



## KV9.1 (N-20): sc-51119

### BACKGROUND

Voltage-gated K<sup>+</sup> 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 proteins that comprise the subunits of the K<sup>+</sup> 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  $\alpha$  subunits (KV), which include the KV1, KV2, KV3, KV4 and KV9 proteins, and accessory or KV-subunits that modify the gating properties of the coexpressed KV subunits. KV9.1 is a K<sup>+</sup> channel subunit that reduces the ion flow and regulates channel activity. It localizes to the cell membrane and is expressed in all tissues except skeletal muscle. It is highly expressed in fetal and adult brain, adult prostate and testis and fetal kidney and lung.

### REFERENCES

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- Kerschensteiner, D., Soto, F. and Stocker, M. 2005. Fluorescence measurements reveal stoichiometry of K<sup>+</sup> channels formed by modulatory and delayed rectifier alpha-subunits. *Proc. Natl. Acad. Sci. USA* 102: 6160-6165.

### CHROMOSOMAL LOCATION

Genetic locus: KCNS1 (human) mapping to 20q12; Kcns1 (mouse) mapping to 2 H3.

### SOURCE

KV9.1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of KV9.1 of human origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-51119 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

KV9.1 (N-20) is recommended for detection of KV9.1 of 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).

Suitable for use as control antibody for KV9.1 siRNA (h): sc-60909.

### 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.