

## KV6.3 (C-12)-R: sc-23322-R

### BACKGROUND

The human voltage-gated potassium (KV) channel KV6.3 gene maps to chromosome 16q24.1 and encodes a modulatory  $\gamma$  subunit that shares 34% sequence identity with KV6.2 and 95.1% identity with the rat ortholog, KV6.3. KV channels regulate neurotransmitter release, heart rate, insulin secretion, neuronal excitability, epithelial electrolyte transport, smooth muscle contraction, and cell volume. KV channels are multimers that contain channel activity-dependent  $\alpha$  subunits and modulatory  $\gamma$  subunits. Human KV6.3 transcript is abundant in brain, lung, kidney, thymus, ovary, small intestine, and colon. KV6.3 contains a pore forming domain with 6 transmembrane domains, and interacts with KV2.1.

### REFERENCES

1. Martens, J.R., Kwak, Y.G. and Tamkun, M.M. 1999. Modulation of Kv channel  $\alpha/\beta$  subunit interactions. *Trends Cardiovasc. Med.* 9: 253-258.
2. Ottschytch, N., Raes, A., Van Hoorick, D. and Snyders, D.J. 2002. Obligatory heterotetramerization of three previously uncharacterized Kv channel  $\alpha$ -subunits identified in the human genome. *Proc. Natl. Acad. Sci. U.S.A.* 99: 7986-7991.
3. Sano, Y., Mochizuki, S., Miyake, A., Kitada, C., Inamura, K., Yokoi, H., Nozawa, K., Matsushime, H. and Furuichi, K. 2002. Molecular cloning and characterization of Kv6.3, a novel modulatory subunit for voltage-gated K<sup>+</sup> channel Kv2.1. *FEBS Lett.* 512: 230-234.
4. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 606767. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. LocusLink Report (LocusID: 170850). <http://www.ncbi.nlm.nih.gov/LocusLink/>

### CHROMOSOMAL LOCATION

Genetic locus: KCNG4 (human) mapping to 16q24.1.

### SOURCE

KV6.3 (C-12)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of KV6.3 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-23322 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

### APPLICATIONS

KV6.3 (C-12)-R is recommended for detection of KV6.3 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).

KV6.3 (C-12)-R is also recommended for detection of KV6.3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for KV6.3 siRNA (h): sc-42726, KV6.3 shRNA Plasmid (h): sc-42726-SH and KV6.3 shRNA (h) Lentiviral Particles: sc-42726-V.

### 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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

### RESEARCH USE

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