SANTA CRUZ BIOTECHNOLOGY, INC.

Na+ CP type Vα (4G8:1G7): sc-81631

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Voltage-gated sodium channels drive the initial depolarization phase of the cardiac action potential and, therefore, critically determine conduction of excitation through the heart. The sodium channel gene SCN5A, which encodes the Na^+ CP type Vα protein, possesses two fundamental properties, ion conduction and gating. The human SCN5A gene maps to chromosome 3q21-24. Deletions or loss-of-function mutations in SCN5A result in a wide range of arrhythmias, including bradycardia, atrioventricular conduction delay and ventricular fibrillation. Specifically, patients with Brugada syndrome have mutations in the SCN5A gene, which reduces the sodium current. Additionally, gain-of-function mutations are associated with long QT syndrome type III (LQT3), a cardiac disorder that causes sudden death from ventricular tachyarrhythmias, specifically torsade de pointes. The SCN5A gene is expressed in human atrial and ventricular cardiac muscle, but not in adult skeletal muscle, brain, myometrium, liver or spleen.

REFERENCES

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2. Wang, Q., Chen, Q. and Towbin, J.A. 1998. Genetics, molecular mechanisms and management of long QT syndrome. Ann. Med. 30: 58-65.
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CHROMOSOMAL LOCATION

Genetic locus: SCN5A (human) mapping to 3p22.2.

SOURCE

Na+ CP type Vα (4G8:1G7) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to an extracellular region of Na+ CP type Vα of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Na+ CP type Vα (4G8:1G7) is recommended for detection of Voltage-gated sodium channel subunit α Nav1.5 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Na+ CP type Vα siRNA (h): sc-42640, Na+ CP type Vα shRNA Plasmid (h): sc-42640-SH and Na+ CP type Vα shRNA (h) Lentiviral Particles: sc-42640-V.

Molecular Weight of Na+ CP type Vα: 260 kDa.

STORAGE

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

PROTOCOLS

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