detection of Na⁺ CP type IX α 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Na⁺ CP type family members.

Na⁺ CP type IX α (S-17) is also recommended for detection of Na⁺ CP type IX α in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Na⁺ CP type IX α siRNA (h): sc-94458, Na⁺CP type IX α siRNA (m): sc-149784, Na⁺ CP type IX α shRNA Plasmid (h): sc-94458-SH, Na⁺ CP type IX α shRNA Plasmid (m): sc-149784-SH, Na⁺ CP type IX α shRNA (h) Lentiviral Particles: sc-94458-V and Na⁺ CP type IX α shRNA (m) Lentiviral Particles: sc-149784-V.

Molecular Weight of Na⁺ CP type IX α : 226 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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


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Try **Na⁺ CP type IX α (5A11): sc-293298**, our highly recommended monoclonal alternative to Na⁺ CP type IX α (S-17).