

Cytokeratin 19 (SPM266): sc-56371

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 specialization and function to maintain the overall structural integrity of epithelial cells and have been found to be useful markers of tissue differentiation, which is directly applicable to the characterization of malignant tumors. For example, many types of cancer cells express Cytokeratin 19 (CK19), an epithelial cytoskeletal protein within the suprabasal squamous epithelium. Cytokeratin 19 is a specific marker of moderate to severe dysplasia and carcinoma *in situ* in oral cavity squamous epithelium, and measurement of Cytokeratin 19 may be a useful marker in diagnosing hepatoma. Cytokeratin 19 fragment levels in serum have been documented as a marker for lung cancer. Clinical investigations have suggested that serum CYFRA 21-1, a fragment of Cytokeratin 19, may be among the most useful tumor markers.

REFERENCES

1. Van Eyken, P., et al. 1991. Immunocytochemistry of cytokeratins in primary human liver tumors. *APMIS Suppl.* 23: 77-85.
2. Coltrera, M.D., et al. 1992. Markers for dysplasia of the upper aerodigestive tract. Suprabasal expression of PCNA, p53 and CK19 in alcohol-fixed, embedded tissue. *Am. J. Pathol.* 141: 817-825.

CHROMOSOMAL LOCATION

Genetic locus: KRT19 (human) mapping to 17q21.2.

SOURCE

Cytokeratin 19 (SPM266) is a mouse monoclonal antibody raised against breast carcinoma cell line MCF7 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cytokeratin 19 (SPM266) is recommended for detection of amino acids 312-335 of Cytokeratin 19 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Cytokeratin 19 siRNA (h): sc-35152, Cytokeratin 19 shRNA Plasmid (h): sc-35152-SH and Cytokeratin 19 shRNA (h) Lentiviral Particles: sc-35152-V.

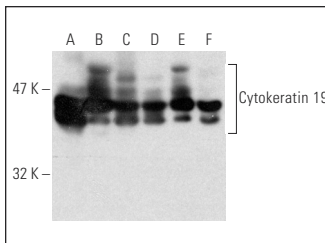
Molecular weight of Cytokeratin 19: 40 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, MCF7 whole cell lysate: sc-2206 or Caco-2 cell lysate: sc-2262.

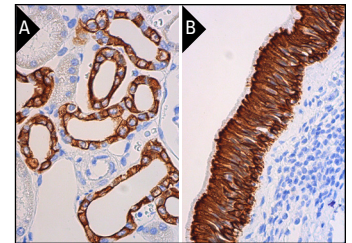
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGλ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Cytokeratin 19 (SPM266): sc-56371. Western blot analysis of Cytokeratin 19 expression in MCF7 (A), SK-BR-3 (B), Caco-2 (C), Hep G2 (D), BT-20 (E) and ME-180 (F) whole cell lysates.



Cytokeratin 19 (SPM266): sc-56371. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic and membrane staining of cells in tubules (A) and human nasopharynx tissue showing cytoplasmic and membrane staining of respiratory epithelial cells (B).

SELECT PRODUCT CITATIONS

1. He, D., et al. 2015. The Wnt11 signaling pathway in potential cellular EMT and osteochondral differentiation progression in nephrolithiasis formation. *Int. J. Mol. Sci.* 16: 16313-16329.
2. Poon, M.W., et al. 2017. Inhibition of NUCKS facilitates corneal recovery following alkali burn. *Sci. Rep.* 7: 41224.

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 for detailed protocols and support products.



See **Cytokeratin 19 (A-3): sc-376126** for Cytokeratin 19 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.