

Cytokeratin 20 (h): 293T Lysate: sc-174535

BACKGROUND

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue, where they constitute up to 85% of mature keratinocytes in the vertebrate epidermis. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. The α -helical coiled-coil dimers associate laterally end-to-end to form 10 nm diameter filaments. Cytokeratins are useful markers of tissue differentiation, and in addition, they aid in the characterization of malignant tumors. Cytokeratin 20 is abundantly expressed in goblet cells and enterocytes of the gastrointestinal tract, and Cytokeratin 20 is a useful marker of pancreatic and colorectal cancer. Cytokeratin 20 is also helpful in distinguishing different types of highly related carcinomas, such as renal oncocytomas from renal cell carcinomas.

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. Moll, R., Zimbelmann, R., Goldschmidt, M.D., Keith, M., Laufer, J., Kasper, M., Koch, P.J. and Franke, W.W. 1993. The human gene encoding Cytokeratin 20 and its expression during fetal development and in gastrointestinal carcinomas. *Differentiation* 53: 75-93.
3. Wauters, C.C., et al. 1995. Keratins 7 and 20 as diagnostic markers of carcinomas metastatic to the ovary. *Hum. Pathol.* 26: 852-855.
4. Marceau, N. and Loranger, A. 1995. Cytokeratin expression, fibrillar organization and subtle function in liver cells. *Biochem. Cell Biol.* 73: 619-625.
5. Fuchs, E. 1995. Keratins and the skin. *Annu. Rev. Cell Dev. Biol.* 11: 123-153.
6. 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 distribution of a fragment of Cytokeratin 19 (cyfra 21-1) in lung cancer patients. *Anticancer Res.* 15: 2857-2863.
7. Mukhopadhyay, T. and Roth, J.A. 1996. Functional inactivation of p53 by antisense RNA induces invasive ability of lung carcinoma cells and down-regulates cytochrome synthesis. *Anticancer Res.* 16: 1683-1689.
8. Wildi, S., Kleeff, J., Maruyama, H., Maurer, C.A., Friess, H., Buchler, M.W., Lander, A.D. and Korc, M. 1999. Characterization of Cytokeratin 20 expression in pancreatic and colorectal cancer. *Clin. Cancer Res.* 5: 2840-2847.
9. Leech, S.N., Kolar, A.J., Barrett, P.D., Sinclair, S.A. and Leonard, N. 2001. Merkel cell carcinoma can be distinguished from metastatic small cell carcinoma using antibodies to Cytokeratin 20 and thyroid transcription factor 1. *J. Clin. Pathol.* 54: 727-729.

CHROMOSOMAL LOCATION

Genetic locus: KRT20 (human) mapping to 17q21.2.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PRODUCT

Cytokeratin 20 (h): 293T Lysate represents a lysate of human Cytokeratin 20 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Cytokeratin 20 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Cytokeratin 20 antibodies. Recommended use: 10-20 μ l per lane.

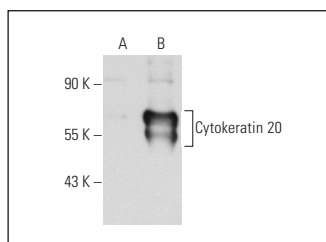
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

pan-Cytokeratin (PK63): sc-53406 is recommended as a positive control antibody for Western Blot analysis of enhanced human Cytokeratin 20 expression in Cytokeratin 20 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

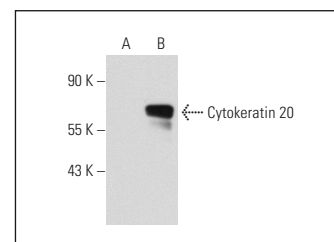
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



pan-Cytokeratin (PK63): sc-53406. Western blot analysis of Cytokeratin 20 expression in non-transfected: sc-117752 (A) and human Cytokeratin 20 transfected: sc-174535 (B) 293T whole cell lysates.



pan-Cytokeratin (HEP 111): sc-53401. Western blot analysis of Cytokeratin 20 expression in non-transfected: sc-117752 (A) and human Cytokeratin 20 transfected: sc-174535 (B) 293T whole cell lysates.

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.