SANTA CRUZ BIOTECHNOLOGY, INC.

KV4.3 (C-17): sc-11686

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Voltage-gated K^+ channels in the plasma membrane control the repolarization and the frequency of action potentials in neurons, muscles, and other excitable cells. The KV gene family encodes more than 30 genes that comprise the subunits of the K^+ channels, and they vary in their gating and permeation properties, subcellular distribution, and expression patterns. Functional KV channels assemble as tetramers consisting of pore-forming α-subunits (KV), which include the KV1, KV2, KV3, and KV4 proteins, and accessory or KV-subunits that modify the gating properties of the coexpressed KV subunits. Differences exist in the patterns of trafficking, biosynthetic processing, and surface expression of the major KV1 subunits (KV1.1, KV1.2, and KV1.4) expressed in rat and human brain, suggesting that the individual protein subunits are highly regulated to control for the assembly and formation of functional neuronal channels.

CHROMOSOMAL LOCATION

Genetic locus: KCND3 (human) mapping to 1p13.2; Kcnd3 (mouse) mapping to 3 F2.2.

SOURCE

KV4.3 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KV4.3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-11686 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KV4.3 (C-17) is recommended for detection of KV4.3 long and short forms of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

KV4.3 (C-17) is also recommended for detection of KV4.3 long and short forms in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for KV4.3 siRNA (h): sc-42724, KV4.3 siRNA (m): sc-42725, KV4.3 siRNA (r): sc-156045, KV4.3 shRNA Plasmid (h): sc-42724-SH, KV4.3 shRNA Plasmid (m): sc-42725-SH, KV4.3 shRNA Plasmid (r): sc-156045-SH, KV4.3 shRNA (h) Lentiviral Particles: sc-42724-V, KV4.3 shRNA (m) Lentiviral Particles: sc-42725-V and KV4.3 shRNA (r) Lentiviral Particles: sc-156045-V.

Molecular Weight of KV4.3: 80/82 kDa.

Positive Controls: mouse brain extract: sc-2253.

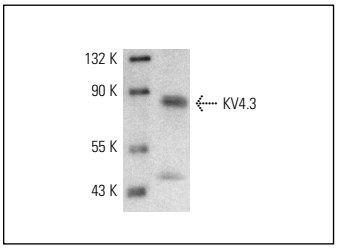
RESEARCH USE

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

STORAGE

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

DATA



KV4.3 (C-17): sc-11686. Western blot analysis of KV4.3 expression in mouse brain extract.

SELECT PRODUCT CITTIONS

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3. Burkhalter, A., et al. 2006. Differential expression of I(A) channel subunits Kv4.2 and Kv4.3 in mouse visual cortical neurons and synapses. J. Neurosci. 26: 12274-12282.
4. Tsuji, Y., et al. 2006. Potassium channel subunit remodeling in rabbits exposed to long-term bradycardia or tachycardia: discrete arrhythmogenic consequences related to differential delayed-rectifier changes. Circulation 113: 345-355.
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6. Ferrer, T., et al. 2012. Mechanisms responsible for the altered cardiac repolarization dispersion in experimental hypothyroidism. Acta Physiol. 204: 502-512.
7. Gao, M., et al. 2013. An altered expression of genes involved in the regulation of ion channels in atrial myocytes is correlated with the risk of atrial fibrillation in patients with heart failure. Exp. Ther. Med. 5: 1239-1243.