SANTA CRUZ BIOTECHNOLOGY, INC.

ROM-K (N-17): sc-10692

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ROM-K, an ATP-sensitive inward rectifying K^+ channel (also designated KIR1.1), is a member of the Kir family of K^+ channels that controls renal K^+ secretion. These K^+ channels more readily conduct an inward current rather than an outward current and are constituitively open. Inwardly rectifying K^+ channels are a complex of four Kir (Kir1-6) subunits. ROM-K is activated by protein kinase A, and its activity is regulated by phosphatidylinositol 4,5-bis-phosphate and intracellular pH. Alternative splicing of ROM-K mRNA yields various isoforms which are differentially expressed in nephrons of the mammalian kidney. Mutations in the ROM-K gene are linked to antenatal Bartter syndrome, an autosomal recessive disorder of renal electrolyte transport.

REFERENCES

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4. Zolotnitskaya, A., et al. 1999. Developmental expression of ROM-K in rat kidney. Am. J. Physiol. 276: F825-836.
5. Liou, H.H., et al. 1999. Regulation of ROM-K1 channel by protein kinase A via a phosphatidylinositol 4,5-bisphosphate-dependent mechanism. Proc. Natl. Acad. Sci. USA 96: 5820-5825.
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7. Flagg, T.P., et al. 1999. A mutation linked with Bartter's syndrome locks Kir1.1a (ROM-K1) channels in a closed state. J. Gen. Physiol. 114: 685-700.
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CHROMOSOMAL LOCATION

Genetic locus: KCNJ1 (human) mapping to 11q24.3.

SOURCE

ROM-K (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ROM-K of human origin.

STORAGE

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

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-10692 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ROM-K (N-17) is recommended for detection of ROM-K isoforms 1-5 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).

ROM-K (N-17) is also recommended for detection of ROM-K isoforms 1-5 in additional species, including equine.

Suitable for use as control antibody for ROM-K siRNA (h): sc-42632, ROM-K shRNA Plasmid (h): sc-42632-SH and ROM-K shRNA (h) Lentiviral Particles: sc-42632-V.

Molecular Weight of ROM-K: 42 kDa.

Molecular Weight of ROM-K dimer: 80 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.

RESEARCH USE

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

PROTOCOLS

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