SANTA CRUZ BIOTECHNOLOGY, INC.

CARKD (A-1): sc-514529

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CARKD (carbohydrate kinase domain-containing protein) is a 347 amino acid protein that belongs to the YjeF family and exists as 3 alternatively spliced isoforms. Containing one YjeF C-terminal domain, CARKD is encoded by a gene that maps to human chromosome 13q34. Chromosome 13 contains around 114 million base pairs and 400 genes. Key tumor suppressor genes on chromosome 13 include the breast cancer susceptibility gene, BRCA2, and the RB1 (retinoblastoma) gene. RB1 encodes a crucial tumor suppressor protein which, when defective, leads to malignant growth in the retina and has been implicated in a variety of other cancers. The gene SLITRK1, which is associated with Tourette syndrome, is on chromosome 13. As with most chromosomes, polysomy of part or all of chromosome 13 is deleterious to development and decreases the odds of survival. Trisomy 13, also known as Patau syndrome, is quite deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

REFERENCES

1. Dunham, A., et al. 2004. The DNA sequence and analysis of human chromosome 13. Nature 428: 522-528.
2. Deng, H., et al. 2006. Examination of the SLITRK1 gene in Caucasian patients with Tourette syndrome. Acta Neurol. Scand. 114: 400-402.
3. Giacinti, C., et al. 2006. RB and cell cycle progression. Oncogene 25: 5220-5227.
4. Grados, M.A., et al. 2006. A new gene for Tourette's syndrome: a window into causal mechanisms? Trends Genet. 22: 291-293.
5. Bugge, M., et al. 2007. Non-disjunction of chromosome 13. Hum. Mol. Genet. 16: 2004-2010.
6. Hsu, H.F., et al. 2007. Variable expressivity in Patau syndrome is not all related to trisomy 13 mosaicism. Am. J. Med. Genet. A 143A: 1739-1748.

CHROMOSOMAL LOCATION

Genetic locus: Carkd (mouse) mapping to 8 A1.1.

SOURCE

CARKD (A-1) is a mouse monoclonal antibody raised against amino acids 32-331 mapping within an internal region of CARKD of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CARKD (A-1) is available conjugated to agarose (sc-514529 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514529 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514529 PE), fluorescein (sc-514529 FITC), Alexa Fluor® 488 (sc-514529 AF488), Alexa Fluor® 546 (sc-514529 AF546), Alexa Fluor® 594 (sc-514529 AF594) or Alexa Fluor® 647 (sc-514529 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514529 AF680) or Alexa Fluor® 790 (sc-514529 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CARKD (A-1) is recommended for detection of CARKD of mouse origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for CARKD siRNA (m): sc-108125, CARKD shRNA Plasmid (m): sc-108125-SH and CARKD shRNA (m) Lentiviral Particles: sc-108125-V.

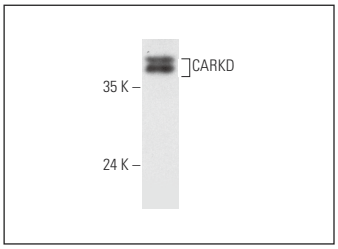
Molecular Weight of CARKD isoforms: 41/36/13 kDa.

Positive Controls: mouse thymus extract: sc-2406.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CARKD (A-1): sc-514529. Western blot analysis of CARKD expression in mouse thymus tissue extract.

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 for detailed protocols and support products.