

Cytokeratin 20 (SPM140): sc-56522

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 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. The gene encoding human Cytokeratin 20 maps to chromosome 17q12.

REFERENCES

- 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.
- 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.
- Wauters, C.C., Smedts, F., Gerrits, L.G., Bosman, F.T. and Ramaekers, F.C. 1995. Keratins 7 and 20 as diagnostic markers of carcinomas metastatic to the ovary. *Hum. Pathol.* 26: 852-855.
- Marceau, N. and Loranger, A. 1995. Cytokeratin expression, fibrillar organization and subtle function in liver cells. *Biochem. Cell Biol.* 73: 619-625.
- Fuchs, E. 1995. Keratins and the skin. *Annu. Rev. Cell Dev. Biol.* 11: 123-153.
- Quillien, V., Ramee, M.P., Bansard, J.Y., Meritte, H., Briens, E., Logeais, Y., Langanay, T., Corbineau, H. and Dazard, L. 1995. Serum and tissue distribution of a fragment of Cytokeratin 19 (CYFRA 21-1) in lung cancer patients. *Anticancer Res.* 15: 2857-2863.
- 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.
- 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.
- 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.

SOURCE

Cytokeratin 20 (SPM140) is a mouse monoclonal antibody raised against a semi-purified cytokeratin preparation of human origin.

PRODUCT

Each vial contains 500 μ l culture supernatant containing IgG_{2a} with < 0.1% sodium azide.

APPLICATIONS

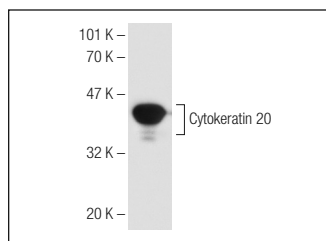
Cytokeratin 20 (SPM140) is recommended for detection of Cytokeratin 20 of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:10-1:200), immunoprecipitation [10-20 μ l per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:10-1:200) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:10-1:200).

Suitable for use as control antibody for Cytokeratin 20 siRNA (h): sc-43313, Cytokeratin 20 shRNA Plasmid (h): sc-43313-SH and Cytokeratin 20 shRNA (h) Lentiviral Particles: sc-43313-V.

Molecular Weight of Cytokeratin 20: 46 kDa.

Positive Controls: T84 whole cell lysate.

DATA



Cytokeratin 20 (SPM140): sc-56522. Western blot analysis of Cytokeratin 20 expression in T84 whole cell lysate.

SELECT PRODUCT CITATIONS

- Sauriol, A., Simeone, K., Portelance, L., Meunier, L., Leclerc-Desaulniers, K., de Ladurantaye, M., Chergui, M., Kendall-Dupont, J., Rahimi, K., Carmona, E., Provencher, D.M. and Mes-Masson, A.M. 2020. Modeling the diversity of epithelial ovarian cancer through ten novel well characterized cell lines covering multiple subtypes of the disease. *Cancers* 12: E2222.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

For research use only, not for use in diagnostic procedures.