SANTA CRUZ BIOTECHNOLOGY, INC.

WNK1 (Q-15): sc-168110

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The Power to Question

BACKGROUND

WNK1 (WNK lysine deficient protein kinase 1), also known as KDP (kinase deficient protein), PSK, erythrocyte 65 kDa protein (p65), HSN2, HSAN2 or PRKWNK1, is a 2,382 amino acid cytoplasmic protein that participates in cell signaling, proliferation and survival, and regulates electrolyte homeostasis. WNK1 belongs to the Ser/Thr protein kinase family of the protein kinase superfamily, and contains one protein kinase domain. Existing as five alternatively spliced isoforms, WNK1 is widely expressed but is found at highest levels in skeletal muscke, heart, testis and kidney. The gene that encodes WNK1 maps to human chromosome 12p13.33, and when defective, is the cause of an an autosomal dominant disease known as pseudohypoaldosteronism type II (PHAII), as well as a hereditary sensory and autonomic neuropathy designated hereditary sensory and autonomic neuropathy type 2A (HSAN2A).

REFERENCES

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2. Moore, T.M., et al. 2000. PSK, a novel STE20-like kinase derived from prostatic carcinoma that activates the c-Jun N-terminal kinase mitogen-activated protein kinase pathway and regulates actin cytoskeletal organization. J. Biol. Chem. 275: 4311-4322.
3. Veríssimo, F., et al. 2001. WNK kinases, a novel protein kinase subfamily in multi-cellular organisms. Oncogene 20: 5562-5569.
4. Wilson, F.H., et al. 2001. Human hypertension caused by mutations in WNK kinases. Science 293: 1107-1112.
5. Delaloy, C., et al. 2003. Multiple promoters in the WNK1 gene: one controls expression of a kidney-specific kinase-defective isoform. Mol. Cell. Biol. 23: 9208-9221.
6. Lenertz, L.Y., et al. 2005. Properties of WNK1 and implications for other family members. J. Biol. Chem. 280: 26653-26658.
7. Roddier, K., et al. 2005. Two mutations in the HSN2 gene explain the high prevalence of HSAN2 in French Canadians. Neurology 64: 1762-1767.
8. Shekarabi, M., et al. 2008. Mutations in the nervous system—specific HSN2 exon of WNK1 cause hereditary sensory neuropathy type II. J. Clin. Invest. 118: 2496-2505.

CHROMOSOMAL LOCATION

Genetic locus: WNK1 (human) mapping to 12p13.33; Wnk1 (mouse) mapping to 6 F1.

SOURCE

WNK1 (Q-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of WNK1 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-168110 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WNK1 (Q-15) is recommended for detection of WNK1 of mouse, rat and 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).

WNK1 (Q-15) is also recommended for detection of WNK1 in additional species, including porcine.

Suitable for use as control antibody for WNK1 siRNA (h): sc-39256, WNK1 siRNA (m): sc-39257, WNK1 shRNA Plasmid (h): sc-39256-SH, WNK1 shRNA Plasmid (m): sc-39257-SH, WNK1 shRNA (h) Lentiviral Particles: sc-39256-V and WNK1 shRNA (m) Lentiviral Particles: sc-39257-V.

Molecular Weight of WNK1: 251 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.