SANTA CRUZ BIOTECHNOLOGY, INC.

DIRC2 (G-12): sc-99865

BACKGROUND

Belonging to the major facilitator superfamily, DIRC2 (disrupted in renal carcinoma protein 2) is a 478 amino acid multi-pass membrane protein that is primarily expressed in kidney proximal tubular cells. The genes encoding DIRC2 and DIRC3 are located at a translocation breakpoint which occurs frequently in individuals affected by familial renal cell carcinoma. Fusion transcripts that result from these translocations may affect normal protein function. This evidence suggests that, due to its chromosomal location, deregulation of the DIRC2 gene may cause haploinsufficiency and therefore result in the onset of tumor growth. There are two isoforms of DIRC2 which are produced as a result of alternative splicing events.

REFERENCES

1. Bodmer, D., et al. 1998. An alternative route for multistep tumorigenesis in a novel case of hereditary renal cell cancer and a t(2;3) (q35;q21) chromosome translocation. Am. J. Hum. Genet. 62: 1475-1483.
2. Druck, T., et al. 2001. The DIRC1 gene at chromosome 2q33 spans a familial RCC-associated t(2;3)(q33;q21) chromosome translocation. J. Hum. Genet. 46: 583-589.
3. Podolski, J., et al. 2001. Characterization of a familial RCC-associated t(2;3)(q33;q21) chromosome translocation. J. Hum. Genet. 46: 685-693.
4. Bodmer, D., et al. 2002. Cytogenetic and molecular analysis of early stage renal cell carcinomas in a family with a translocation (2;3)(q35;q21). Cancer Genet. Cytogenet. 134: 6-12.
5. Bodmer, D., et al. 2002. Molecular cytogenetic analysis of clustered sporadic and familial renal cell carcinoma-associated 3q13 approximately q22 breakpoints. Cancer Genet. Cytogenet. 136: 95-100.
6. Bodmer, D., et al. 2002. Disruption of a novel MFS transporter gene, DIRC2, by a familial renal cell carcinoma-associated t(2;3)(q35;q21). Hum. Mol. Genet. 11: 641-649.
7. Bodmer, D., et al. 2003. Disruption of a novel gene, DIRC3, and expression of DIRC3-HSPBAP1 fusion transcripts in a case of familial renal cell cancer and t(2;3)(q35;q21). Genes Chromosomes Cancer 38: 107-116.
8. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 602773. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: DIRC2 (human) mapping to 3q21.1; Dirc2 (mouse) mapping to 16 B3.

SOURCE

DIRC2 (G-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of DIRC2 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 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-99865 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DIRC2 (G-12) is recommended for detection of DIRC2 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); non cross-reactive with DIRC1 or DIRC3.

DIRC2 (G-12) is also recommended for detection of DIRC2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for DIRC2 siRNA (h): sc-78452, DIRC2 siRNA (m): sc-143044, DIRC2 shRNA Plasmid (h): sc-78452-SH, DIRC2 shRNA Plasmid (m): sc-143044-SH, DIRC2 shRNA (h) Lentiviral Particles: sc-78452-V and DIRC2 shRNA (m) Lentiviral Particles: sc-143044-V.

Molecular Weight of DIRC2: 52 kDa.

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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 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™ 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.