

Cytokeratin 7 (C-17): sc-17118

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 7 (also known as sarcolectin) agglutinates normal and transformed cells with a high affinity for simple sugars. Cytokeratin 7 also inhibits the synthesis of interferon-dependent secondary proteins thus reversing the antiviral effect of interferon induction and restoring cells to their status ad primum. In normal and transformed cells, cytokeratin 7 localizes to the membrane.

REFERENCES

1. Moll, R., et al. 1982. The catalog of human cytokeratins: patterns of expression in normal epithelia, tumors and cultured cells. *Cell* 31: 11-24.
2. Lane, E.B., et al. 1985. Keratin antigens in differentiating skin. *Ann. N.Y. Acad. Sci.* 455: 241-258.
3. Osborn, M., et al. 1986. Differential diagnosis of gastrointestinal carcinomas by using monoclonal antibodies specific for individual keratin polypeptides. *Lab. Invest.* 55: 497-504.
4. Vojtesek, B., et al. 1990. A panel of monoclonal antibodies to keratin no. 7: characterization and value in tumor diagnosis. *Neoplasma* 37: 333-342.
5. Ramaekers, F., et al. 1990. Use of monoclonal antibodies to keratin 7 in the differential diagnosis of adenocarcinomas. *Am. J. Pathol.* 136: 641-655.
6. Markey, A.C., et al. 1991. Expression of simple epithelial keratins 8 and 18 in epidermal neoplasia. *J. Invest. Dermatol.* 97: 763-770.
7. Bartek, J., et al. 1991. A series of 14 new monoclonal antibodies to keratins: characterization and value in diagnostic histopathology. *J. Pathol.* 164: 215-224.
8. van Niekerk, C.C., et al. 1991. Immunohistochemical demonstration of keratin 7 in routinely fixed paraffin-embedded human tissues. *J. Pathol.* 165: 145-152.

CHROMOSOMAL LOCATION

Genetic locus: KRT7 (human) mapping to 12q13.13.

SOURCE

Cytokeratin 7 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Cytokeratin 7 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 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17118 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

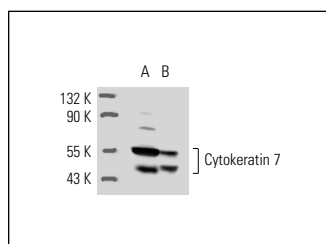
Cytokeratin 7 (C-17) is recommended for detection of Cytokeratin 7 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 7 siRNA (h): sc-35154, Cytokeratin 7 shRNA Plasmid (h): sc-35154-SH and Cytokeratin 7 shRNA (h) Lentiviral Particles: sc-35154-V.

Molecular Weight of Cytokeratin 7: 54 kDa.

Positive Controls: T24 cell lysate: sc-2292, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

DATA



Cytokeratin 7 (C-17): sc-17118. Western blot analysis of Cytokeratin 7 expression in T24 (A) and HeLa (B) whole cell lysates.



Cytokeratin 7 (C-17): sc-17118. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic and membrane staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

1. Zehbe, I., et al. 2007. Human papillomavirus 16 E6-specific CD45RA⁺ CCR7⁺ high avidity CD8⁺ T cells fail to control tumor growth despite interferon- γ production in patients with cervical cancer. *J. Immunother.* 30: 523-532.
2. Mu, L., et al. 2015. Expression of focal adhesion kinase in endometrial stromal cells of women with endometriosis was adjusted by ovarian steroid hormones. *Int. J. Clin. Exp. Pathol.* 8: 1810-1815.

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.