

KNDC1 (Q-15): sc-163000

BACKGROUND

KNDC1 (kinase non-catalytic C-lobe domain (KIND) containing 1), also known as C10orf23, KIAA1768, RASGEF2 or VKIND, is a 1,749 amino acid protein that contains 2 KIND domains and an N-terminal Ras-GEF domain. Expressed in the cerebral cortex, KNDC1 is a likely guanine nucleotide exchange factor (GEF). Existing as six alternatively spliced isoforms, the gene encoding KNDC1 maps to human chromosome 10q26.3 and mouse chromosome 7 F4. Spanning nearly 135 million base pairs, chromosome 10 makes up approximately 4.5% of total DNA in cells and encodes nearly 1,200 genes. Several protein-coding genes, including those that encode for chemokines, cadherins, excision repair proteins, early growth response factors (Egrs) and fibroblast growth receptors (FGFRs), are located on chromosome 10. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

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3. Berger, P., et al. 2002. Molecular cell biology of Charcot-Marie-Tooth disease. *Neurogenetics* 4: 1-15.
4. Teresi, R.E., et al. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
5. Cho, M.Y., et al. 2008. First report of ovarian dysgerminoma in Cowden syndrome with germline PTEN mutation and PTEN-related 10q loss of tumor heterozygosity. *Am. J. Surg. Pathol.* 32: 1258-1264.
6. Yin, Y. and Shen, W.H. 2008. PTEN: a new guardian of the genome. *Oncogene* 27: 5443-5453.
7. Laugel, V., et al. 2010. Mutation update for the CSB/ERCC6 and CSA/ERCC8 genes involved in Cockayne syndrome. *Hum. Mutat.* 31: 113-126.

CHROMOSOMAL LOCATION

Genetic locus: KNDC1 (human) mapping to 10q26.3; Kndc1 (mouse) mapping to 7 F4.

SOURCE

KNDC1 (Q-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of KNDC1 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-163000 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KNDC1 (Q-15) is recommended for detection of KNDC1 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).

KNDC1 (Q-15) is also recommended for detection of KNDC1 in additional species, including equine and porcine.

Suitable for use as control antibody for KNDC1 siRNA (h): sc-90837, KNDC1 siRNA (m): sc-146561, KNDC1 shRNA Plasmid (h): sc-90837-SH, KNDC1 shRNA Plasmid (m): sc-146561-SH, KNDC1 shRNA (h) Lentiviral Particles: sc-90837-V and KNDC1 shRNA (m) Lentiviral Particles: sc-146561-V.

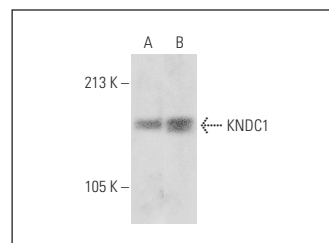
Molecular Weight of KNDC1 isoforms 1/3/5: 191/184/56 kDa.

Positive Controls: mouse cerebellum extract: sc-2403 or rat brain extract: sc-2392.

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.

DATA



KNDC1 (Q-15): sc-163000. Western blot analysis of KNDC1 expression in rat brain (A) and mouse cerebellum (B) tissue extracts.

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.