SANTA CRUZ BIOTECHNOLOGY, INC.

Cytokeratin 10 (K-14): sc-31770

SANTA CRUZ®

BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue. Cytokeratins play a critical role in differentiation and tissue special-ization and function to maintain the overall structural integrity of epithelial cells. Cytokeratins have been found to be useful markers of tissue differentia-tion which is directly applicable to the characterization of malignant tumors. Cytokeratins 10 and 13 are present in the cytoskeletal region of a subset of squamous cell carcinomas. Cytokeratin 10 is a heterotetramer of two type I and two type II keratins, is generally associated with keratin 1, and is seen in all suprabasal cell layers including stratum corneum.

REFERENCES

1. van der Velden, L.A., Schaafsma, H.E., Manni, J.J., Ramaekers, F.C. and Kuijpers, W. 1993. Cytokeratin expression in normal and (pre)malignant head and neck epithelia: an overview. Head Neck 15: 133-146.

2. Silen, A., Wiklund, B., Norlen, B.J. and Nilsson, S. 1994. Evaluation of a new tumor marker for Cytokeratin 8 and 18 fragments in healthy individu-als and prostate cancer patients. Prostate 24: 326-332.

3. Quillien, V., Ramee, M.P., Bansard, J.Y., Meritte, H., Briens, E., Logeais, Y., Langanay, T., Corbineau, H. and Dazord, L. 1995. Serum and tissue distri-bution of a fragment of Cytokeratin 19 (cyfra 21-1) in lung cancer patients. Anticancer Res. 15: 2857-2863.

4. Marceau, N. and Loranger, A. 1995. Cytokeratin expression, fibrillar organ-ization and subtle function in liver cells. Biochem. Cell Biol. 73: 619-625.

5. Silen, A., Wiklund, B., Andersson, E.L. and Nilsson, S. 1995. A novel IRMA and ELISA for quantifying Cytokeratin 8 and 18 fragments in the sera of healthy individuals and cancer patients. Scand. J. Clin. Lab. Invest. 55: 153-161.

6. Mukhopadhyay, T. and Roth, J.A. 1996. Functional inactivation of p53 by antisense RNA induces invasive ability of lung carcinoma cells and down-regulates Cytokeratin synthesis. Anticancer Res. 16: 1683-1689.

CHROMOSOMAL LOCATION

Genetic locus: KRT10 (human) mapping to 17q21; Krt2-10 (mouse) mapping to 15 F2.

SOURCE

Cytokeratin 10 (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Cytokeratin 10 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-31770 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Cytokeratin 10 (K-14) is recommended for detection of Cytokeratin 10 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).

Suitable for use as control antibody for Cytokeratin 10 siRNA (h): sc-35149 and Cytokeratin 10 siRNA (m): sc-35150.

Molecular Weight of Cytokeratin 10: 56.5 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or rat skin tissue.

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) Immunofluores-cence: 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.

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 or our catalog for detailed protocols and support products.